AMAZING FACTS MINISTRY

FIRST ADMINISTRATIVE DRAFT ENVIRONMENTAL IMPACT REPORT

Prepared for:

PLACER COUNTY
COMMUNITY DEVELOPMENT RESOURCE
3091 COUNTY CENTER DRIVE
AUBURN, CA 95603

Prepared by:

PMC®

1590 DREW AVENUE, SUITE 120
DAVIS, CA 95618

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Report Preparers

None

References

None

1.0
INTRODUCTION

1.0 INTRODUCTION

This Draft Environmental Impact Report ("DEIR"; "Draft EIR") was prepared in accordance with the California Environmental Quality Act (CEQA) (Cal. Pub. Resources Code Sections 21000, et seq.) and the State CEQA Guidelines (14 Cal. Code Regs., Section 15000, et seq.). The County of Placer ("Placer County"; "County") is the lead agency for the environmental review of the proposed Amazing Facts Ministries project ("project"; "proposed project") evaluated herein and has the principal responsibility for approving the project. This DEIR assesses the expected environmental impacts resulting from adoption of the proposed project and associated impacts from subsequent development under the project.

This section summarizes the purpose of the Environmental Impact Report (EIR) and describes the environmental procedures that are to be followed according to the California Environmental Quality Act (CEQA). It also discusses the intended uses of the EIR; describes the EIR's scope and organization, contact person, and impact terminology; and provides definitions of commonly used terms and acronyms utilized throughout this EIR.

1.1 TYPE AND PURPOSE OF THE EIR

The County of Placer, acting as the lead agency, has prepared this DEIR to provide the public, trustee agencies, and responsible agencies with information about the potential environmental effects of the proposed project. As described in CEQA Guidelines Section 15121(a), an EIR is a public informational document that assesses potential environmental effects of a proposed project and identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed development, where feasible, and an obligation to balance a variety of public objectives, including economic, environmental, and social factors.

CEQA requires the preparation of an environmental impact report prior to approving any project which may have a significant adverse effect on the environment. For the purposes of CEQA, the term "project" refers to the whole of an action which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]). With respect to the proposed project, the County has determined that the proposed project is a "project" within the definition of CEQA.

Section 15206(b) of the State CEQA Guidelines lists the types of projects that are considered to be of statewide, regional, or areawide significance. Criteria includes general plan amendments, development projects of over 500 housing units, commercial developments employing over 1,000 people, projects requiring cancellation of a Williamson Act contract, projects that would substantially affect sensitive wildlife habitats, and projects that would interfere with attainment of regional water quality standards. If a project meets the criteria listed, the EIR is required to be distributed to applicable state agencies through the State Clearinghouse and to the metropolitan area council of governments in whose jurisdiction the project site is located. The proposed project does not meet any of the criteria listed in Section 15206(b) and is therefore not considered to be of statewide, regional, or areawide significance.

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project EIR pursuant to State CEQA Guidelines Section 15161. Project EIRs are defined by State CEQA Guidelines (Section 15161) as:

The most common type of EIR examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development of the project. The EIR shall examine all phases of the project including planning, construction, and operation.

By preparing a Project EIR, the County intends to allow the entire project, if approved by the County Board of Supervisors, to proceed without additional CEQA compliance, absent the kinds of changed circumstances or project modifications that trigger the preparation of a subsequent EIR, supplemental EIR, or addendum (see State CEQA Guidelines, Sections 15162–15164).

This Draft EIR utilizes technical information provided by the project applicant (Amazing Facts Ministries), the Placer County General Plan and Zoning Code, the Placer County General Plan Background Report, and information gathered from federal, state, and local agencies, as well as any other data supported by the State CEQA Guidelines (see Section 15148 [Citation] and 15150 [Incorporation by Reference]). By utilizing these provisions of the State CEQA Guidelines, the County, in preparing this Draft EIR, has been able to make maximum feasible and appropriate use of this technical information.

Intended Uses of the EIR

This Draft EIR is intended to evaluate the environmental impacts of the project to the greatest extent possible. This DEIR, prepared in accordance with State CEQA Guidelines Section 15126, should be used as the primary environmental document to evaluate all planning and permitting actions associated with the project. These actions include, but are not limited to, the following:

- Approval of a minor use permit;
- Approval of tentative and final maps;
- Improvement plans for grading, drainage, and utilities;
- Building permits;
- Section 401 and 404 permits;
- City of Rocklin approvals for improvements to frontage on Sierra College Boulevard;
- South Placer Wastewater Authority approval for Service Area boundary expansion;
- South Placer Municipal Utility District for approval of conveyance of wastewater through its collection system;
- Annexation into Sewer Maintenance District 2;
- Granting of a Development Agreement to the project applicant; and
- Adoption of a mitigation monitoring and reporting program, if the project is approved.

Known Responsible and Trustee Agencies

“Responsible agency” means a public agency that proposes to carry out or approve a project for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For the purpose

of CEQA, the term "responsible agency" includes all California public agencies other than the lead agency that have discretionary approval power over the project or an aspect of the project. The following agencies are identified as potential responsible agencies:

- Placer Valley Water Authority (PVWA)
- Central Valley Regional Water Quality Control Board (CVRWQB)
- California Department of Fish and Game (CDFG)
- Placer County Air Pollution Control District (PCAPCD)
- Placer County Local Agency Formation Commission (LAFCo)
- South Placer Municipal Utility District
- Placer County Parks and Grounds Division
- City of Rocklin

"Trustee agency" means a state agency having jurisdiction by law over natural resources affected by a project, which are held in trust for the people of the State of California. The only known possible trustee agency is the California Department of Fish and Game (CDFG).

Although not subject to California law, and thus outside the definitions of responsible agency or trustee agency, the United States Army Corps of Engineers (USACE) and the United States Fish and Wildlife Service (USFWS) will also be called upon to grant approvals – under federal law – necessary for the development of the project area. These agencies have no duties under CEQA but rather are governed by a variety of federal statutory schemes, such as the Clean Water Act, which governs the dredging and filling of waters of the United States (e.g., some wetlands), and the Endangered Species Act, which requires USACE to consult with USFWS as part of the review process for any wetland or fill permits that may be required.

1.2 ORGANIZATION AND SCOPE OF THE DRAFT EIR AND EFFECTS FOUND NOT TO BE SIGNIFICANT

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a brief summary of the proposed actions and its consequences, a description of the project, a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. The environmental issues addressed in this Draft EIR were established through environmental documentation of existing projects located in the vicinity and private and public agency responses to the Notice of Preparation/Initial Study (NOP/IS).

This Draft EIR is organized in the following manner:

Introduction – Provides an introduction and overview describing the purpose, type, and intended use of the EIR. This section also identifies responsible agencies and describes the organization of the EIR and the review and certification process, as well as includes a summary of comments received on the NOP.

Executive Summary (State CEQA Guidelines Section 15123) – Includes a summary of the characteristics of the proposed project, known areas of controversy, and issues to be resolved, and provides a concise summary matrix of the project's environmental impacts, proposed mitigation measures, and identification of alternatives that reduce or avoid at least one environmental effect of the proposed project.

Project Description – Provides a detailed description of the proposed project, including intended objectives, background information, and physical and technical characteristics.

Technical Chapters – Contain an analysis of environmental topic areas as identified below. Each subsection contains a description of the existing setting of the project area, identifies project-related impacts, and recommends mitigation measures.

This section also includes an introduction to the environmental analysis that describes the general assumptions used to evaluate project-specific and cumulative environmental impacts. Specific analyses are provided in each environmental issue area section:

- Land Use
- Population, Housing, and Employment
- Biological Resources
- Cultural Resources
- Visual Resources
- Transportation and Circulation
- Air Quality
- Noise
- Soils, Geology, and Seismicity
- Hydrology and Water Quality
- Public Services and Utilities
- Hazardous Materials and Hazards

Other CEQA Sections

Alternatives to the Project – State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the project which could feasibly attain most of the basic objectives of the project while avoiding and/or lessening any of the significant environmental effects of the project. This alternatives analysis provides a comparative analysis between the project and the selected alternatives.

Growth Inducing Implications of the Project – Contains discussions and analysis of various topical issues mandated by State CEQA Guidelines Section 15126.2. These issues include

significant environmental effects that cannot be avoided if the project is implemented, significant irreversible environmental changes, and growth-inducing impacts.

Cumulative Impacts Summary – Discusses the cumulative impacts associated with the proposed project and includes mitigation measures. As required by State CEQA Guidelines Section 15130, the EIR discusses cumulative impacts when the project's incremental effect is cumulatively considerable.

Report Preparers – Lists all authors and agencies that assisted in the preparation of the EIR by name, title, and company or agency affiliation.

References and Persons Consulted – Lists all sources of information cited throughout this Draft EIR.

Appendices – Includes all notices and correspondence pertinent to the EIR, as well as technical materials prepared and used to support the analysis. Appendices are included on a CD at the back of the DEIR.

1.3 DEFINITION OF BASELINE

The baseline conditions for the project are the existing conditions at the project site at the time that the technical studies and the environmental review for the project were initiated. The majority of the project technical studies were conducted starting in 2007 and the environmental analysis has been ongoing since June 2008.

1.4 PROJECT BACKGROUND

The proposed project consists of development of an Amazing Facts Ministries house of worship on 17 acres within the northern portion of the 75-acre project site. Amazing Facts Ministries is a multifaceted, Christian media ministry which includes television, radio, Internet, publishing, and the Amazing Facts School of Evangelism.

The project site is located within the Granite Bay Community Plan and is designated Rural Estate (RE) 4.6-acre to 20-acre minimum. The project site is zoned F-B-X 20-acre minimum (Farm, combining a minimum building site size of 20 acres). A house of worship is an allowed use in the Farm zone with the approval of a minor use permit (MUP).

The proposed project has various components that would be constructed in three phases with buildings totaling ±208,000 square feet (sf). Phase I would include an ±96,000 sf multi-use area consisting of an auditorium/gymnasium, ministry offices, Sabbath school classrooms, a fireside chapel, an audio/visual production suite, and kitchen facilities. The auditorium/gymnasium would have removable chairs and an upper level of fixed stadium seating to accommodate approximately 1,300 people. The auditorium/gymnasium would be utilized for Saturday worship service until the completion of Phase II. The ministry offices would include ±20,000 sf of office space to house approximately 80 employees. Sabbath school classrooms would be utilized on Saturday mornings for infants through adults, and the fireside chapel would be utilized for small community gatherings such as seminars, funerals, and weddings. The audio/visual production suite would be used to record and edit ministry services. Phase I would also include a separate ±11,220 sf resource center building to support the ministry in housing materials such as compact discs, tapes, and periodicals. Phase II would consist of a ±90,000 sf multi-use building with

seating for 2,000 people, primarily for Saturday worship services. Phase III would include an additional ±10,000 sf of ministry office and classroom space.

In addition, the proposed project would include construction of ±1,000 off-street parking spaces, landscaping along frontage areas, and an entry feature in the northwest corner of the project site. A series of retaining walls would be constructed to accommodate the lower-level parking areas. A sound wall is also proposed along the western property line.

1.5 ENVIRONMENTAL REVIEW PROCESS

Notice of Preparation and Initial Study

In accordance with Section 15082 of the State CEQA Guidelines, the County prepared a Notice of Preparation/Initial Study (NOP/IS) for the project on February 5, 2009. In accordance with the State CEQA Guidelines, the County was identified as the lead agency for the proposed project. The NOP/IS was circulated to the public, local, state, and federal agencies, and other interested parties to solicit comments on the proposed project. The issues and concerns identified in responses to the NOP/IS document are addressed in this Draft EIR. The NOP/IS comments are presented in **Appendix A**.

The Initial Study completed for the proposed project concluded that the preparation of an EIR would be required for the project. The NOP/IS is also included in **Appendix A**. The County also held a scoping meeting for the project on March 3, 2009. Concerns and comments received during the scoping meeting were considered during preparation of the Draft EIR. The City received letters from the following federal, state, and local agencies, and other interested parties:

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Agency	Date
City of Rocklin	March 5, 2009
Town of Loomis	March 19, 2009
South Placer Wastewater Authority	March 6, 2009
Granite Bay Community Association	February 28, 2009
James and Geri Lee	May 6, 2009
Native American Heritage Commission	February 10, 2009
Placer County Sheriff	February 20, 2009
Placer County Water Agency	March 3, 2009

The following summarizes the major concerns in these letters.

- **Potential Light and Glare Impacts** – The letter from the City of Rocklin requests that the EIR address light and glare impacts from the project onto nearby residences. These issues are addressed in Section 8.0 Visual Resources.

- **Traffic and Transportation Impacts** – The letter from the Town of Loomis requests that certain traffic and transportation issues be considered during the preparation of the Draft EIR. These issues include the provision of traffic fees, cumulative traffic analysis, future road

widening, and how the project will affect traffic on I-80 and Sierra College Boulevard and throughout the Town of Loomis These issues are addressed in Section 9.0 Transportation and Circulation.

- **Potential Impacts to Wastewater** – The letter from the South Placer Wastewater Authority recommends that the EIR discuss and provide adequate mitigation for various concerns related to wastewater. Such issues include potentially upsizing trunk sewers that collect wastewater flows and the identification of issues relating to the construction and installation of wastewater facilities. These issues are addressed in Section 13.0 Hydrology and Water Quality, and Section 14.0 Public Services and Utilities.

- **Aesthetic and Air Quality Impacts** – The letter from the Granite Bay Community Association recommends that the EIR discuss the project visibility from the community and vehicle-related air quality issues. These issues are addressed in Section 8.0 Visual Resources and Section 10.0 Air Quality respectively.

- **Transportation and Water** – The letter from James and Geri Lee addresses operational traffic hazards, parking issues, parking lot noise, sediment runoff, habitat issues, adequate water flow, water pollution and flooding. These issues are addressed in Section 6.0 Biological Resources, Section 9.0 Transportation and Circulation, Section 11.0 Noise, Section 12.0 Soils, Geology and Seismicity, and Section 13.0 Hydrology and Water Quality.

- **Cultural Resources** – The letter from the Native American Heritage Commission recommends various steps to take in the archeological investigation associated with the proposed project. These issues are addressed in Section 7.0 Cultural Resources.

- **Law Enforcement** – The letter from the Placer County Sherriff recommends that the applicant work closely with law enforcement during all stages of the proposed development and design features that discourage criminal activity. Law enforcement impacts are discussed in Section 14.0 Public Services and Utilities.

- **Potential Impacts to Water** – The letter from the Placer County Water Agency recommends that the EIR discuss and provide adequate mitigation for various concerns related to water. These issues are addressed in Section 13.0 Hydrology and Water Quality, and Section 14.0 Public Services and Utilities.

Draft EIR

This document constitutes the Draft EIR (DEIR). The DEIR contains a description of the project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Upon completion of the DEIR, the County will file a Notice of Completion (NOC) with the State Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161).

Public Notice/Public Review

Concurrent with the NOC, the County will provide public notice of the availability of the DEIR for public review and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA Guidelines Section 15105, the review period for this

DEIR will be forty-five (45) days. Public comment on the Draft EIR will be accepted both in written form and orally at public hearings. All comments or questions regarding the DEIR should be addressed to:

Gina Langford, Environmental Coordinator
Community Development Resource Agency
3091 County Center Drive, Suite 190
Auburn, CA 95603
(530) 745-2035
fax (530) 745-3003
cdraecs@placer.ca.gov.

Response to Comments/Final EIR

Following the public review period, a Final EIR (FEIR) will be prepared. The Final EIR will respond to all significant environmental issues raised in written and oral comments received during the public review period and to comments made at any public hearing.

Certification of the EIR/Project Consideration

Upon review and certification of the FEIR, the County Board of Supervisors may take action to approve, revise, or reject the project. A decision to approve the project would be accompanied by written findings in accordance with CEQA Guidelines Section 15091 (Findings) and, if applicable, Section 15093 (Statement of Overriding Considerations). A Statement of Overriding Considerations requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits of a proposed project against its unavoidable environmental risks when determining whether to approve a project. A mitigation monitoring and reporting program (MMRP), as described below, would also be adopted for mitigation measures that have been incorporated into or imposed upon the project to reduce or avoid significant effects on the environment. The MMRP will be designed to ensure that these measures are carried out during all phases of the project's implementation.

Mitigation Monitoring and Reporting Program

Public Resources Code Section 21081.6(a) requires lead agencies, at the time of project approval, to adopt an MMRP to describe measures that have been adopted or made a condition of project approval in order to mitigate or avoid significant effects on the environment. The specific "reporting or monitoring" program required by CEQA is not required to be included in the EIR; however, it will be presented to County decision-makers for adoption. Throughout the EIR, however, mitigation measures have been clearly identified and presented in language that will facilitate establishment of a monitoring and reporting program. Any mitigation measures adopted by the Board of Supervisors as conditions for approval of the project will be included in the MMRP to ensure and verify compliance.

1.6 DEFINITION OF COMMONLY USED TERMS

Identified below are common terms used throughout this document. A complete list of acronyms and abbreviations is also provided.

CEQA Terminology

Cumulatively Considerable: Cumulatively considerable means that the incremental effects of an individual 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.

Less Than Cumulatively Considerable: A less than cumulatively considerable impact results when the incremental effects of an individual project would not contribute significantly to a cumulative impact.

Less Than Significant Impact: A less than significant impact would cause no substantial change in the environment and no mitigation would be required.

No Impact: No adverse change to the environment would occur.

Potentially Significant: A potentially significant impact is one that may or may not occur and where a definite determination cannot be made. Feasible mitigation measures and/or project alternatives are identified to avoid or reduce the project's effects on the environment to a less than significant level.

Significant Impact: A significant impact would cause (or would potentially cause) a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project effects using specified standards of significance. Mitigation measures and/or project alternatives are identified to reduce project effects on the environment.

Significant Unavoidable Impact: A significant and unavoidable impact would result in a substantial change in the environment that cannot be avoided or mitigated to a less than significant level if the project is implemented.

Standards of Significance: 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 the State CEQA Guidelines; factual or scientific information; regulatory performance standards of local, state, and federal agencies; and County goals, objectives, and policies.

General Terminology

County: County of Placer

Applicant: Any person or other legal entity who applies to the County to develop or improve any portion of the real property within the project boundaries. The term "applicant" shall include all successors in interest.

Project: The development or improvement of the project site, as defined by the project application.

Project Site: The real property described by the project application.

2.0
EXECUTIVE SUMMARY

2.0 EXECUTIVE SUMMARY

PROJECT DESCRIPTION

The proposed project consists of development of an Amazing Facts Ministries house of worship on 17 acres within the northern portion of the 75-acre project site. Amazing Facts Ministries is a multifaceted, Christian media ministry which includes television, radio, Internet, publishing, and the Amazing Facts School of Evangelism.

The project site is located within the Granite Bay Community Plan and is designated Rural Estate (RE) 4.6-acre to 20-acre minimum. The project site is zoned F-B-X 20-acre minimum (Farm, combining a minimum building site size of 20 acres). A house of worship is an allowed use in the Farm zone with the approval of a minor use permit (MUP).

The proposed project has various components that would be constructed in three phases with buildings totaling ±208,000 square feet (sf). Phase I would include an ±96,000 sf multi-use area consisting of an auditorium/gymnasium, ministry offices, Sabbath school classrooms, a fireside chapel, an audio/visual production suite, and kitchen facilities. The auditorium/gymnasium would have removable chairs and an upper level of fixed stadium seating to accommodate approximately 1,300 people. The auditorium/gymnasium would be utilized for Saturday worship service until the completion of Phase II. The ministry offices would include ±20,000 sf of office space to house approximately 80 employees. Sabbath school classrooms would be utilized on Saturday mornings for infants through adults, and the fireside chapel would be utilized for small community gatherings such as seminars, funerals, and weddings. The audio/visual production suite would be used to record and edit ministry services. Phase I would also include a separate ±11,220 sf resource center building to support the ministry in housing materials such as compact discs, tapes, and periodicals. Phase II would consist of a ±90,000 sf multi-use building with seating for 2,000 people, primarily for Saturday worship services. Phase III would include an additional ±10,000 sf of ministry office and classroom space.

In addition, the proposed project would include construction of ±1,000 off-street parking spaces, landscaping along frontage areas, and an entry feature in the northwest corner of the project site. A series of retaining walls would be constructed to accommodate the lower-level parking areas. A sound wall is also proposed along the western property line.

PROJECT LOCATION

The proposed Amazing Facts church would be located in Placer County, California within the unincorporated community of Granite Bay (**Figure 3-1**). The project site is composed of two parcels (APN 046-050-006 [69.1 acres] and APN 046-050-008 [5.1 acres]) totaling approximately 75 acres bordered by Sierra College Boulevard on the north between Night Watch Drive and Ridge Park Drive (**Figure 3-2**). The property abuts the City of Rocklin along the north property line and extends south to Oak Hill Lane in Placer County. The church campus would occupy approximately 17 acres in the northwest corner of the property (**Figure 3 -3**) and would be constructed in 3 phases (**Figure 3-4**). The remaining 58 acres of the project site would remain undeveloped due to grading and site constraints.

Regional access to the site would be provided by Interstate 80 which is approximately 1.5 miles east of the site. Major roadways in the vicinity include Rocklin Road (approximately 1 mile north of the site) and Cavitt-Stallman Road (approximately one-quarter mile to the south).

PROJECT OBJECTIVES

The objectives of the proposed Project include:

- Develop the Amazing Facts worship facility and offices to accommodate the multi-faceted ministry that supports their local and worldwide mission.
- Develop a church facility to serve the surrounding community.
- Provide a consistent style of architecture to ensure that development is compatible and complementary with the existing visual character in the region;
- Create an efficient circulation pattern for vehicles, pedestrians, and bicyclists;
- Provide adequate infrastructure and public services to support the proposed development;
- Identify and incorporate natural resources into the proposed development area as feasible; and
- Provide for the orderly and systematic development in a method consistent with the Placer County Zoning Ordinance.

ALTERNATIVE TO THE PROPOSED PROJECT

This Draft EIR evaluates several alternatives to the proposed project that would eliminate or reduce the significant impacts of the proposed project. The alternatives analyzed are described in detail in Section 17.0 and are summarized below.

No Project - Alternative 1

Alternative 1 is the "No Project" alternative for the Amazing Facts Ministries project. Evaluation of the "No Project" alternative is required by CEQA. By definition, the No Project alternative assumes that no development would occur on the project site. None of the project impacts would occur with implementation of the "No Project" alternative. The site is assumed to remain in its existing condition as a vacant parcel of undeveloped land.

Under the "No Project" alternative, environmental conditions on the site would remain unchanged. Impacts predicted to occur as a result of the proposed project would not occur including increased traffic on nearby roadways and intersections. Cumulative development would occur as described in this EIR, but the "No Project" alternative would not contribute to these effects. As shown in Table 17-1, the "No Project" alternative would not contribute to these effects. As shown in Table 17-1, the "No Project" alternative would cause the fewest environmental impacts of any alternative. However the "No Project" alternative would not achieve any of the objectives of the proposed project.

Development Under Existing Zoning - Alternative 2

Alternative 2 would involve development of the same 17 acres of the total project site consistent with the existing general plan land use designation of Rural Estate 4.6 acre to 20 acre minimum and zoning of F-B-X 20 acre minimum (farm, combining a minimum building site size of 20 acres). This current zoning allows creation of lots no smaller than 20 acres in size. Therefore,

implementation of Alternative would allow the creation of 1 lot (minimum of 20 acres) on the 17 acre portion of project site that can be developed; the existing constraints on the remaining 58 acre portion of the total site would remain. However, should the entire 75 acre project site be developed according to the base zoning for this property, there could be a maximum of 3 lots and 3 houses on the entire project site.

Reduced Scale Church - Alternative 3

Alternative 3 would involve construction of just Phase I of the proposed project. This includes the approximately 100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and a total of 624 parking spaces. Access to the site is anticipated to remain the same for this Alternative.

Overall, the No Development Alternative was identified as the environmentally superior alternative. Among the "build" alternatives, Alternative 2 was identified as the environmentally superior "action" alternative. The alternatives and analyses are described in more detail for each environmental resource in Section 17.0 of this Draft EIR.

ENVIRONMENTAL IMPACTS AND PROPOSED AND RECOMMENDED MITIGATION

This Draft EIR presents information concerning the environmental setting of the project study area, identifies the project's potential impacts to the environment, and recommends mitigation measures to reduce these impacts. The environmental resources analyzed include land use and agriculture, population, housing, and employment, biological resources, cultural resources, visual resources, traffic and circulation, air quality, noise, geology, soils, and seismicity, hydrology and water quality, public services, hazardous materials and hazards, and climate change. The proposed project's consistency with the policies of the *Placer County General Plan* and the *Granite Bay Community Plan* is analyzed in Chapters 4.0 through 16.0.

The location of discussions related to environments in this Draft EIR is identified in Table 2-1 below. Table 2-2 at the end of this chapter summarizes the potential impacts of the proposed project by environmental resource. Impacts can be construction-related or they can be the short- or long-term result of project operation. The Applicant has worked with the County to anticipate and mitigate potential adverse environmental effects of the proposed project; these are identified in the chapters that discuss each resource area. If an impact is determined to be significant or potentially significant, Applicant-proposed mitigation measures and additional mitigation measures (if applicable) are identified. These mitigation measures are also summarized on Table 2-2. Mitigation measures for project-level parcels would be a part of the Applicant's proposed project and are identified as "proposed" in most instances. The EIR also includes mitigation measures that the County recommends for program-level parcels. The latter are not formally proposed as part of the Applicant's project, are not required by County ordinance, and are identified as "recommended." An impact that remains significant after mitigation is considered an unavoidable adverse impact of the proposed project.

TABLE 2-1
CONSIDERATION AND DISCUSSION OF ENVIRONMENTAL IMPACTS

Topic	Location of Discussion in this Draft EIR
Significant environmental effects of the proposed project	Summary in Table 2-2 Discussions in: • Impacts subsections of Chapters 4 through 16 • Cumulative Impacts, Section 17
Significant environmental effects which cannot be avoided if the proposed project is implemented	Summary in Table 2-2 Section 2.2 above Discussions in: • Impact subsections of Chapters 4 through 16 • Cumulative Impacts, Section 17
Mitigation measures proposed to minimize the significant effects	Summary in Table 2-2 Impacts and Mitigation Measures subsections of Chapters 4 through 16
Alternatives to the proposed project	Summary in Table 17-1 Section 17.0
Growth-inducing impacts of the proposed project	Section 18.0
Significant irreversible environmental changes which would be involved in the proposed project should it be implemented	Section 18.0

The proposed project would result in three impacts that would remain significant or potentially significant after mitigation. These include:

Impact 4-5 Convert Farmland of Local Importance

Impact 8-3 Adversely Affect a Scenic Vista

Impact 9.6 Short Term Cumulative Traffic Impacts

TABLE 2-2
IMPACT SUMMARY TABLE – PROPOSED PROJECT

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Land Use and Agriculture				
Impact 4-1	Divide and Established Community	N	None required.	**N**
Impact 4-2	Conflict with Applicable Land Use Plans, Policies, or Regulations	PS	**Revise the Granite Bay Community Plan** Prior to approval of the project, the applicant shall apply for and gain approval of an amendment to the Granite Bay Community Plan to allow for the development of houses of worship to the scale and size as proposed by the project. **Preserve the remainder of the project site as undeveloped land** The applicant shall enter into an agreement with the County of Placer to preserve the remainder of the project site to the south of the proposed house of worship in perpetuity as undeveloped land.	**LTS**
Impact 4-3	Conflict with any Habitat Conservation Plan or Natural Community Conservation Plan	N	None required.	**N**
Impact 4-4	Convert Farmland of Local Importance	PS	**Preserve offsite farmland at a one to one ratio** The applicant shall protect one acre of existing farmland or land of equal or higher quality for each acre of Farmland of Local Importance that would be converted as a result of the project. This protect may consist of the establishment of a farmland conservation easement, farmland deed restriction or other appropriate farmland conservation mechanism that ensures the preservation of that land	**SU**

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts. The farmland/wildlife habitat land to be preserved shall be located within unincorporated Placer County and must have adequate water supply to support agricultural use. In deciding whether to approve the land proposed for preservation by the project applicant, the County shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland shall occur prior to the County's approval of the project's first building permit. In addition, the County shall impose the following minimum conservation easement content standards: ■ All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land; ■ The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land; ■ The document shall prohibit any activity which substantially impairs or diminished the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land. ■ The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land. ■ Interests in agricultural/wildlife habitat mitigation land shall be held in trust by an entity acceptable to the	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			County in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the County. ■ The applicant shall pay to the County an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the County Board of Supervisors, not to exceed 15 percent of the easement price paid by the applicant. ■ The County shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the County. ■ If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the County. i) Before committing to the preservation of any particular farmland pursuant to this measure, the project proponent shall obtain the County's approval of the farmland proposed for preservation.	
Impact 4-5	Conflict with Williamson Act contract	N	None required.	**N**

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 4-6	Agricultural/Urban Interface Conflicts	PS	**Comply with County's Right-to-Farm Ordinance** Consistent with the County's right-to-farm ordinance (Chapter 5, Section 5.24.040 of the County Code), the project applicant shall acknowledge receipt of the right-to-farm ordinance.	**LTS**
Population and Housing				
Impact 5-1	Displace Substantial Numbers of Existing Housing or People	N	None required.	**N**
Impact 5-2	Induce Population Growth	LTS	None required.	**LTS**
Biological Resources				
Impact 6-1	Impacts to Special-status Plant Species	PS	**MM 6-1a Conduct Special-Species Surveys** The applicant shall retain a qualified biologist to perform focused surveys to determine the presence/absence of special-status plant species with potential to occur within and adjacent to (within 25 feet, where appropriate) the proposed impact area, as listed in **Table 6-3**. These surveys shall be conducted in accordance with CDFG-approved guidelines for conducting field surveys. Specifically, the guidelines are outlined in *Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities* (Nelson 1994). These guidelines require rare plant surveys to be conducted at the proper time of year when rare or endangered species are both "evident" and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during periods of phonological development that are necessary to identify the plant species of concern. **MM 6-1b Implement Avoidance Measures to Protect**	**LTS**

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			Special-status Species If any state- or federally listed, CNPS List 1, or CNPS List 2 plant species are found within or adjacent to (within 25 feet) the proposed impact area during the surveys, these plant species shall be avoided to the extent possible. Avoidance measures shall include fencing of the population(s) before construction, exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified biologist. Avoidance areas shall be identified on project plans. If these plants cannot be avoided, the following measures shall be applied: Before the approval of grading plans or any ground-breaking activity within the PSA, the applicant shall submit a mitigation plan concurrently to CDFG and USFWS (if appropriate) for review and comment, and the applicant may consult with these entities before approval of the plan. The plan shall include mitigation measures for the population(s) to be directly affected. Possible mitigation for the population(s) that would be removed during construction of the project includes implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible). The mitigation ratio for directly impacted plant species shall be at a minimum ratio of 2:1. The actual level of mitigation may vary depending on the sensitivity of the species (its rarity or endangerment status), its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. Alternatively, replacement credits may be purchased by the applicant at an approved mitigation bank should such credits be available. It should be noted that currently, replacement credits are not available at a conservation bank that has a service area encompassing the PSA. The Laguna Terrace East Conservation Bank out of Rocklin, California, only offers vernal pool preservation credits to include Ahart's dwarf rush. Any special-status plant species that are identified adjacent to the PSA, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			be identified on project plans. In some cases involving state-listed plants where it may be necessary to obtain an incidental take permit under Section 2081 of the Fish and Game Code, the applicant shall consult with CDFG to determine the applicability of an incidental take permit. The applicant may be required to prepare an application for this permit. It should be noted that the application for this permit requires a project description, a detailed analysis of impacts to species, and an analysis of the probability of the species' long-term survival as related to the impacts	
Impact 6-2	Impacts to Western Spadefoot Toad	**LTS**	None required.	**LTS**
Impact 6-3	Impacts to Swainson's Hawk	**PS**	**Mitigate for Loss of Swainson's Hawk Habitat** Impacts from project implementation would result in the loss of the approximately 13.99 acres of foraging habitat. Measures to minimize impacts to Swainson's hawk foraging habitat include restoration of foraging habitat temporarily disturbed by project construction activities. After construction is completed, all temporarily disturbed areas shall be stabilized with hydroseed and replanted with a mixture of native and non-native plants (as deemed appropriate by a CDFG-approved biologist). In order to compensate for the permanent loss of potential foraging habitat, the applicant shall acquire suitable Swainson's hawk foraging habitat, as determined by CDFG and approved by Placer County. Trees located within the PSA may support nesting activity for Swainson's hawks; however, no Swainson's hawks were observed	**LTS**

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			within the PSA during a reconnaissance-level survey conducted by a PMC biologist on May 20, 2009, or by North Fork Associates (2007a) during their survey work. As such, the following measures are recommended as a precaution: When possible, schedule construction activities to avoid nesting activities. Swainson's hawks generally breed from March 1 through August 15. As such, construction activities should occur between August 16 and February 28 to the extent possible. If construction avoids the breeding season, pre-construction surveys are not necessary. However, if construction occurs during the breeding season, the applicant shall retain a qualified biologist to conduct pre-construction surveys for Swainson's hawk nests within 0.5 mile of the proposed project per CDFG (1994) and the Swainson's Hawk Technical Advisory Committee (SHTAC 2000) recommendations. Pre-construction surveys to determine the presence of active Swainson's hawk nests shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or construction activities. If an active nest is detected within 0.5 mile of the proposed project, consultation with CDFG is required. In the event that Swainson's hawk nesting occurs within 500 feet of the proposed project footprint, the applicant's qualified biologist shall consult with CDFG to determine if the potential for nest abandonment exists. If an adequate buffer is present (more than 500 feet) between the nest and the proposed project footprint to prevent nest abandonment, then construction may proceed with on-site monitoring of the nesting birds by a qualified biologist or biological monitor. Monitoring shall be performed in accordance with CDFG (1994) guidelines. Monitoring frequency would be determined by the distance of the nest from the activity and	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			the timing, duration, and nature of the construction activity in consultation with CDFG. The biological monitor shall have the authority to cease construction if there is any sign of distress to the raptor. If the applicant's qualified biologist and CDFG determine that the potential for nest abandonment exists, modifications to construction activities may be required by CDFG until young have fledged. If construction activity is determined to need modification to avoid nesting disturbance, modifications to construction activity would be identified and implemented, in consultation with CDFG, to reduce and avoid adverse effects.	
Impact 6-4	Impacts to Special-status Avian Species, Including Raptors	PS	Implementation of MM 6-4.	LTS
Impact 6-5	Impacts to Special-status Bat Species	LTS	None required.	LTS
Impact 6-6	Impacts to Jurisdictional Waters of the U.S., Including Wetlands	PS	**Mitigate for Impacts to Special-status Avian Species, Including Raptors** If proposed site disturbance and construction activities are planned to occur within the PSA during the nesting season for local avian species (typically February 15 through August 31), the applicant shall retain a qualified biologist to conduct a focused survey for active nests of special-status birds within and in the vicinity of (up to 200 feet and no less than 100 feet outside project boundaries, where possible) the disturbance and construction area no more than 30 days prior to ground disturbance or tree removal. If active nests are found, trees/shrubs with nesting birds shall not be disturbed until abandoned by the birds or a qualified biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG, where appropriate). If applicable, tree removal shall be restricted to a	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			period following fledging of chicks, which typically occurs between late July and early August. If an active nest is located within the 100 feet (200 feet for raptors) of construction activities, other restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100 feet or 200 feet, as appropriate, around the nest as confirmed by the appropriate resource agency) or alteration of the construction schedule. Reference to this requirement and the MBTA shall be included in the construction specifications. If construction activities or tree removal are proposed to occur during the non-breeding season (September 1 through February 14), a survey is not required, no further studies are necessary, and no mitigation is required.	
Impact 6-7	Impacts to Migratory Corridors	LTS	None required.	LTS
Impact 6-8	Impacts to Protected Trees	PS	**Protect Significant Trees** For all qualifying trees proposed for removal, the applicant shall prepare and submit a tree permit to the County. Mitigation for tree removal shall be in accordance with Section 12.16.80 of the Placer County tree ordinance (Code Chapter 12, Article 12.16).	LTS
Impact 6-9	Impacts to Sensitive Biological Communities	PS	MM 6-9 Mitigate for Loss of Sensitive Biological Communities (Recommended) Implement mitigation measures MM 6-6 and MM 6-8.	LTS
Impact 6-10	Conflicts with Local Policies or Ordinances Protecting Biological	N	None required.	N

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
	Resources (Other than Protected Trees)			
Impact 6-11	Conflicts with an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Any Adopted Biological Resources Recovery or Conservation Plan of Any Federal or State Agency	N	None required.	N

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Cultural Resources				
Impact 7-1	POTENTIAL DESTRUCTION OR DAMAGE TO KNOWN AND UNDISCOVERED PREHISTORIC AND HISTORIC RESOURCES	N	None required.	N
Impact 7-2	POTENTIAL DESTRUCTION OR DAMAGE TO KNOWN AND UNDISCOVERED ARCHAEOLOGICAL RESOURCES	PS	**Mitigate for Potential Cultural Resources** It shall be required on the final improvement plans approved by the county, that if, during the course of construction cultural resources (i.e., prehistoric sites, historic sites, exotic rock (non-native), or unusual amounts of shell or bone, isolated artifacts, or other features) are discovered, work shall be halted immediately within 50 feet of the discovery, the Placer County Community Development Resource Agency shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. Determination of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups). The Placer County Planning Department and Department of Museums shall also be contacted for review of the archaeological find(s). Prior to the commencement of project excavations, all construction personnel shall be informed of the potential to inadvertently uncover cultural resources and human remains and the procedures to follow subsequent to an inadvertent discovery of cultural resources or human remains. In addition, should excavations for site testing or data recovery become necessary, the United Auburn Indian Community of the Auburn Rancheria shall be informed in order to provide on-site tribal monitors.	LTS
Impact 7-3	POTENTIAL DESTRUCTION OR DAMAGE TO A UNIQUE PALEONTOLOGICAL RESOURCE OR	PS	**Mitigate for Potential Paleontological Resources** If human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the Placer County Community Development Resource Agency shall be notified, and	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
	GEOLOGICAL FEATURE		the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed. It shall be required on the final improvement plans approved by the county, that if paleontological resources are discovered on-site, the applicant shall retain a qualified paleontologist to observe all grading and excavation activities throughout all phases of project construction, and salvage fossils as necessary. The paleontologist shall establish procedures for paleontological resource surveillance and shall establish, in cooperation with the project developer, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of fossils. If major paleontological resources are discovered, which require temporarily halting or redirecting of grading, the paleontologist shall report such findings to the project developer and to the Placer County Department of Museums and Planning Department. The paleontologist shall determine appropriate actions, in cooperation with the project developer, that ensure proper exploration and/or salvage. Excavated finds shall first be offered to a State-designated repository such as the Museum of Paleontology, University of California, Berkeley, or the California Academy of Sciences. Otherwise, the finds shall be offered to the Placer County Department of Museums for purposes of public education and interpretive displays. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the Department of Museums. The paleontologist shall submit a follow-up report to the Department of Museums and Planning Department, which shall include the period of inspection, an analysis of the fossils found, and present repository of fossils.	
Visual Resources				
Impact 8-1	**Damage Visual Resources within a Scenic Highway**	**LTS**	None required.	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
	Corridor			
Impact 8-2	**Adversely Affect a Scenic Vista**	**S**	**None feasible.**	**SU**
Impact 8-3	**Degrade Visual Character**	**LTS**	None required.	**LTS**
Impact 8-4	Construction Impacts	**LTS**	None required.	LTS
Impact 8-5	**Create New Source of Light or Glare**	**PS**	**Minimize Project Site Lighting** All outdoor lighting installed as part of the proposed project shall be limited to the minimum amount needed for public safety, shall be designed to limit upward and sideways spillover of light, and shall include High Pressure Sodium fixtures. All lighting shall be consistent with the most recent update of the "Nonresidential Compliance Manual for California's 2005 Energy Efficiency Standards." Outdoor light fixtures for parking areas, buildings, pedestrian areas, and roadways shall be shielded, and directed down to preserve the night sky and away from residential areas to minimize light and glare effects on such areas. To reduce brightness, proposed lighting fixtures shall be mounted at a height not to exceed 14'. In addition, all light poles shall be finished in a color that will blend into the landscape and prevent glare (i.e., black, bronze, or dark bronze). These lighting requirements shall be included in lighting plans for the project prior to issuance of any building permits. **Use Non-Reflective Building Materials** Non-reflective building materials shall be used for the exterior of all buildings. Building windows shall be coated with tinting materials	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			to reduce glare and to minimize visibility of interior lighting.	
Traffic and Circulation				
Impact 9-1	**Exceed Level of Service Standards at Study Intersections**	**PS**	**Intersection LOS Mitigation** The proposed project shall contribute its fair share of the cost of widening the Sierra College Blvd/Rocklin Rd intersection to provide a second northbound left turn lane. This improvement is a condition of approval of a development project previously approved by the City of Rocklin. Therefore, City of Rocklin staff has indicated that payment of SPRTA fees will adequately mitigate the project's impact at this intersection. Should this improvement not be constructed as part of this previously approved project, the proposed project shall be limited to a capacity of 1,050 people in order to achieve a Level of Service C at this intersection. **MM 9-1b** The proposed project shall comply with Placer County's Trip Reduction Program Level 1 requirements as specified in Section 10.20.060 of the County Code. These requirements include posting of transit schedules and bicycle routes to the project site in order to encourage employees and visitors to the site to utilize alternative modes of transportation thereby reducing vehicle trips.	LTS
Impact 9-2	**Site Access and Safety**	**PS**	MM 9-2 Site Access and Safety Mitigation Measures Although adequate site distance is anticipated to be provided at the project site access points given the proposed site plan, the final grading and landscaping plans shall be reviewed by the County Engineering and Surveying Department to ensure that all applicable driver sight distance standards are attained at each site access point prior to issuance of building permits.	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			The site layout shall be modified to eliminate the initial access points to vehicles entering the site at the Sierra College Blvd Access in order to provide sufficient driveway throat depth to accommodate vehicle storage under EPAP plus Phase 1+2 conditions. The site layout modifications shall be reviewed and approved by the County Engineering and Surveying Department prior to issuance of building permits. The following access point lane configuration modifications shall be applied to the site layout for the proposed project prior to issuance of building permits: A formal left turn lane is not required for vehicles entering the site via the more northerly access intersection on the Nightwatch Drive extension. However, to avoid congestion at this location, the Nightwatch Drive extension shall be constructed wide enough to provide the opportunity for southbound through traffic to continue past any left turning vehicles waiting at this intersection. To avoid peak period congestion, the Nightwatch Drive extension shall be constructed with two lanes in each direction from Sierra College Blvd south to the northern site access point. The area along the project's frontage shall be striped to provide separated right turn lanes into the site in accordance with County and Caltrans standards. These turn lanes shall be placed at locations that will perpetuate separate right turn lanes when the road is striped for three northbound through lanes. **MM 9-2d** A left turn lane into the project site shall be provided on Sierra College Blvd approaching the Nightwatch Drive	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			intersection. Caltrans Highway Design Manual (HDM) standards for left turn lanes suggest providing 275 feet of deceleration length prior to a stop at 35 mph, 375 feet to stop at 45 mph and 485 feet to come to a stop from 55 mph, although these design guidelines recognize that lesser distance is needed on sustained uphill grades. Under Caltrans standards these requirements are satisfied by a combination of left turn lane and its bay taper. Because the need for a long left turn lane would exist infrequently, a compromise between storage and deceleration shall be provided. As such, a 400 foot queue shall be accommodated along with deceleration to a stop from 35 mph. This would imply a turn lane and bay taper that together are 675 feet long.	
Impact 9-3	**Provide Adequate Off-Site Parking**	**LTS**	None required.	LTS
Impact 9-4	Alternative Transportation	**PS**	**Alternative Transportation Mitigation Measures** The project proponent shall consult with Placer County Transit and shall dedicate right-of-way on the project site for the construction of a bus stop and turn out, if deemed necessary, to the satisfaction of Placer County Transit. **MM 9-4b** The proposed site layout shall be modified to include the location of a minimum of 32 bicycle racks with construction of Phase I of the project and an additional 14 bicycle racks with construction of Phase II. The bicycle racks shall meet all applicable County standards. The site layout modifications shall be reviewed and approved by the County Department of Engineering and Surveying prior to issuance of building permits.	LTS
Impact 9-5	Construction Impacts	**LTS**	None required.	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Air Quality				
Impact 10-1	Increases in Short-term Construction Emissions	**PS**	**Mitigate for On-site Active Dust Control** The proposed project shall comply with PCAPCD Rule 228, which addresses fugitive dust emissions. Rule 228 provides standards for dust control, as well as recommends mitigation for vehicle track out. Below are on-site active fugitive dust mitigation measures which are required to ensure that the project will not violate Rule 228. In addition, mitigation which would lower ROG emissions is provided below. The applicant shall submit to the District and receive approval of a Construction Emission/Dust Control Plan prior to groundbreaking. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust www.placer.ca.gov/airpollution/airpolut.htm Replace vegetation in disturbed areas as quickly as possible. There shall be no open burning of removed vegetation during infrastructure improvements All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites. Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours • Minimize idling time to five minutes for all diesel power equipment. • Use low sulfur fuel for stationary construction equipment Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators **Mitigate for On-site Inactive Dust Control** As mentioned above, the proposed project shall comply with PCAPCD Rule 228, which addresses fugitive dust emissions. Provided below are on-site inactive fugitive dust mitigation measures which would lower ROG emissions and which are required to ensure that the project will not violate Rule 228: All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant. Limit traffic speeds on unpaved roads to 15 mph. Install sandbags or other erosion control	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			measures to prevent silt runoff to public roadways. Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.	

TABLE 10-13
PHASE 1 SHORT-TERM MITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	25	13	0	38	9	2,350
Paving	4	20	13	0	2	2	1,947
Construction	4	18	19	0	1	1	2,527
Coating	74	0	1	0	0	0	89
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded After Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

TABLE 10-14
PHASE 2 SHORT-TERM MITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	23	13	0	9	3	2,350
Paving	3	16	11	0	1	1	1,586
Construction	4	17	16	0	1	1	2,338

<table>
<tr><th>Topic/Impact Number</th><th>Impact Description</th><th>Significance</th><th>MM</th><th>Residual Significance</th></tr>
<tr><td></td><td></td><td></td><td>
<table>
<tr><td>Coating</td><td>78</td><td>0</td><td>1</td><td>0</td><td>0</td><td>0</td><td>94</td></tr>
<tr><td>PCAPCD Threshold (lbs/day)</td><td>82</td><td>82</td><td>550</td><td>N/A</td><td>82</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Threshold Exceeded After Mitigation?</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td></tr>
</table>
Source: URBEMIS 2007 v. 9.2.4 Outputs
TABLE 10-15
PHASE 3 SHORT-TERM MITIGATED PROJECT EMISSIONS
<table>
<tr><th rowspan="2">Emissions Source</th><th colspan="7">Pollutant (pounds/day)</th></tr>
<tr><th>ROG</th><th>NO_x</th><th>CO</th><th>SO_x</th><th>PM_{10}</th><th>$PM_{2.5}$</th><th>CO_2</th></tr>
<tr><td>Fine Grading</td><td>3</td><td>22</td><td>12</td><td>0</td><td>2</td><td>1</td><td>2,350</td></tr>
<tr><td>Construction</td><td>1</td><td>8</td><td>5</td><td>0</td><td>0</td><td>0</td><td>975</td></tr>
<tr><td>Coating</td><td>12</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>14</td></tr>
<tr><td>PCAPCD Threshold (lbs/day)</td><td>82</td><td>82</td><td>550</td><td>N/A</td><td>82</td><td>N/A</td><td>N/A</td></tr>
<tr><td>Threshold Exceeded After Mitigation?</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td><td>No</td></tr>
</table>
</td><td></td></tr>
<tr><td>Impact 10-2</td><td>Contribute Substantially to an Existing Air Quality Violation</td><td>LTS</td><td>None required.</td><td>LTS</td></tr>
<tr><td>Impact 10-3</td><td>Violate Any Air Quality Standard or Contribute Substantially to a Projected Air Quality Violation</td><td>LTS</td><td>None required.</td><td>LTS</td></tr>
</table>

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 10-4	Expose Sensitive Receptors to Toxic Air Contaminants	LTS	None required.	LTS
Impact 10-5	Conflict With or Obstruct Implementation the Air Quality Attainment Plan	LTS	None required.	LTS
Impact 10-6	Create Objectionable Odors	LTS	None required.	LTS
Noise				
Impact 11-1	Traffic Noise Impacts to Surrounding Land Uses	PS	**Construct sound wall of 7 feet elevation along the western property line** As part of project construction, a sound wall shall be built along the western property line of the proposed project. Noise barriers shall be constructed of concrete masonry units, solid concrete panels, earthen berms, or any combination of these materials. Wood is not recommended due to eventual warping and degradation of acoustical performance. Other types of materials shall be reviewed by an acoustical consultant prior to use. **Submit a Post-Project Assessment Program** The applicant shall submit a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures pertaining to noise impacts, consistent with the Placer County General Plan. **Parking Lots shall be closed at 10 p.m.** Special events shall be scheduled to end so that parking lots shall be empty no later than 10:00 p.m.	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 11-2	**Traffic Noise Impacts to the Proposed Project**	LTS	None required.	LTS
Impact 11-3	Construction-Related Noise Impacts	**PS**	**Limit hours of Truck deliveries** Truck deliveries and loading/unloading activities shall be restricted to the hours of 6 a.m. to 8 p.m. Monday through Friday and 8 a.m. to 8 p.m. on Saturdays and Sundays. **Develop and Implement a Construction Noise Abatement Program** Construction activities shall adhere to the following noise control measures as required by the Placer County General Plan Noise Element and Granite Bay Community Plan Noise Element: Traffic shall be rerouted onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses; In coordination with the Placer County Department of Public Works, truck traffic shall be required to lower speed limits to 25 miles per hour on and in the vicinity of the project site; Construction activities shall be limited to daytime hours 6 a.m. to 8 p.m. Monday through Friday and 8 a.m. to 8 p.m. on Saturdays and Sundays. Implement mitigation measure **MM 11-3a.**	**LTS**
Impact 11-4	Impacts of On-Site Noise Sources on Nearby Residential Uses	LTS	None required.	LTS
Geology and Soils				
Impact 12-1	Exposure to Strong Seismic Shaking	LTS	None required.	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 12-2	Seismic-Related Impacts	LTS	None required beyond compliance with the requirements of the Geotechnical Engineering Report prepared by Holdrege and Kull (2009).	LTS
Impact 12-3	Erosion and Loss of Topsoil	PS	**Mitigation Measure 12-3 Erosion Mitigation Measures** Water quality best management practices (BMPs) shall be designed according to the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and/or for Industrial and Commercial, and/or other similar source as approved by the County Engineering and Surveying Department (ESD). Construction (temporary) BMPs for the project include, but are not limited to, a stabilized construction entrance, straw wattles, silt fences, water bars/berms, flow spreaders, gravel bags, straw mulch, inlet filters, sediment traps, and revegetation of disturbed areas. Storm drainage from on- and off-site impervious surfaces (including roads) shall be collected and routed through specially designed catch basins, vegetated swales, vaults, infiltration basins, water quality basins, filters, etc. for entrapment of sediment, debris, and oils/greases or other identified pollutants, as approved by the ESD. BMPs shall be designed at a minimum in accordance with the Placer County Guidance Document for Volume and Flow-Based Sizing of Permanent Post-Construction Best Management Practices for Stormwater Quality Protection. Post-development (permanent) BMPs for the project include, but are not limited to, clarifying basins, erosion mat/rock lines/seeded ditches and swales, rock flow spreaders, and detention basins. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			authorized by project approvals. All BMPs shall be maintained as required to ensure effectiveness. The applicant shall provide for the establishment of vegetation, where specified, by means of proper irrigation. Proof of ongoing maintenance, such as contractual evidence, shall be provided to the ESD upon request. Maintenance of these facilities shall be provided by the project owners/permittees unless, and until, a County Service Area is created and said facilities are accepted by the County for maintenance. Contractual evidence of a monthly parking lot sweeping/vacuuming and catch basin cleaning program shall be provided to the ESD upon request. Failure to do so will be grounds for discretionary permit revocation. Prior to Improvement Plan or Final Map approval, easements shall be created and offered for dedication to the County for maintenance and access to these facilities in anticipation of possible County maintenance. The applicant shall obtain a construction stormwater quality permit of the National Pollutant Discharge Elimination System (NPDES) program from the State Regional Water Quality Control Board and shall provide to the Engineering and Surveying Department evidence of a state-issued WDID number or filing of a Notice of Intent and fees prior to start of construction. This project is located within the area covered by Placer County's municipal stormwater quality permit, pursuant to the National Pollutant Discharge Elimination System (NPDES) Phase II program. Project-related stormwater discharges are subject to all applicable requirements of this NPDES permit. BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff in accordance with "Attachment 4" of Placer County's NPDES Municipal Stormwater Permit (State Water Resources Control Board	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			NPDES General Permit No. CAS000004). Graded portions of the site shall be seeded as soon as possible to allow vegetation to become established prior to and during the rainy season. In addition, since grading will result in more than one acre of soil disturbance, the applicant shall prepare a site-specific stormwater pollution prevention plan. At a minimum, the following controls shall be installed prior to and during grading to reduce erosion. Prior to commencement of site work, fiber rolls shall be installed down slope of the proposed area of disturbance to reduce migration of sediment from the site. Fiber rolls on slopes are intended to reduce sediment discharge from disturbed areas, reduce the velocity of water flow, and aid in the overall revegetation of slopes. The fiber rolls shall remain in place until construction activity is complete and vegetation becomes established. Soil exposed in permanent slope faces shall be hydroseeded or hand seeded/strawed with an appropriate seed mixture compatible with the soil and climate conditions of the site as recommended by the local Resource Conservation District. Following seeding, jute netting or erosion control blankets shall be placed and secured over the slopes steeper than 2:1, horizontal to vertical. Surface water drainage ditches shall be established as necessary to intercept and redirect concentrated surface water away from cut and fill slope faces. The intercepted water shall be discharged into natural drainage courses or into other collection and disposal structures. The applicant shall prepare and submit Improvement Plans,	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			specifications, and cost estimates (per the requirements of Section II of the Land Development Manual [LDM] that are in effect at the time of submittal) to the Engineering and Surveying Department (ESD) for review and approval of each project phase. The plans shall show all conditions for the project as well as pertinent topographical features both on- and off-site. All existing and proposed utilities and easements, on-site and adjacent to the project that may be affected by planned construction shall be shown on the plans. All landscaping and irrigation facilities within the public right-of-way (or public easements), or landscaping within sight distance areas at intersections, shall be included in the Improvement Plans. The applicant shall pay plan check and inspection fees. Prior to plan approval, all applicable recording and reproduction costs shall be paid. The cost of the above-noted landscape and irrigation facilities shall be included in the estimates used to determine these fees. It is the applicant's responsibility to obtain all required agency signatures on the plans and to secure department approvals. If the design/site review process and/or Placer County Development Review Committee (DRC) review is required as a condition of approval for the project, said review process shall be completed prior to submittal of Improvement Plans. Record drawings shall be prepared and signed by a California Registered Civil Engineer at the applicant's expense and shall be submitted to the ESD in both electronic and hard copy format prior to acceptance by the County of site improvements. All proposed grading, drainage improvements, vegetation, tree impacts, and tree removal shall be shown on the Improvement Plans and all work shall conform to provisions of the County Grading Ordinance (Section 15.48, Placer County Code) and the Placer County Flood Control District's Stormwater Management Manual. The applicant shall pay plan check fees and inspection fees. No grading, clearing, or tree disturbance shall occur until:	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			Improvement Plans are approved and any required temporary construction fencing has been installed and inspected by a member of the Placer County Development Review Committee (DRC). All cut/fill slopes shall be at 2:1 (horizontal to vertical) unless a soils report supports a steeper slope and the Engineering and Surveying Department (ESD) concurs with said recommendation. All facilities and/or easements dedicated or offered for dedication to Placer County or to other public agencies which encroach on the project site or within any area to be disturbed by the project construction shall be accurately located on the Improvement Plans. The intent of this requirement is to allow review by concerned agencies of any work that may affect their facilities. The applicant shall revegetate all disturbed areas. Revegetation undertaken from April 1 to October 1 shall include regular watering to ensure adequate growth. A winterization plan shall be provided with project Improvement Plans. It is the applicant's responsibility to assure proper installation and maintenance of erosion control/winterization during project construction. Erosion control will be provided where roadside drainage is off of the pavement, to the satisfaction of the ESD. Submit to the ESD a letter of credit or cash deposit in the amount of 110 percent of an approved engineer's estimate for winterization and permanent erosion control work prior to Improvement Plan approval to guarantee protection against erosion and improper grading practices. Upon the County's acceptance of improvements and satisfactory completion of a one-year maintenance period, unused portions of said deposit shall be refunded to the project applicant or authorized agent. If, at any time during construction, a field review by County	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			personnel indicates a significant deviation from the proposed grading shown on the Improvement Plans, specifically with regard to slope heights, slope ratios, erosion control, winterization, tree disturbance, and/or pad elevations and configurations, the plans shall be reviewed by the DRC/ESD for a determination of substantial conformance to the project approvals prior to any further work proceeding. Failure of the DRC/ESD to make a determination of substantial conformance may serve as grounds for the revocation/modification of the project approval by the appropriate hearing body. Any work affecting facilities maintained by, or easements dedicated or offered for dedication to, Placer County or other public agency may require the submittal and review of appropriate Improvement Plans by the ESD or the other public agency. Staging Areas: Stockpiling and/or vehicle staging areas shall be identified on the Improvement Plans and located as far as practical from existing dwellings and protected resources in the area. **MM 12.3h** If blasting is required for the installation of site improvements, the developer will comply with applicable County ordinances that relate to blasting and use only contractors licensed by the State of California to conduct these operations.	
Impact 12-4	Unstable Geologic Unit	LTS	None required beyond compliance with the requirements of the Geotechnical Engineering Report prepared by Holdrege and Kull (2009).	LTS
Impact 12-5	Expansive Soils	PS	**Mitigation Measure 12-5 Expansive Soils Mitigation Measures** Fine grained, potentially expansive soil, as determined by the project's geotechnical engineer, that is encountered during grading shall be mixed with granular soil or overexcavated and stockpiled for removal from the project site or for later use in landscape areas. A	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			typical mixing ratio for granular to expansive soil is 4 to 1. The actual mixing ratio shall be determined by the project's geotechnical engineer. Soil used for fill shall consist of uncontaminated, predominantly granular, non-expansive native soil or approved import soil. Rock used in fill shall be broken into pieces no larger than 8 inches in diameter. Rocks larger than 8 inches are considered oversized material and shall be stockpiled for off-haul or later use in landscape areas and drainage channels. Cohesive, predominantly fine grained, or potentially expansive soil encountered during grading shall be stockpiled for removal, mixed as directed by the project engineer, or used in landscape areas. As an option, cohesive fine grained or potentially expansive soil can often be placed in the deeper portions of proposed fill (e.g., depths greater than 3 feet below subgrade in building footprints). However, this option would have to be evaluated on a case-by-case basis with consideration of the fill depth and proposed loading. Footings for single story structures shall be a minimum of 12 inches wide and trenched through any loose surface material, potentially expansive soil, or untested fill, and a minimum of 12 inches into competent native soil, weathered rock or compacted fill. Footings for two-story structures shall be a minimum of 15 inches wide and trenched a minimum of 18 inches into competent native soil, weathered rock, or compacted fill. If clay is encountered at the base of footing excavations, the footing shall be deepened through the clay lens into underlying granular material or weathered rock, as determined in the field by the project engineer.	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			Prior to placing the vapor retarder and concrete, slab subgrade soil must be moisture conditioned to between 75 and 90 percent saturation to a depth of 24 inches. Moisture conditioning shall be performed for a minimum of 24 hours prior to concrete placement. Clayey soil may take up to 72 hours to reach this required degree of saturation. If the soil is not moisture conditioned prior to placing concrete, moisture will be wicked out of the concrete, possibly contributing to shrinkage cracks. Additionally, moisture conditioning the soil prior to placing concrete will reduce the likelihood of soil swell or heave following construction at locations where fine grained, potentially expansive soil is encountered. To facilitate slab-on-grade construction, the project geotechnical engineer recommends that the slab subgrade soil be moisture conditioned following rock placement. Following moisture conditioning, the vapor retarder shall be placed.	
Hydrology and Water Quality				
Impact 13-1	Degrade Water Quality – Construction	PS	**MM 13-1a Properly destroy on-site groundwater well via permit** In order to protect the existing water table, the water well shall be properly destroyed via permit through the Placer County Environmental Health Services Department prior to approval of the Improvement Plans. Additionally, the water well location shall be shown on the Improvement and Grading Plans to prevent the well from being damaged by grading equipment. **MM 13-1b Implement best management practices during construction** The applicant shall implement temporary BMPs to include minimum erosion control measures such as straw logs, silt fence, water bars, or	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			diversion berms directing stormwater to flow spreaders, gravel bags, straw mulch, and inlet filters. The project shall utilize a gravel construction entry which would reduce tracked mud onto Sierra College Boulevard. Sediment traps shall be installed to protect the wetlands.	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 13-2	Degrade Water Quality – Operation	PS	**Implement best management practices after construction and during operation of the proposed project (Proposed)** **THE APPLICANT SHALL IMPLEMENT PERMANENT BMPS TO INCLUDE THE MINIMUM EROSION CONTROL MEASURES SUCH AS INLETS, CULVERTS, OPEN CLARIFYING BASINS, EROSION MAT-LINED, ROCK-LINED OR SEEDED DITCHES, ROCK FLOW SPREADERS, AND DETENTION BASINS. SEEDING, MULCHING, AND LANDSCAPING ARE PROPOSED TO STABILIZE DISTURBED SOILS.** **Include specific design details and criteria to implement the permanent BMPs** The following design details and criteria shall be followed to implement the permanent best management practices required on the project site. Culverts 30 inches in diameter and less shall be designed for 50 percent blockage at the inlet, as in the case of a FES (flared end section). However, where there is a grated inlet or OMP inlet with 8-inch maximum size opening, the inlet shall be designed for 50 percent blockage, but the culvert connected to such an inlet may be sized without blockage (figuring that large objects cannot enter through the inlet openings and then block the culvert). Lined ditches, vegetative sediment basins, or grass swales shall be sized for the 100-year storm flow with no overtopping, taking into consideration the slope of the water surface at curves in the ditches. Where the HEC-1 computer program is not used, the following Placer County formulas shall be used to determine peak discharge from contributing areas:	LTS

Sheet flow: $t_r = \frac{.355(nL)^{.6}}{S^{.3}}$

$00735Ln^{.75}(1+z)^{.25}$

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 13-3	Increase Stormwater Runoff	PS	**Prepare and adhere to final drainage study** The Engineering and Surveying Department shall review the preliminary drainage study dated December 23, 2008 submitted by the project proponent. The Department shall determine if this study is adequate and meets all applicable standards including Section 5 of the Placer County Land Development Manual and the Placer County Storm Water Management Manual that are in effect at the time review. Any changes to the preliminary study required to achieve compliance with applicable standards shall be incorporated into a final drainage study which shall be submitted with the project Improvement Plans to the Department for final review and approval. All provisions of the final drainage study shall be adhered to during design, construction and operation of the proposed project. **MM 13-3b Reduce stormwater runoff to pre-project conditions** Stormwater runoff shall be reduced to pre-project conditions through the installation of detention facilities. Detention facilities shall be designed in accordance with the requirements of the Placer County Storm Water Management Manual that are in effect at the time of submittal and to the satisfaction of the Engineering and Surveying Department (ESD). The ESD may, after review of the project drainage report, delete this requirement if it is determined that drainage conditions do not warrant installation of this type of facility. In the event on-site detention requirements are waived, this project may be subject to payment of any in-lieu fees prescribed by County Ordinance. No retention/detention facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals. **MM 13-3c Design drainage facilities in accordance with**	**LTS**

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			County requirements Drainage facilities, for purposes of collecting runoff on the project site, shall be designed in accordance with the requirements of the Placer County Storm Water Management Manual that are in effect at the time of submittal and shall be in compliance with applicable stormwater quality standards, to the satisfaction of the Engineering and Surveying Department (ESD). These facilities shall be constructed with site improvements and easements provided as required by ESD. Maintenance of these facilities shall be provided by the property owners. **MM 13-3d Pay drainage improvement and flood control fees** The applicant is subject to the one-time payment of drainage improvement and flood control fees pursuant to the Dry Creek Watershed Interim Drainage Improvement Ordinance (Ref. Chapter 15, Article 15.32, Placer County Code). The current estimated development fee is $2,493, payable to the Engineering and Surveying Department prior to building permit issuance. The actual fee shall be that in effect at the time payment occurs. **MM 13-3e Fence preserved vernal pools to prevent trespass and damage** The vernal pools that are to remain undisturbed shall be surrounded with colored poly fencing prior to the start of construction. A low profile permanent perimeter fence with signs shall be constructed once project construction is completed to identify the pools in the dry season and prevent trespass and damage to the pools. **MM 13-3f Improve or rebuild dam to increase detention capacity**	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			The applicant shall retain a qualified engineer to assess the structural integrity of the dam on the project site based on all applicable state and local standards. Based on the results on this assessment, one of the following courses shall be taken: If the dam is found to have the required integrity, including a non-seeping core, a new spillway shall be constructed with a lower spill elevation to increase the available detention volume. A lower spill elevation would lower the pond's normal water surface by 1.8 feet. This could cause a loss of wetland habitat. In order for these improvements to be implemented, the pond would be partially drained and there would be disturbance to the spillway area during construction. The U.S. Army Corps of Engineers Section 404 permit for the project (required under mitigation measure MM 6-6) shall address this potential loss of wetland at the spillway and pond perimeter. If the dam is found not to have the required integrity, it shall be rebuilt to meet all structural requirements. The new dam shall be constructed at an elevation 1.8 feet higher than the existing dam's elevation and the associated spillway shall be constructed at the existing spillway's elevation. This would result in the pond's water surface remaining the same but the footprint of the dam would increase, resulting in a loss of wetland habitat at the spillway. In order for these improvements to be implemented, the pond would be completely drained and there would be disturbance to the pond during construction. The dam slope shall be planted with grass of like kind to the existing site vegetation. Any trees removed shall be replanted with like kind in a compatible location. The U.S. Army Corps of Engineers Section 404 permit for the project (required under mitigation measure MM 6-6) shall address the potential loss of wetland habitat at the spillway.	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			In addition, a new concrete weir shall be constructed at the spillway channel. As a result, the pond spillway would discharge less than pre-development flow to Point B. Pond B1 would then function as a detention basin in accordance with Placer County drainage standards and the criteria listed in the Preliminary Drainage Report for the project (**Appendix 13**).	
Impact 13-4	Deplete Groundwater Supplies or Interfere with Groundwater Recharge	LTS	**None required.**	**LTS**
Impact 13-5	Flooding Hazards	N	**None required.**	**N**
Public Services				
Impact 14.1-1	Fire Protection and Emergency Medical Services	LTS	**None required.**	**LTS**
Impact 14.2-1	**Law Enforcement Services**	LTS	**None required.**	**LTS**
Impact 14.3-1	Impacts on Schools and Related Facilities	N	None required.	N
Impact 14.4-1	Electrical, Natural Gas and Telecommunication Services	LTS	**None required.**	**LTS**
Impact 14.5-1	Park and Recreation Facilities	N	None required.	N

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 14.6-1	Solid Waste Disposal	LTS	**None required.**	**LTS**
Impact 14.7-1	Project Water Demand	LTS	**None required.**	**LTS**
Impact 14.7-2	Water System Facilities	**PS**	**Enter into a Facilities Agreement** Prior to issuance of building permits for the project, the project applicant shall enter into a facilities agreement with the PCWA to provide any on-site or off-site pipelines or other facilities needed to supply water for domestic or fire protection services. **Pay All Applicable Fees** Prior to issuance of building permits for the project, the project applicant shall pay all applicable fees and charges required by the PCWA. **Install PCWA approved Backflow Prevention Device** Prior to issuance of building permits for the project, the project applicant shall install a PCWA-approved backflow prevention device on the existing on-site well.	LTS
Impact 14.8-1	Wastewater Treatment Impacts	**PS**	**Obtain Approval from SPWA** Prior to issuance of building permits for the project, the project applicant shall obtain an approval action from the SPWA for the modification of the SAB to include the project site. The project shall obtain Placer County Board of Supervisor's approval for annexation into SMD # 2 after approval by SPWA for modification of the SAB. In addition, modification of the agreement between SPMUD and Placer County is required. **Review Existing Chemical Building Dosing Capacity** The existing chemical building dosing capacity shall be reviewed to	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			determine if it is sufficient for the proposed increased flows. **Maintain Existing Septic and Grease Trap Tanks** The project's septic and grease trap tanks shall be maintained to minimize pump screen plugging and to minimize solids from being pumped into the STEP system. These tanks' bottom solids levels and top scum thicknesses shall be periodically checked and the contents pumped in accordance with the requirements of the Placer County Facilities Services Environmental Engineering Division. Typically the grease trap tank contents will be sent to a licensed grease rendering facility.	
Impact 14.8-2	Wastewater Collection and Conveyance Impacts	**PS**	**Comply with Mitigation Identified in the Low Pressure (STEP) Sewer System Design Report for Amazing Facts Church with Annexation to Placer County SMD #2 (King Engineering; June 11, 2009)** The project shall demonstrate conformance with all design criteria and mitigation identified in King Engineering report entitled *Low Pressure (STEP) Sewer System Design Report for Amazing Facts Church with Annexation to Placer County SMD #2* and dated June 11, 2009. **Existing Wastewater System to Comply with County DEH Standards** The on-site wastewater system shall comply with all requirements and standards of the County Division of Environmental Health.	LTS
Climate Change				
Impact 16-1	Greenhouse Gas Emissions and Global	**PS**	**MM 16-1a Reduce Vehicle Emissions**	LTS

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
	Climate Change		The project applicant shall: Provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles. Tree plantings for parking lots shall be in compliance with the Placer County Design Guidelines Manual. Implement on-site circulation design elements in parking lots such as no parking areas in front of the main church facility; limiting passenger loading and unloading zones to a maximum of three (3) minutes; providing for adequate pedestrian cross-walks and walkways between the parking lot areas and the church facilities, to reduce vehicle queuing and improve the pedestrian environment **MM 16-1b Reduce VMT** The project shall include on and off-site pedestrian and bicycle improvements to encourage non-motorized forms of transportation, secure bike storage at parks and recreation areas and retail facilities, new bicycle lanes. **MM 16-1c Energy Efficient Building Design** The project applicant shall: Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use. Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings. Install light colored “cool” roofs, cool pavements, and	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
			strategically placed shade trees. Install energy efficient heating and cooling systems, appliances including low-flow plumbing fixtures and waterless urinals and equipment and control systems, double-paned windows. Install door sweeps and weather stripping if more efficient doors and windows are not available. Use low-energy parking lot and streetlights (i.e. sodium). **MM 16-1d Reduce waste flows** The project shall provide interior and/or exterior storage areas where appropriate for recyclables and green waste and adequate recycling containers located in public areas if such recycling programs are available. **MM 16-1e Implement water-wise operations** The project shall: Install high-efficiency fixtures and equipment to reduce energy and water usage, including Energy Star equipment Create water-efficient landscapes Install water-efficient irrigation systems and devices such as soil moisture-based irrigation controls. Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff	

Topic/Impact Number	Impact Description	Significance	MM	Residual Significance
Impact 16-2	Exposure of Persons to Substantial Impacts from Global Climate Change	**LTS**	**None required.**	LTS

AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Aspects of the proposed project that could be of public concern include the following:

- Conversion of existing agricultural and open space to urbanized use;
- Visual impacts to the existing community;
- Traffic congestion; and
- Loss or degradation of biological resources, including wetlands and special-status plant habitat.

3.0
PROJECT DESCRIPTION

3.0 PROJECT DESCRIPTION

The purpose of the project description is to describe the project in a way that will be meaningful to the public, reviewing agencies, and decision-makers. As described in Section 15124 of the State CEQA Guidelines, the project description in an Environmental Impact Report (EIR) is required to contain the following information:

- the location of the proposed project;
- a statement of project objectives;
- a general description of the project's technical, economic, and environmental characteristics; and,
- a statement briefly describing the intended uses of the EIR.

State CEQA Guidelines state that a project description need not be exhaustive but should provide the level of detail needed for the evaluation and review of potential environmental impacts. The project description is the starting point for all environmental analysis required by the State CEQA Guidelines. Section 15146 of the State CEQA Guidelines states that the degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity, which is described in the EIR. In this case, the proposed project consists of the development of a church facility with associated chapel, office, reception, Sunday school classrooms, and church recording studio uses. The following project description serves as the basis for the environmental analysis contained in this Draft EIR. Placer County would serve as the Lead Agency with final authority to approve the proposed project.

3.1 PROJECT LOCATION

The proposed Amazing Facts church would be located in Placer County, California within the unincorporated community of Granite Bay (**Figure 3-1**). The project site is composed of two parcels (APN 046-050-006 [69.1 acres] and APN 046-050-008 [5.1 acres]) totaling approximately 75 acres bordered by Sierra College Boulevard on the north between Night Watch Drive and Ridge Park Drive (**Figure 3-2**). The property abuts the City of Rocklin along the north property line and extends south to Oak Hill Lane in Placer County. The church campus would occupy approximately 17 acres in the northwest corner of the property (**Figure 3-3**) and would be constructed in 3 phases (**Figure 3-4**). The remaining 58 acres of the project site would remain undeveloped due to grading and site constraints.

Regional access to the site would be provided by Interstate 80 which is approximately 1.5 miles east of the site. Major roadways in the vicinity include Rocklin Road (approximately 1 mile north of the site) and Cavitt-Stallman Road (approximately one-quarter mile to the south).

3.2 STUDY AREA CHARACTERISTICS

The project site is located within the northern portion of Granite Bay and is within the boundaries of the Granite Bay Community Plan. The site is designated Rural Estate 4.6 acre to 20 acre minimum and is zoned F-B-X 20 acre minimum (farm, combining a minimum building site size of 20 acres). Elevations on the site range between approximately 300 and 520 feet with the general slope trending to the south. The northwestern portion of the site, where the church is proposed to be sited, is a relatively flat ridge top that borders Sierra College to the north.

The project site is covered with a mixture of foothill woodland and ruderal grassland habitats. In general, the ruderal grasslands occupy the flat area of the site while the oak woodlands (which include blue oaks and interior live oaks) cover the slopes. Approximately 0.223 acres of vernal pools are located on the northwestern portion of the site. Seasonal wetland and seasonal swale, intermittent drainage, ephemeral drainage and pond are located in the southern half of the site. An intermittent drainage aligns through the site and collects in a ±1 acre pond in the lower south-central part of the site and continues to the southern portion of the property where there are several small wetlands and annual grasslands. The site is located on the Merhten Formation with intermittent rock outcroppings across the site.

The site is currently undeveloped with the exception of a few manmade features including pipelines, pump houses, and an earthen-impound pond to retain water for local, downstream use.

The site drains to the south, toward an unnamed tributary to Miner's Ravine. Ground slopes range from flat to 35%. Topographic features include a man-made pond with a dam approximately 17 feet high and 300 feet long located near the middle of the site that acts as a detention basin. The volume of the pond is estimated to be 6 acre feet.

Surrounding land uses include rural residential uses to the south and west (Cavitt Ranch Estates), a wholesale nursery to the southeast, commercial/professional uses and residential areas to the north in the City of Rocklin and rural residential uses and the San Juan Water District detention basin to the east.

3.2.1 Existing General Plan and Community Plan Designations

As previously mentioned, the Placer County General Plan designates the project site as Rural Residential (RR) (see **Figure 4-2** in Section 4.0). The Granite Bay Community Plan designates the site as Rural Estate (RE) with 4.6- to 20-acre minimum parcel sizes (see **Figure 4-3** in Section 4.0).

The RR designation under the County General Plan is applied to areas generally located away from cities and unincorporated community centers, in hilly, mountainous, or forested terrain, and as a buffer zone where dispersed residential development on larger parcels would be appropriate and compatible with smaller-scale farming and ranching operations (Placer County, 1994). Typical land uses allowed include:

- Detached single-family dwellings and secondary dwellings;
- Agricultural uses such as crop production and grazing, equestrian facilities, and limited agricultural support businesses such as roadside stands and farm equipment and supplies sales;
- Resource extraction uses;
- Various facilities and services that support residential neighborhoods, such as churches, schools, libraries, child care, and medical facilities; and
- Parks and necessary public utility and safety facilities.

Similarly, the Granite Bay Community Plan's designation of Rural Estate (RE) is used to recognize those areas where the continued rural or agricultural uses of land are to be maintained

and protected in perpetuity. This particular designation allows for a high number of family farms or hobby farms to satisfy a growing demand for home sites where an individual can raise a large home vegetable garden, orchard, Christmas tree farm, or livestock. This designation also includes areas unsuited for more dense residential development due to constraints imposed by natural features, such as soils, geology, and hydrologic factors, and man-made constraints, such as a lack of adequate roadways and unavailability of public sewers and water as well as other public services. The Community Plan does not provide a list of specifically permitted uses within this designation. However, the permitted zoning districts for this designation, Single Family Residential, Agricultural Residential, Farm and Open Space, provide further definition (Placer County, 2005). Each of these zoning districts considers houses of worship accessory uses requiring a minor use permit (Placer County, 2009a).

3.3 PROJECT OBJECTIVES

- Develop the Amazing Facts worship facility and offices to accommodate the multi-faceted ministry that supports their local and worldwide mission.
- Develop a church facility to serve the surrounding community.
- Provide a consistent style of architecture to ensure that development is compatible and complementary with the existing visual character in the region;
- Create an efficient circulation pattern for vehicles, pedestrians, and bicyclists;
- Provide adequate infrastructure and public services to support the proposed development;
- Identify and incorporate natural resources into the proposed development area as feasible; and
- Provide for the orderly and systematic development in a method consistent with the Placer County Zoning Ordinance.

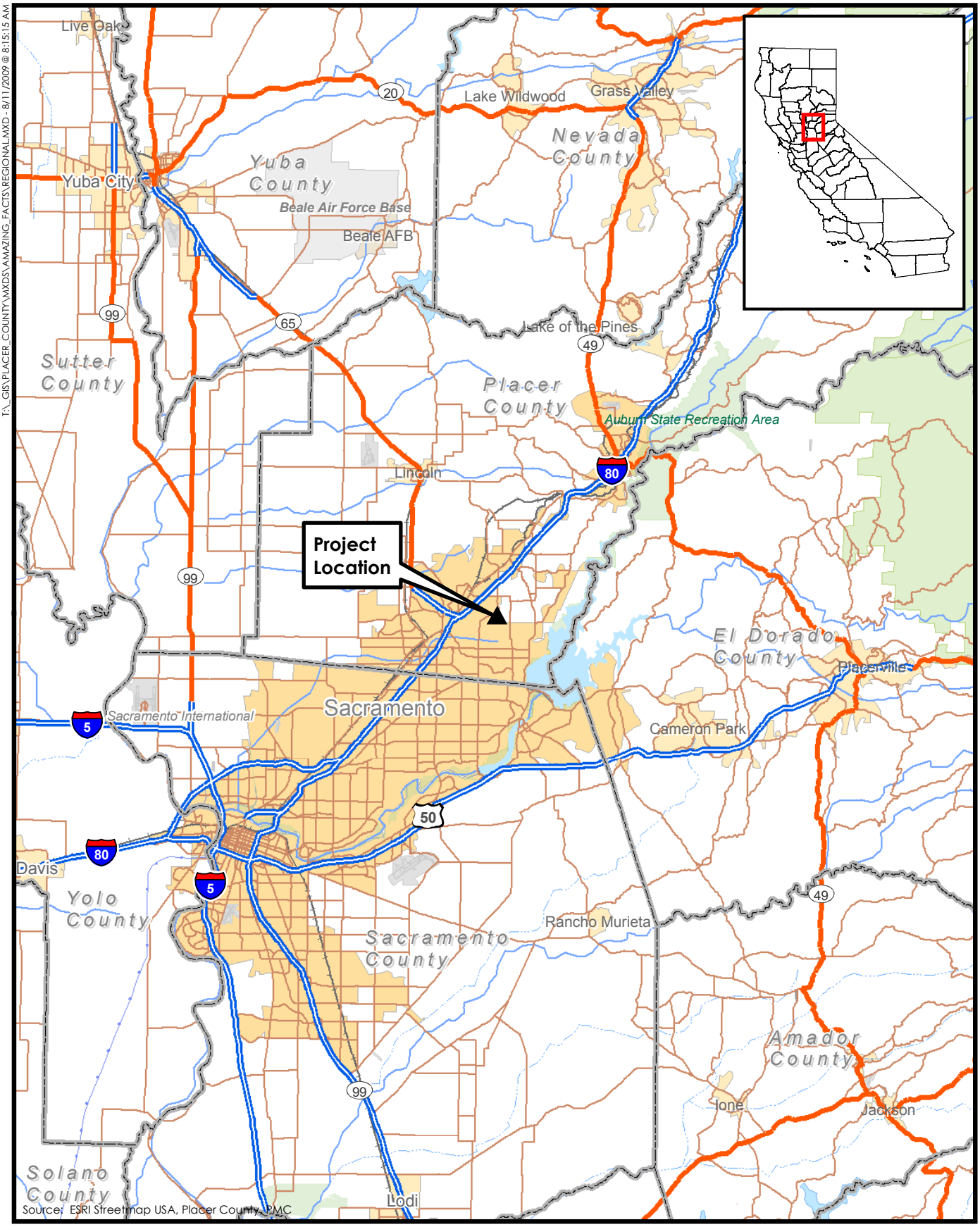

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Figure 3-1
Regional Location Map

PMC®

T:_GIS\PLACER_COUNTY\MXDS\AMAZING_FACTS\AERIAL.MXD - 8/11/2009 @ 8:11:43 AM

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FEET

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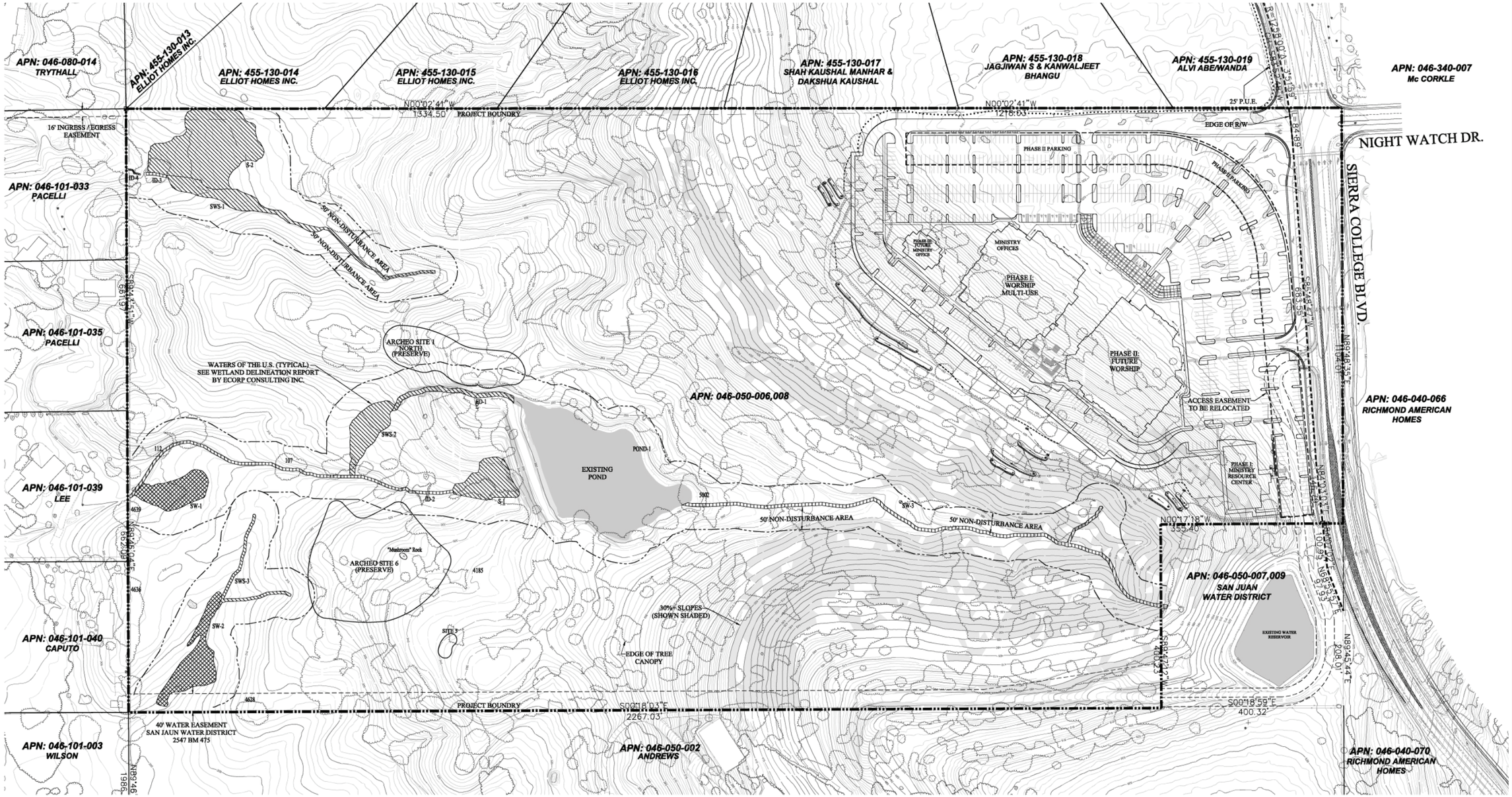
Figure 3-2
Aerial of Project Site

PMC®

T:_CS\Work\Placer_County of\Amazing Facts Ministry 28-0120\figures\Initial Study



Source: King Engineering, 2008

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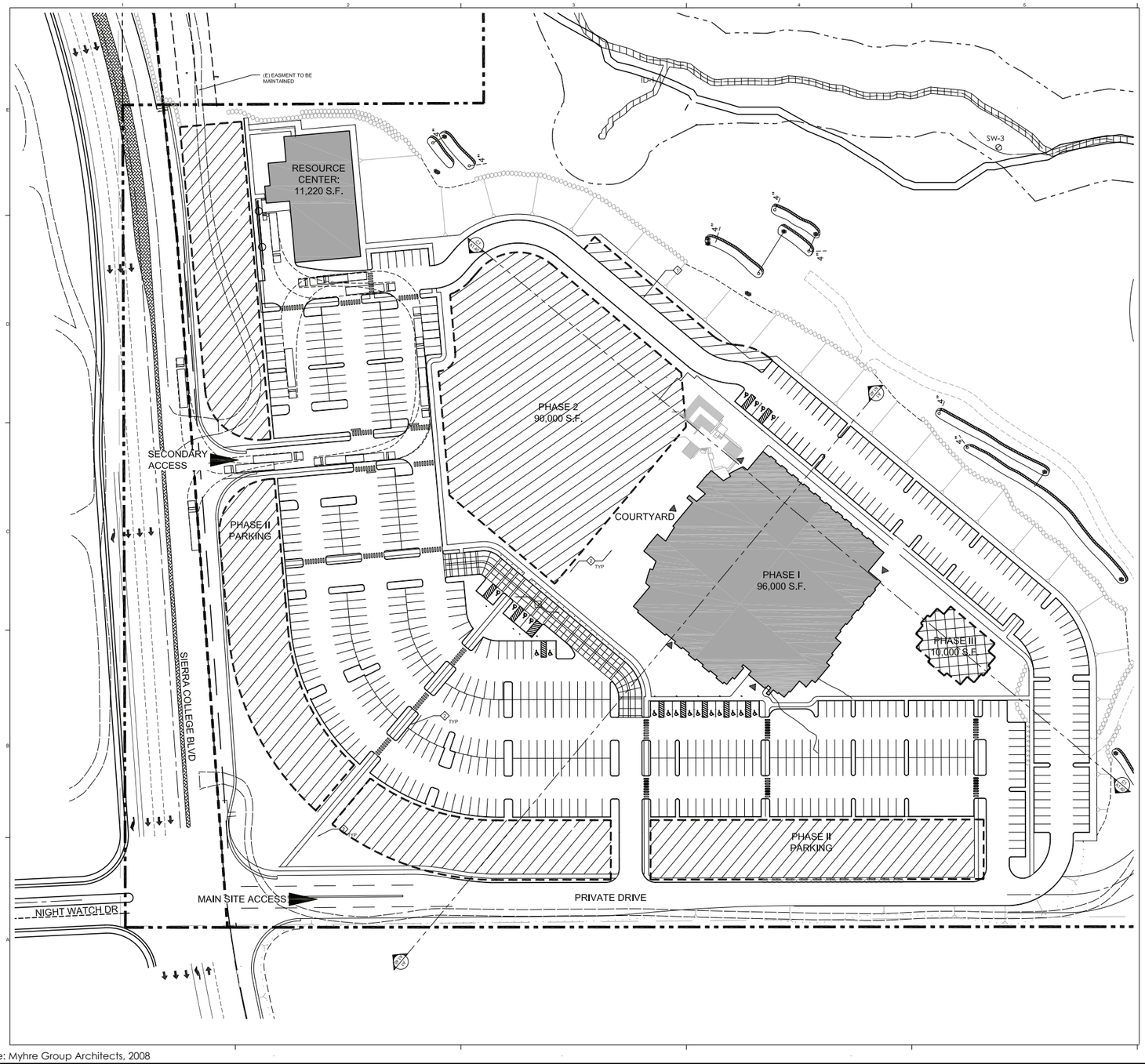
Figure 3-3
Preliminary Site Plan

PMC®

T:_CS\Work\Placer. County of\Amazing Facts Ministry 28-0120\figures\Initial Study



Source: Myhre Group Architects, 2008

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SITE NOTES

A. FIELD VERIFY ALL INFORMATION PRIOR TO CONSTRUCTION. IF SITE CONDITIONS VARY FROM CONTRACT DOCUMENTS, NOTIFY ARCHITECT IN WRITING IMMEDIATELY

B. COORDINATE FINAL GRADE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING(S).

C. ARCHITECT'S DRAWINGS DO NOT REFLECT SITE AND LANDSCAPE LIGHTING.

D. EXPANSION JOINTS ARE SHOWN ON ARCHITECTURAL SITE PLAN(S), ALL OTHER LINES WITHIN CONCRETE PAVING AREAS ARE CONTROL JOINTS, UNLESS NOTED OTHERWISE.

KEYNOTES

1. FIRE ACCESS LANE. TO BECOME PARKING AISLE IN PHASE 2.
2. SEE LANDSCAPE PLAN
3. VEHICULAR PLAZA

PARKING COUNT

PHASE 1 PARKING: 625 SPACES TOTAL (19 HC)

SITE PLAN LEGEND

- LINE OF PROPOSED EASEMENT
- ASSUMED PROPERTY LINE
- LIMIT OF CONSTRUCTION
- AREA OF PHASE 2 CONSTRUCTION
- FUTURE PHASE 2 DEVELOPMENT
- FUTURE PHASE 3 DEVELOPMENT
- POINT OF ENTRY, REFER TO FLOOR PLANS

Figure 3-4
Phasing Plan

PMC®

3.4 DESCRIPTION OF PROPOSED PROJECT CHARACTERISTICS

The proposed Amazing Facts Church project includes construction of a 17 acre campus which would support its various ministries which include television, radio, internet, publishing, and the Amazing Facts School of evangelism and training. The project includes three phases (described below). The proposed project would be constructed in three phases with buildings totaling ±208,000 square foot (sf). Building heights will range from 42 feet to 62 feet. The proposed project will be oriented to the north towards Sierra College Boulevard with the structures setback from the roadway (approximately 295 feet from Sierra College Boulevard) and the parking lot and landscaping serving as a buffer (**Figure 3-3**). Proposed building materials include metal and concrete panels, aluminum fronts/sunshades, and glass.

Phase I

Phase I will include the construction of an approximately 96,000 sq. ft. multi-use church facility (**Figure 3.0-4**). The main area of this phase will consist of a multi-use space that is approximately the size of the gymnasium with fixed upper level stadium seating. Removable chairs could be added to the main level creating a facility capable of accommodating up to 1,300 people. The multi-use space would have an adjoining kitchen and accommodate social and community events, banquets, athletic activities and all-church meals. This space will initially be used for Saturday worship services. Included are Sabbath school classrooms used on Saturday mornings for infants through senior adults. In addition, a fireside chapel would be used for smaller community gatherings such as various seminars on healthful living, family life, financial responsibility, small weddings, funeral, sing-a-longs and cooking schools. All church activities are on Saturday with typical worship times starting at 9:00 a.m. until 12:30 p.m. Members typically arrive from 9:00 a.m. to 10:45 for service.

Approximately 20,000 square feet of this building will house ministry offices for approximately 80 employees over the next five years, 60 of which would be full-time Ministry employees and 20 of which would be volunteers who typically donate their services. Activities conducted in the ministry offices include routine office type activities associated with operating a non-profit media ministry. Also housed in this building are a recording studio and green rooms. The office staff works in a quiet environment with minimal traffic on most business days. Normal hours of operation are 8:00 a.m. to 6:00 p.m. Monday through Thursday with occasional work on Fridays. An 11,220 sq. ft. resource center building is included in Phase I. The purpose of this single story building is to support the ministry in housing materials such as CD's, tapes, periodicals, etc. A total of 624 parking spaces will be developed as part of this phase.

Phase 2

Phase 2 will include a 90,000 sq. ft. detached facility to serve as the main sanctuary for this ministry (**Figure 3-4**). This phase will also include associated Sabbath school classrooms, a central lobby area, a small chapel area, and expanded offices to accommodate and support the increased congregation size. Upon completion, this facility will have the capability of seating approximately 2,000 people for Saturday worship. Activities and times would be the same as described above. No amplified outdoor activities are planned. Phase 2 is currently not planned for construction and only upon building a congregation that exceeds the capacity of the Phase I facilities would Phase 2 be constructed. An additional 272 parking spaces would be developed as part of Phase 2.

Phase 3

Phase 3 will add a 10,000 sq. ft. detached building to include additional offices and classrooms to accommodate anticipated ministry growth. This building would be used exclusively for ministry support offices. This phase is currently not planned for construction and only upon exceeding capacity for Phase 1 will this phase be considered.

Parking

On site parking will include +/- 1,000 off-street parking stalls as depicted on submitted plans (refer to **Figure 3-4**). This includes 429 parking spaces required by Placer County's "House of Worship" requirements of 0.33 spaces per seat in the principle worship areas (1300 x 0.33 = 429) for Phase I, and the 660 parking spaces for Phase II (2000 x 0.33 = 660). The proposed parking layout includes provision for required landscape and traffic flow. The intent is to phase parking according to construction phasing. The applicant is anticipating that office use during the week can utilize/share parking necessary for worship due to time of use.

Lighting

The project site will be lighted at night with a variety of lighting types. Pole mounted lights will be used in the parking lot. Some pole fixtures will have single lamps while others will have two arm mounts. Poles will be approximately 16 feet tall. Metal halide lamps ranging from 100 to 175 watts will be used. In addition, building lights on the exterior of the buildings and entry feature lights will also be part of the proposed lighting plan for the project. **Figure 3-5** shows the arrangement of fixtures on the project site.

Landscaping

Landscaping is proposed along the project's frontage, including entry features at the northwest corner of the project site (**Figure 3-6a**, **3-6b, 3-6c** and **3-6d**). Planting islands for trees and ground cover will be distributed throughout the entire parking lot. Areas surrounding each building would also be planted with various irrigated groundcovers, grasses, shrubs, and trees. A water feature using naturalized vegetated boulders is proposed along the east side of the Phase I Worship Center building. A landscaped entry feature is also proposed on the project site to the south of the Sierra College Boulevard and Night Watch Drive intersection. A series of retaining walls would be constructed to accommodate the lower-level parking areas, while a sound wall is also proposed along the western property line.

Signage

The proposed project will include signage as well as a steeple feature as part of the church near the main entry. Specific details of these features were not available as the project description was being formulated. However, conceptual drawings and elevations depict a vertical pillar extending above the roofline of the church (**Figure 3-7**).

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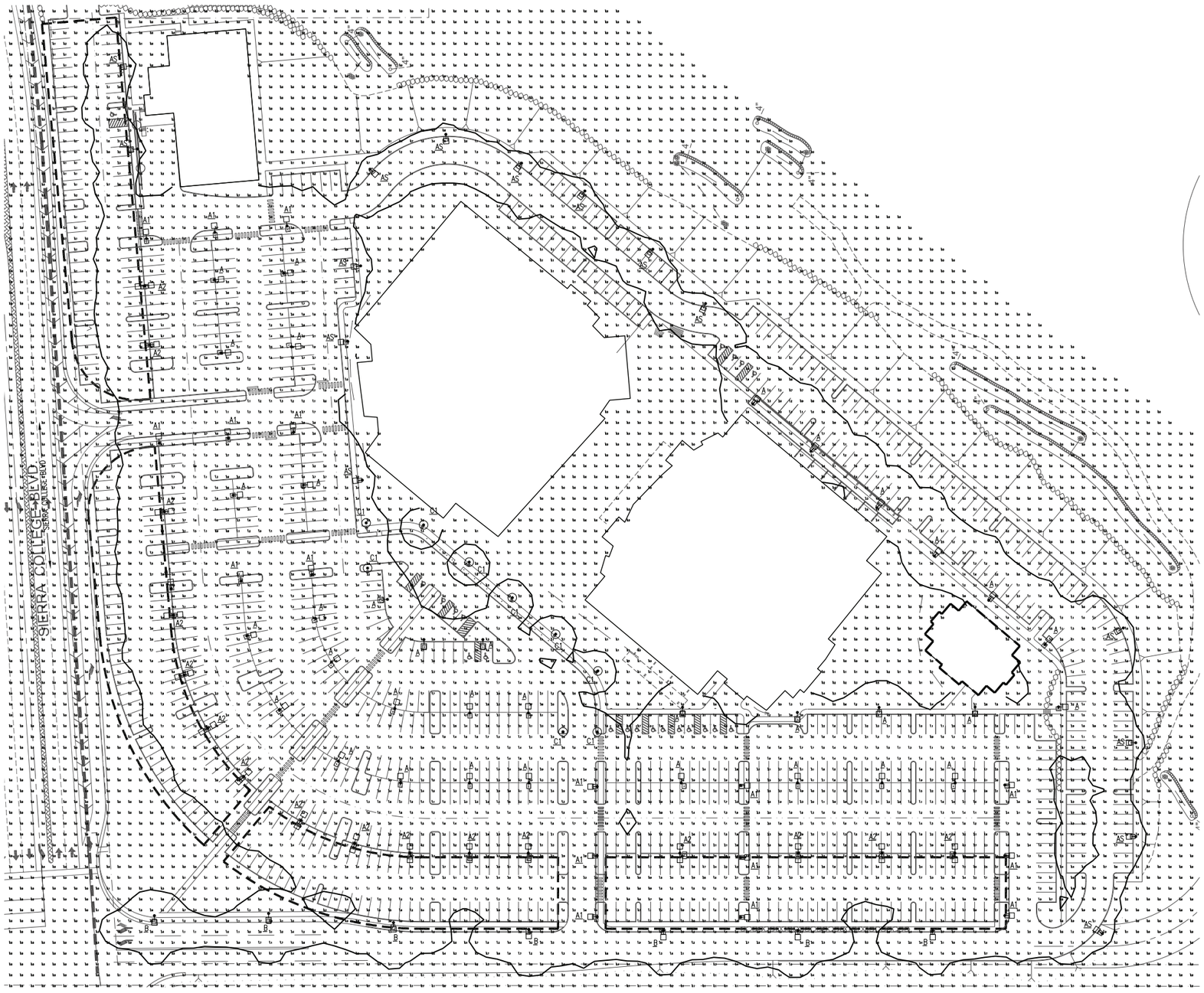


LUMINAIRE SCHEDULE

A H.I.D. OUTDOOR POLE MOUNT ⅛ 16⅔ AFG
- 1 SIZE: 31-1/2 INCH X 18 INCH X 6-1/2 INCH TALL.
- 2 LAMP: METAL HALIDE, ONE 175 WATT.
- 3 BALLAST: 277 VAC, HPF, CWA.
- 4 MOUNTING: POLE ARM MOUNT, QUANTITY AS INDICATED.
- 5 FINISH: ARCHITECTURAL CLASS I ANODIZED. BLACK.
- 6 LENS: CLEAR TEMPERED GLASS.
- 7 REFLECTOR: SEGMENTED, TYPE IV DISTRIBUTION, FULL CUTOFF.
- 8 ACCESSORIES: FULL BASE COVER.
- 9 POLE: NON-TAPERED ROUND ALUMINUM X 16 FOOT HIGH.
- 10 LUMINAIRE MANUFACTURER: GARDCO G18-4XL-175MH-BLP SERIES OR APPROVED.
- 11 POLE MANUFACTURER: GARDCO TRA-CB-16⅔ SERIES, OR APPROVED.

A1 SAME AS TYPE A EXCEPT W/ 20⅝ EXTENSION ARM AT LUMINAIRE.

A2 SAME AS TYPE A EXCEPT DUAL LUMINAIRE CONFIGURATION (180 DEGREES)

AS SAME AS TYPE A EXCEPT W/ INTERNAL HOUSE-SIDE SHIELD.

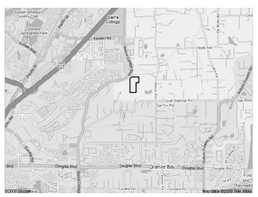
B SAME AS TYPE A EXCEPT W/20⅝ EXTENSION ARM AND TYPE II REFLECTOR.

C1 H.I.D. OUTDOOR POLE POST-TOP MOUNT ⅛ 12⅔ AFG
- 1 SIZE: 28-3/8⅝ DIA X 30-1/4⅝ TALL.
- 2 LAMP: METAL HALIDE, ONE 100 WATT.
- 3 BALLAST: 277 VAC, HPF, CWA.
- 4 MOUNTING: POLE POST-TOP MOUNT, QUANTITY AS INDICATED.
- 5 FINISH: SILVER.
- 6 LENS: CLEAR UV STABILIZED ACRYLIC.
- 7 REFLECTOR: ALUMINUM.
- 8 ACCESSORIES: FULL BASE COVER.
- 9 POLE: 3.5⅝ ROUND, SILVER FINISH.
- 10 LUMINAIRE MANUFACTURER: SELUX SA1 SERIES OR APPROVED.

SHEET LEGEND

- POLE LUMINAIRE
- POLE LUMINAIRE
- POLE LUMINAIRE
- .5 FOOTCANDLE CALCULATION LINE
- A LUMINAIRE DESCRIPTION
- 0.0 CALCULATION POINT
- PHASE II ZONE

VICINITY MAP



Source: PAE Consulting Engineers, November 2008

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Figure 3-5
Lighting Plan

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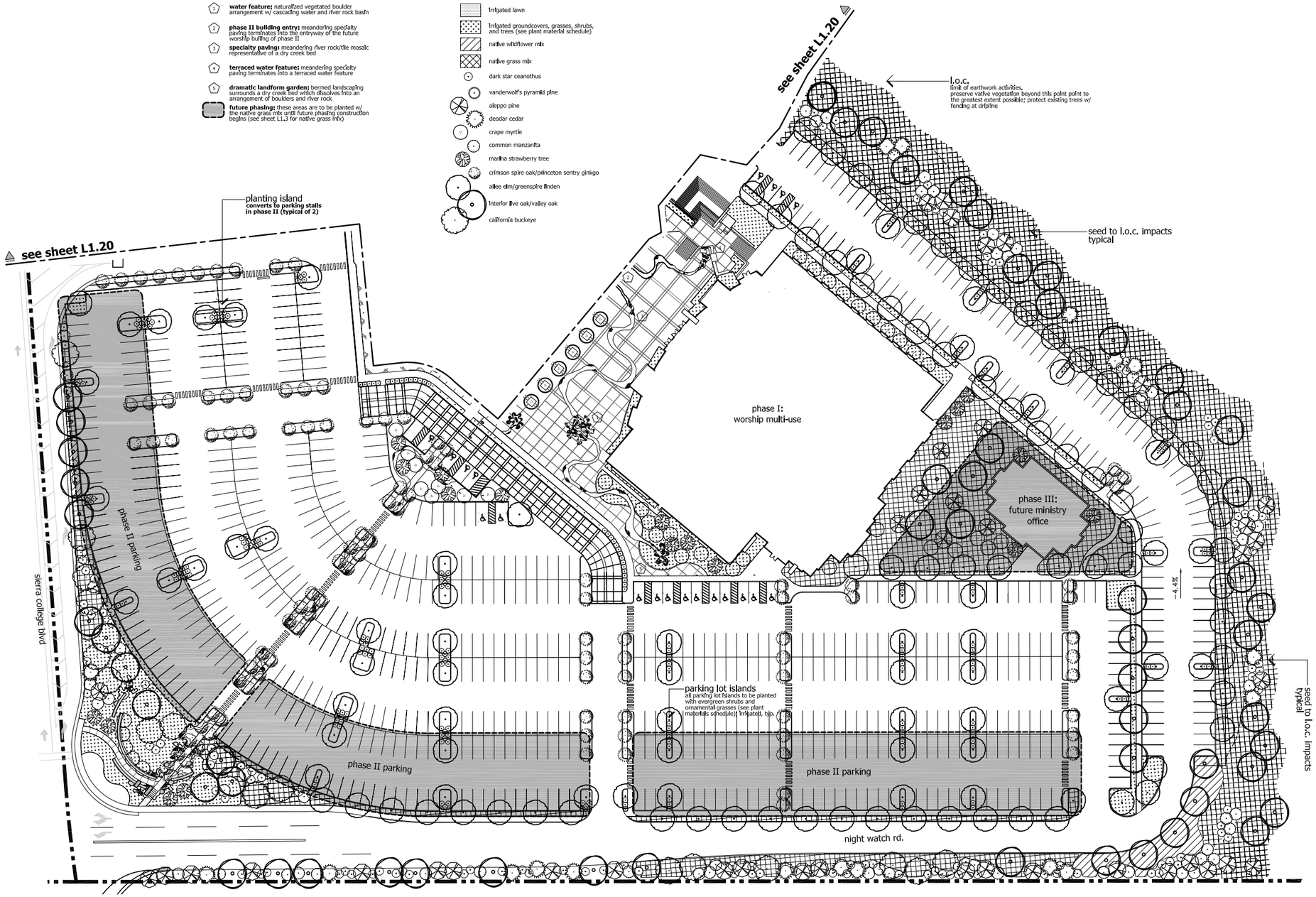
site legend

1. **water feature:** naturalized vegetated boulder arrangement w/ cascading water and river rock basin
2. **phase II building entry:** meandering specialty paving terminates into the entryway of the future worship building of phase II
3. **specialty paving:** meandering river rock/tile mosaic representative of a dry creek bed
4. **terraced water feature:** meandering specialty paving terminates into a terraced water feature
5. **dramatic landform garden:** bermed landscaping surrounds a dry creek bed which dissolves into an arrangement of boulders and river rock

future phasing: these areas are to be planted w/ the native grass mix until future phasing construction begins (see sheet L1.3 for native grass mix)

plant legend

- irrigated lawn
- irrigated groundcovers, grasses, shrubs, and trees (see plant material schedule)
- native wildflower mix
- native grass mix
- dark star ceanothus
- vanderwolf's pyramid pine
- aleppo pine
- deodar cedar
- crape myrtle
- common manzanita
- marina strawberry tree
- crimson spire oak/princeton sentry ginkgo
- allee elm/greenspire linden
- interior live oak/valley oak
- california buckeye



Source: Simp.L LLC, November 2008

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Figure 3-6a
Landscape Plan 1

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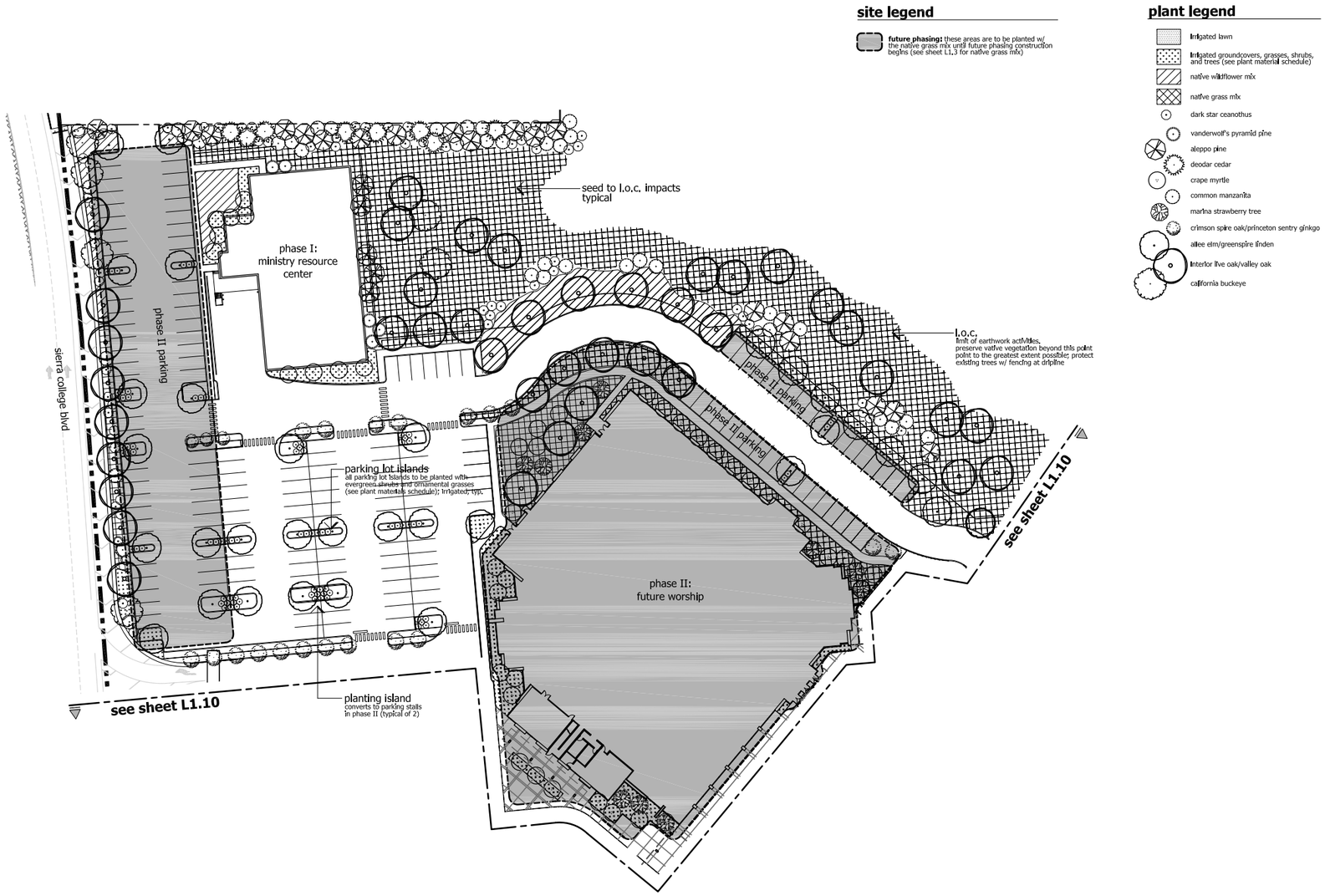

Source: Simp.L LLC, November 2008

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Figure 3-6b
Landscape Plan 2

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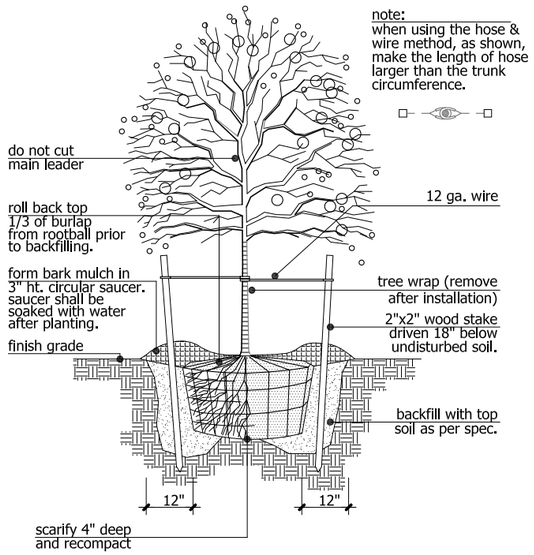
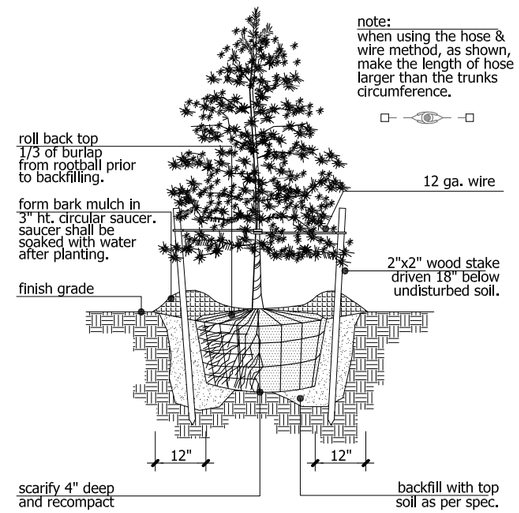


1 detail: deciduous tree staking

nts



2 detail: evergreen tree staking

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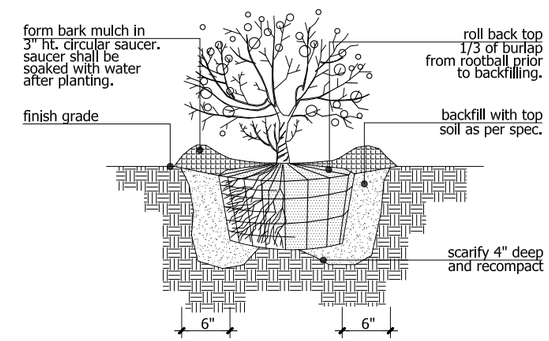

3 detail: evergreen/deciduous shrub

nts

native grass mix

mfg: pacific coast seed
mix: habitat mix
note: prep and apply per mfg

mix contains the following species:
native california brome
blue wildrye
idaho fescue
purple needlegrass
native pine bluegrass

native wildflower mix

mfg: pacific coast seed
mix: california central valley wildflower mix
note: prep and apply per mfg

mix contains the following species:

white yarrow	arroyo lupine
dwarf cornflower	five spot
elegant clarkia	baby blue eyes
california poppy	flanders poppy
globe gilia	california blue bells
scarlet flax	black-eyed susan
blue flax	yellow owl's clover
sweet alyssum	

irrigation notes

1. permanent automatic underground irrigation system to be designed at later date
2. all areas not represented by native grass or wildflower mix shall be irrigated by permanent system
3. temporary irrigation shall be installed in all areas of native grass/wildflower seeding, to be removed/abandoned after seed germination and plant establishment

general notes: landscape plan

1. contractor to verify with owner and utility companies the locations of all utilities prior to construction, to determine in the field the actual locations and elevations of all existing utilities, whether shown on the plans or not. the contractor shall call utility protection service 72 hours prior to construction.
2. contractor shall examine finish surface, grades, topsoil quality and depth. do not start any work until unsatisfactory conditions have been corrected. verify limits of work before starting.
3. contractor to report all damages to existing conditions and inconsistencies with plans to landscape architect.
4. all plant masses to be contained within a gravel mulch bed, unless noted otherwise.
5. bed edge to be no less than 12" and no more than 18" from outer edge of plant material branching. where ground-cover occurs, plant to limits of area as shown.
6. contractor shall maintain positive drainage in all landscape beds and all lawn areas.
7. the contractor shall be responsible for his bid quantities as required by the plans and specifications. if there is a discrepancy between the number labeled on the plant tag and the quantity of graphic symbols shown, the graphic symbol quantity shall govern.
8. coordinate landscape installation with installation of underground sprinkler and drainage systems.
9. contractor shall not remove any trees during construction without the express written consent of the landscape architect. existing vegetation to remain shall be protected as directed by the landscape architect.
10. in areas designated "annuals" landscape contractor to prepare soil with a minimum 6" deep plant mixture and a minimum 2" deep bark mulch for subsequent planting by owner.
11. where proposed tree locations occur under existing overhead utilities or crowd existing trees, notify landscape architect to adjust tree locations.
12. landscape maintenance period begins immediately after the completion of all planting operations and written notification to the owner. maintain trees, shrubs, lawns and other plants until final acceptance or 90 days after notification and acceptance, whichever is longer.
13. remove existing weeds from project site prior to the addition of organic amendments and fertilizer. apply amendments and fertilizer per the recommendations of the soil analysis from the site.
14. backfill material for tree and shrub planting shall contain: one part fine grade compost to one part topsoil by volume, bonemeal per manufacture's recommendation, and slow release fertilizer per manufacturer's recommendation.
15. contractor shall obtain written approval for all plant material substitutions from the landscape architect prior to installation. plant substitutions without prior written approval that do not comply with the drawings and specifications may be rejected by the landscape architect at no cost to the owner. these items may be required to be replaced with plant materials that are in compliance with the drawings.
16. all plant materials shall be nursery-grown with healthy root systems and full branching, disease and insect free, and without defects such as sun scald, abrasions, injuries, and disfigurement.
17. all plant materials shall be installed at the size and quantity specified. landscape architect is not responsible for sub-standard results caused by reduction in size and/or quantity of plant materials.
18. contractor shall report all significant inconsistencies or discrepancies between plans and actual conditions in field to landscape architect to discuss necessary modifications

note:
all groundcover spacing shall be triangular unless otherwise noted

Source: Simp.L LLC, November 2008

Figure 3-6c
Landscape Plan Legend
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plant materials schedule

trees & large shrubs

common name	botanical name	size	spacing	note
interior live oak	quercus wislizeni	2 1/2" cal.	as shown	
valley oak	quercus lobata	2 1/2" cal.	as shown	
california buckeye	aesculus californica	2 1/2" cal.	as shown	
allee elm	ulmus parvifolia 'emer II'	2 1/2" cal.	as shown	
greenspire linden	tilia cordata 'greenspire'	2 1/2" cal.	as shown	
crimson spire oak	quercus alba x quercus robur 'crimschmidt'	2 1/2" cal.	as shown	
aleppo pine	pinus halepensis	6-7' ht.	as shown	
deodar cedar	cedrus deodara	8-9' ht.	as shown	
vanderwolf's pyramid pine	pinus flexilis 'vanderwolf's pyramid'	6-7' ht.	as shown	specimen
crape myrtle	lagerstroemia	7-8' ht.	as shown	multi-stemmed
marina strawberry tree	arbuts x marina	8-9' ht.	as shown	low-branched specimen
common manzanita	arctostyphylos manznita	5-6' ht.	as shown	
dark star ceanothus	ceanothus 'dark star'	5 gal.	as shown	
tiny tower italian cypress	cupressus sempervirens 'monshel'	7-8' ht.	as shown	

shrubs & groundovers

common name	botanical name	size	spacing
variegated mockorange	pittosporum tobira 'variegata'	5 gal.	as shown
petite red oleander	nerium oleander 'petite red'	5 gal.	as shown
dwarf red escallonia	escallonia rubra 'compacta'	5 gal.	as shown
indian hawthorn	rhaphiolepsis indica 'pink beauty'	5 gal.	as shown
japanese holly	ilex crenata 'convexa'	5 gal.	as shown
mugo pine	pinus mugo 'pumilio'	18" ht.	as shown
bronze new zealand flax	phormium tenax 'atropurpureum compactum'	5 gal.	as shown
crimson spot rock rose	cistus ladanifer	3 gal.	as shown
crimson pygmy barberry	berberis thunbergii	3 gal.	as shown
jack spratt new zealand flax	phormium tenax 'jack spratt'	3 gal.	as shown
carmel creeper	ceanothus griseus horizontalis	3 gal.	as shown
star jasmine	trachelospermum jasminoides	3 gal.	as shown
french lavendar	lavendula dentata	1 gal.	as shown
navajo bright red autumn sage	salvia greggii 'navajo bright red'	1 gal.	as shown
lily of the nile	agapanthus africanus	1 gal.	as shown
thrift	armeria maritima	4" pot	as shown
dragon's blood stonecrop	sedum 'dragon's blood'	4" pot	as shown

grasses & perennials

common name	botanical name	size	spacing
japanese silver grass	minscanthus 'morning light'	5 gal.	as shown
regal mist muhly grass	muhlenbergia capillaris 'regal mist'	3 gal.	as shown
deer grass	muhlenbergia rigens	3 gal.	as shown
california fescue	festuca californica	3 gal.	as shown
little bunny fountain grass	pennisetum alopecuroides 'little bunny'	1 gal.	as shown
blue fescue	festuca glauca 'elijah blue'	1 gal.	as shown
mondo grass	ophiopogon japonicus	1 gal.	as shown
yarrow	achillea millefolium	1 gal.	as shown
aster	aster varieties	1 gal.	as shown
black-eyed susan	rudbeckia fulgida 'goldstrum'	1 gal.	as shown
purple coneflower	echinacea purpurea 'magnus'	1 gal.	as shown
daylily varieties	hemerocallis sp.	1 gal.	18" o.c.

Source: Simp.L LLC, November 2008

Figure 3-6d

Landscape Plan: Plant Materials Schedule

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Source: Wynne Group Architects, June 2008

Figure 3-7
Main Entrance Elevation

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Wetland Permits

There are approximately 0.223 acres of vernal pools located on the portion of the site where the project is proposed to be sited. The project will require a permit from the U.S. Army Corps of Engineers (Corps) pursuant to Section 404 of the federal Clean Water Act. The project would also need to obtain a water quality certification from the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the federal Clean Water Act. The Corps and the RWQCB would add conditions to the permits that would stipulate the appropriate mitigation, which could include one or more of the following: onsite creation, off-site creation, purchase of credits in a mitigation bank, or payment to an in-lieu fund (Northfork, 2007).

Infrastructure

Circulation

The on-site circulation system includes two driveways and a loop road around the perimeter of site as well as driveways among the rows of parking spaces (**Figure 3-8**). The project will include frontage improvements to Sierra College Boulevard which is in the City of Rocklin's jurisdiction. Off-site frontage improvements will include requirements by both City of Rocklin and City of Roseville. Proposed improvements are shown in **Figure 3-9** and would include curb and gutter, bike lane reconfiguration, removal and relocation of the existing raised median along Sierra College Boulevard, striping and frontage. The project site will be accessed by a signalized intersection at Sierra College Boulevard and Night Watch Drive. A secondary access with right-turn in and right-turn out only will be constructed along Sierra College Boulevard approximately 450 feet east of the primary access.

Water

The Placer County Water Agency (PCWA) provides water service to the project area and would serve the project site. An existing 20-inch water main is located within Sierra College Boulevard north of the site (**Figure 3-8**). The proposed project would connect to the 20-inch line east of the intersection of Sierra College Boulevard and Night Watch Drive and west of the entry driveway to the project site via three separate water lines (a 4-inch, 8-inch and 12-inch line). On-site water lines would range from 4-inches in diameter to 12-inches and would provide both potable water and water for fire suppression. Fire flow requirements for the site are 2,250 GPM for 4 hours or as determined by the fire marshal. The maximum pipeline velocity would be up to 7 feet per second and buildings on the site would be required to install sprinklers.

Wastewater

The project is proposed to annex into the Placer County Sewer Maintenance District 2 for sewage disposal service. The project will connect to the existing 3-inch (STEP – septic tank effluent pump) low pressure sewer system in the Cavitt Ranch subdivision. The existing STEP system connects to the South Placer Municipal Utility District (SPMUD) gravity sewer manhole at Scarborough Drive. The wastewater is treated at the South Placer Wastewater Authority's regional wastewater treatment plant. The proposed project would connect to the existing STEP (septic tank effluent pumped) pressure sewer system in Cavitt Ranch Subdivision 900 feet to the west of the project site (**Figure 3-8**). The project will require construction of a new sewer lateral for the property. A sanitary sewer line ranging from 4 to 6-inches in diameter is proposed along the southern perimeter of the project. This facility will connect into the SPMUD sewer system via Placer County sewer lateral. A 3-inch low pressure sewer main is located along the northern

boundary of the site adjacent to Sierra College Boulevard. There is capacity in the SPMUD facility for the sewage flows of this project (King Engineering, Inc., 2007).

Drainage

The existing drainage pattern and watershed boundaries are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds (refer to **Figure 3-10**). The proposed project will add approximately 11.0 acres of impervious roof and parking lot. The project would continue to use the pond as a detention basin. The pond will be re-designed to function in accordance with Placer County drainage and flood control standards. The detention basin outlet will be designed such that the downstream post development peak flows will be slightly less than the predevelopment peak flows.

The proposed drainage system will generally consist of parking lot gutters, inlets and culverts directing drainage to temporary best management practices (BMPs) consisting of silt barriers and sediment basins. Permanent BMPs consist of rock slope protection, open clarification basins and rock flow spreaders which discharge to a near sheet flow condition or to natural swales. Runoff from roadway impervious surfaces will flow through BMPs prior to discharging offsite or to onsite wetlands, swales or ponds. No runoff from the site will flow into the San Juan Water District detention basis (King Engineering, Inc. 2007b).

Solid Waste

Solid waste service in Placer County is provided by the West Placer Waste Management Authority (WPWMA) and Auburn Placer Disposal Service. Service to the project site will be provided by Auburn Placer Disposal Service. Solid waste from the project site will be hauled to the Western Region Sanitary Landfill. This facility has sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Fire Protection

Fire protection to the project site would be provided by the South Placer Fire District. The District has 6 stations including the Granite Bay Fire Department at 6900 Eureka Road in Granite Bay. Fire protection is discussed further in Section 4.11, Public Services and Utilities. Five fire hydrants are proposed through the project site (**Figure 3-8**).

Law Enforcement

The Placer County Sheriff Department provides law enforcement services to all of the unincorporated areas of Placer County. The Department has a substation in the community of Granite Bay located at 4120 Douglas Boulevard.

Electricity

Electric service will be provided to the project site by Pacific Gas & Electric (PG&E), while telephone service would be provided by AT&T**.**

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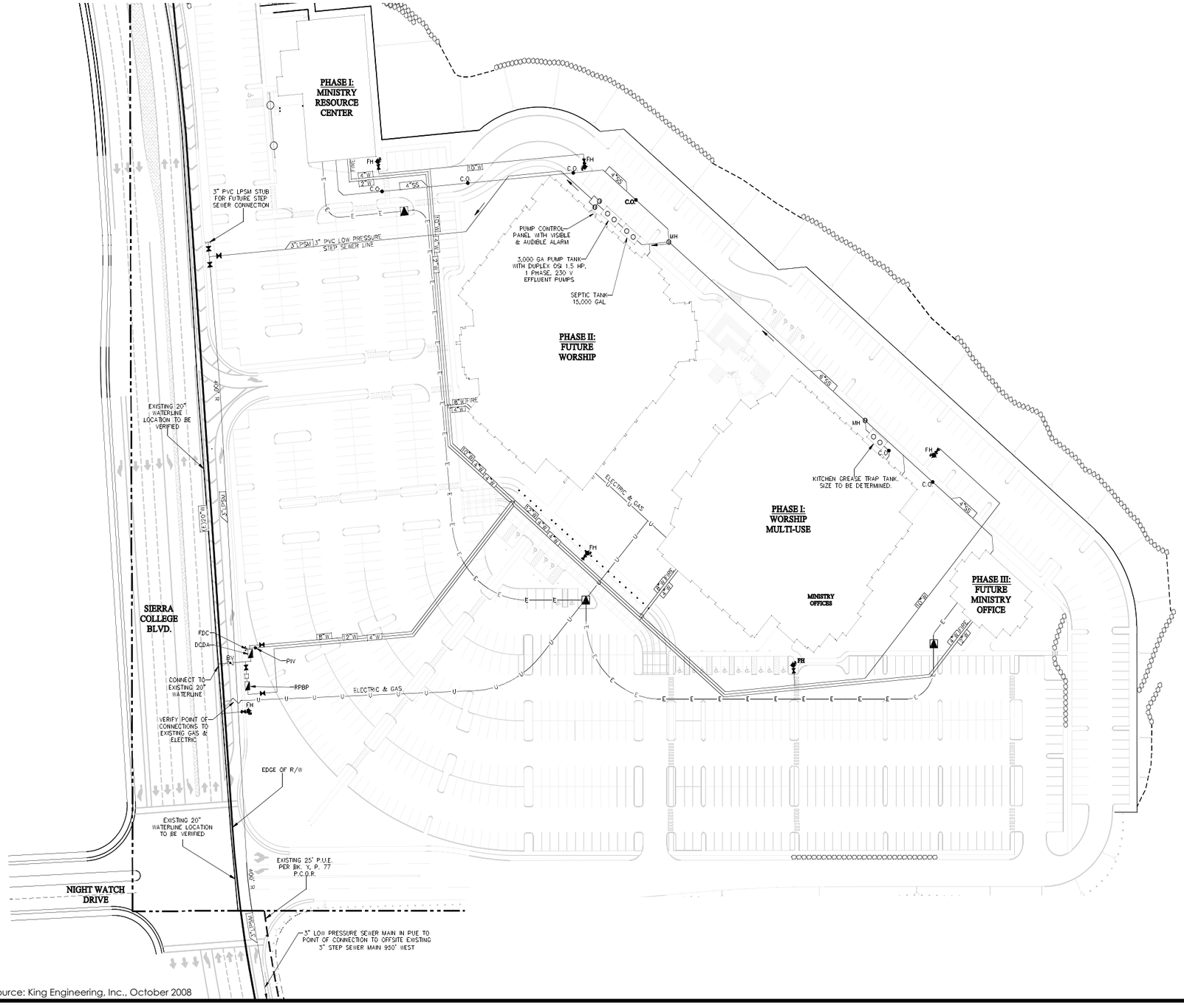

Source: King Engineering, Inc., October 2008

SEWER DATA

SEWER FLOW DATA
-MAX DAY DESIGN FLOW= 18,440 GAL/DAY
-AVG WEEK DESIGN FLOW= 50,800 GAL/WEEK

SEPTIC TANK DATA
-SIZE TANK FOR ABOUT 3/4 DAY DETENTION TIME AT MAX DAY DESIGN FLOW

PUMP TANK DATA
-TANK VOLUME BETWEEN PUMP ON AND PUMP OFF= 600 GAL
-TANK RESERVE VOLUME ABOVE HIGH WATER ALARM= 1,500 GAL (ABOUT 25% OF AN AVG WEEKDAY DESIGN FLOW)

SEWER COLLECTION SYSTEM REPORT
-REFER TO CAPACITY REPORT FOR THE EXISTING STEP SEWER COLLECTION SYSTEM

ANNEXATION APPLICATION
AN ANNEXATION APPLICATION WILL BE FILED WITH PLACER COUNTY FOR ANNEXATION TO SMD No.2 PLACER COUNTY FACILITIES SERVICES, 11476 C AVE, AUBURN, CA 95603, 530-886-4900

WATER DATA

-FIRE FLOW=2250 GPM FOR 4 HOUR DURATION OR AS DETERMINED BY FIRE MARSHAL

-MAX PIPELINE VELOCITY UP TO DCDA=7 FPS

-SPRINKLERED BUILDINGS

-FIRE HYDRANTS AND BLDG. SPRINKLERS ARE SHOWN ON PRIVATE WATERLINES.

-PUBLIC WATER PROVIDER:
PCWA
144 FERGUSON RD.
AUBURN, CA 95604
530-823-4850

Figure 3-8
Preliminary Utility Plan
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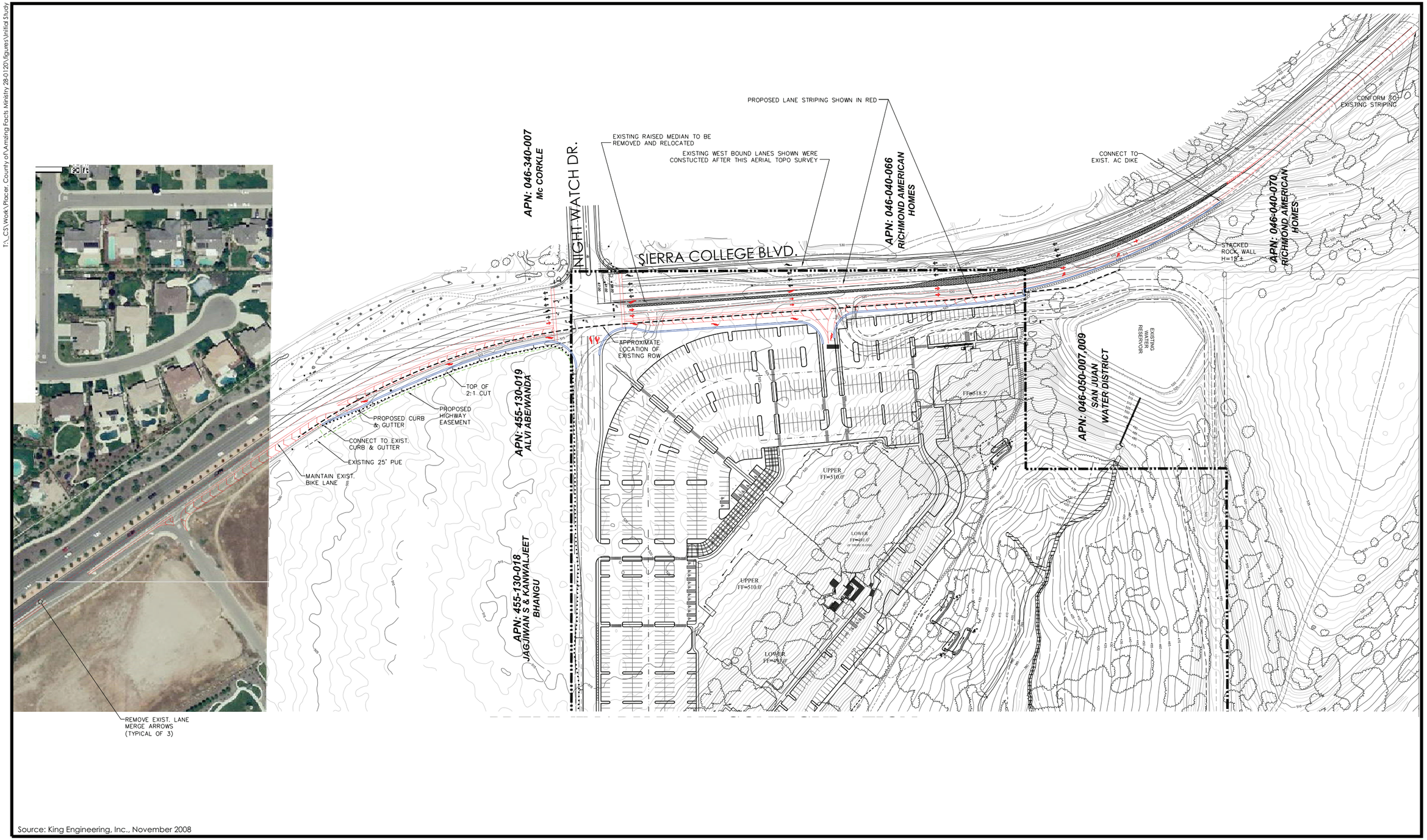

Source: King Engineering, Inc., November 2008

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Figure 3-9

Preliminary Lane Configuration for Sierra College Boulevard

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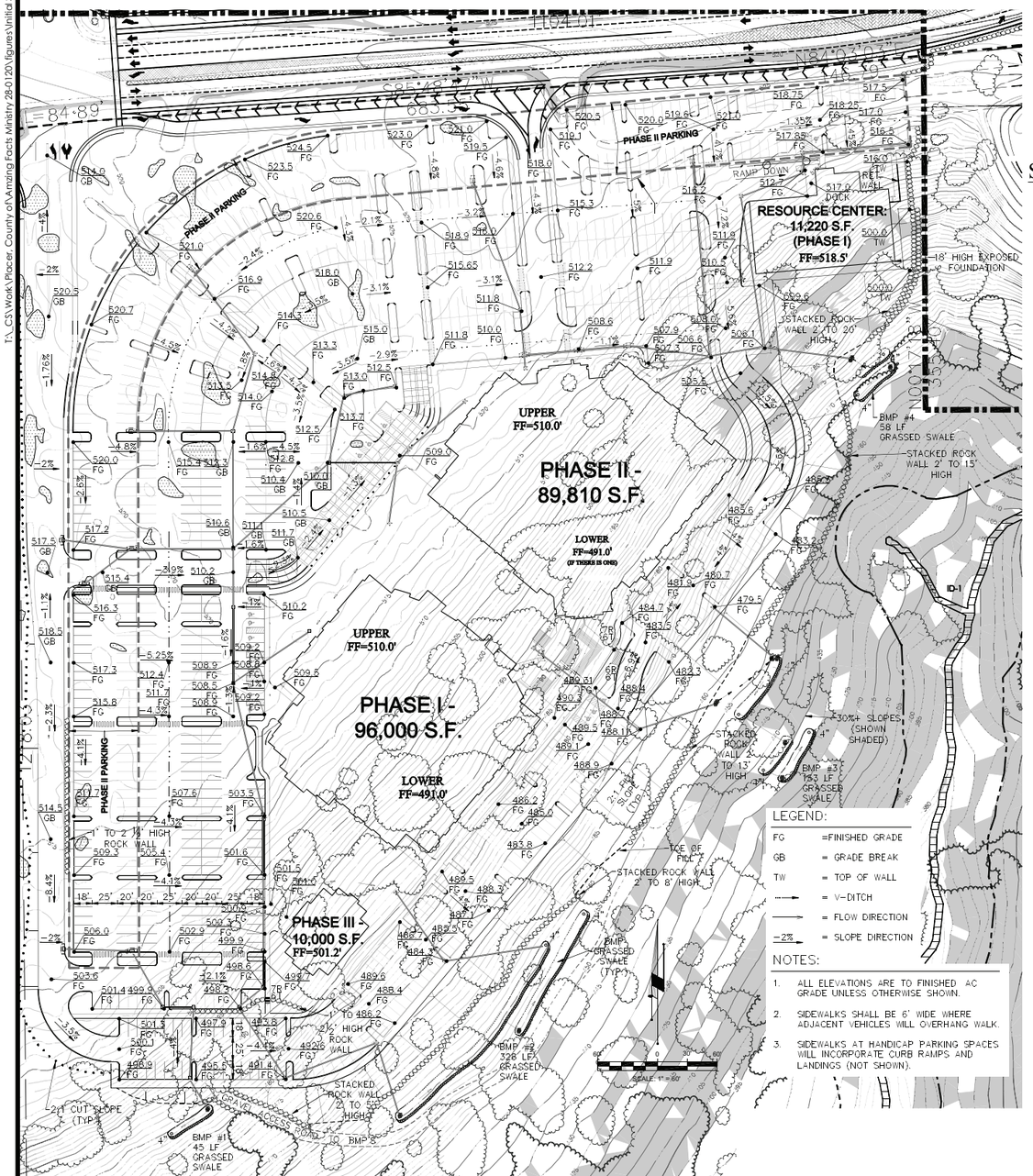

Source: King Engineering, Inc., November 2008

STORM WATER POLLUTION CONTROL DATA

1. NON-POINT POLLUTION SOURCES
   a. PAVED PARKING LOT WITH MOTOR VEHICLES
   b. RUN OFF FROM LANDSCAPE AREAS WITH FERTILIZER
   c. EXPOSED OF DISTURBED SOIL
   d. CONSTRUCTION VEHICLES AND STORED MATERIALS (TEMPORARY)
2. POTENTIAL CONTAMINANTS
   a. OILS, MOTOR OIL, FUELS
   b. AGRICULTURAL FERTILIZER
   C. SOIL
   d. CONSTRUCTION MATERIALS – CONCRETE, PAINT, ASPHALT, OILS (TEMPORARY)
3. CONTAMINANT SOURCE CONTROLS
   a. APPLY FERTILIZER ACCORDING TO MANUFACTURER'S RECOMENDATIONS.
   b. LANDSCAPED AREAS ARE AUTOMATICALLY WATERED BY TIMECLOCK AND NOT OVER WATERED.
   c. CONSTRUCTION MATERIALS ARE PLACED IN COVERED STORAGE OR COVERED IF STOCKPILED FOR AN INDEFINITE TIME. CONCRETE TRUCK WASHOUT BASIN IS PROVIDED.
4. PROPOSED BMPs
   a. DROP INLET SUMPS FOR LARGE SEDIMENT TRAP (UPSTREAM OF B.)
   b. GRASSED SWALES PLACED ON CONTOUR WITH 1fps OR LESS DESIGN VELOCITY AND 10 MINUTE DESIGN DETENTION TIME (FLOW BASED DESIGN). ROCK LEVEL SPREADERS AND ROCK FLOW DISSIPATERS SPREAD FLOW OUT OR REDUCE VELOCITY.
   c. NATIVE SOILS HAVE LOW PERMEABILITY MOSTLY DUE TO UNDERLYING LAVA ROCK, SO SHALLOW GRASS SWALES ARE PROPOSED. ALSO GRASSED SWALES FIT THE STEEPER TOPOGRAPHY BETTER THAN WIDE VOLUMETRIC BASINS. TREATED RUNOFF FROM THE GRASSED SWALES WILL FLOW INTO THE ON SITE POND BI-WHERE IT WILL EXPERIENCE FURTHER DETENTION TIME.
   d. SEDIMENT TRAPS AT DRAINAGE INLETS AND SEDIMENT BARRIER WADDLES PLACED ON CONTOUR OR AGAINST CONTOURS TO TRAP SEDIMENTS. SEDIMENT BARRIERS ARE PLACED DOWNHILL OF CONSTRUCTION (TEMPORARY).
5. GRASSED SWALE EFFECTIVENESS:

TC-30 VEGETATED SWALE

Table 1 Grassed swale pollutant removal efficiency data

Removal Efficiencies (% Removal)							
Study	TSS	TP	TN	NO_3	Metals	Bacteria	Type
Caltrans, 2002	77	8	67	66	83–90	–33	dry swales
Goldberg, 1993	67.8	4.5	–	31.4	42–62	–100	grassed channel
Seattle Metro and Washington Department of Ecology 1992	60	45	–	–25	2–16	–25	grassed channel
Seattle Metro and Washington Department of Ecology 1992	83	29	–	–25	46–73	–25	grassed channel
Wand et al., 1981	80	–	–	–	70–80	–	dry swale
Dorman et al., 1989	98	18	–	45	37–81	–	dry swale
Harper, 1988	87	83	84	80	88–90	–	dry swale
Kercher et al., 1983	99	99	99	99	99	–	dry swale
Harper, 1988	81	17	40	52	37–69	–	wet swale
Koon, 1995	67	39	–	9	–35 to 6	–	wet swale

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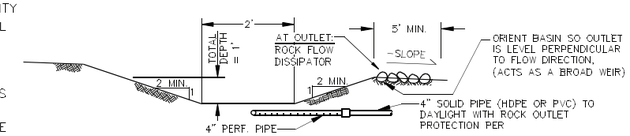
6. THIS PROJECT WILL COMPLY WITH THE DESIGN STANDARDS REQUIRED BY THE NPDES GENERAL PERMIT BY CONTAINING AND DETAINING STORM WATER RUN OFF AND REMOVING POLLUTANTS BY SOIL CONTACT, SOIL ABSORPTION, OXIDARION, ROOT ZONE UPTAKE AND BACTERIAL BREAKDOWN.
7. BMP SIZING DESIGN CALCULATION TABLE:

PRELIMINARY BMP PLAN – GRASSED DETENTION SWALE SIZING
AMAZING FACTS PROJECT
FLOW BASED DESIGN WITH UNIFORM INTENSITY
FORMULAS: Q input = CiA Q out (flow OUT 4" perforated pipe with 4" avg. head = .014 cfs)
Detention Time selected is 10 minutes i=0.2 in/hr uniform intensity
Swale slope is 0.003 with a manning's n=0.05

BMP#	LOCATION	Area size ac.	i in/hr	C avg.	Q input cfs	Q out from 4" subdrain cfs	Q design= Qin +Qout cfs	Detention time sec.	V Volume ft^3	L Length ft	D Water Depth ft	V Velocity fps
1	southwest of parking lot	0.97	0.2	0.8	0.16	0.014	0.17	600	102	45	0.16	0.45
2	south of parking lot and phase 1 building	7.47	0.2	0.81	1.21	0.014	1.22	600	734	328	0.50	0.81
3	south of parking lot and phase 2 building	3.43	0.2	0.81	0.56	0.014	0.57	600	342	153	0.33	0.66
4	southeast of parking lot	1.30	0.2	0.78	0.20	0.014	0.22	600	130	58	0.20	0.46



BMP - GRASSED DETENTION SWALE
N.T.S.

1. SEED BASIN INTERIOR.
2. VOLUME AND RECOMMENDED DEPTH ARE PER PLAN. DIMENSIONS MAY VARY PROVIDED VOLUME LISTED IS MAINTAINED. AVOID EXISTING ROCK AND TREES AS MUCH AS POSSIBLE. SAVE AND PROTECT DESIGNATED VEGETATION.

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Figure 3-10
Preliminary Grading & BMPs
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3.5 INTENDED USES OF THE EIR

3.5.1 REQUIRED PERMITS AND APPROVALS

The following approvals would be issued by Placer County:

- *Minor Use Permit* – The proposed project requires approval of a Minor Use Permit (MUP) to allow a house of worship in the Farm zone district.
- *Grading Permit* – The proposed project will require approval of a grading permit to prepare the site for development.
- *Building Permit* – The proposed project will require approval of a building permit prior to commencing construction on the site.
- *Occupancy Permit* – The proposed project will require an approval of an occupancy permit prior to the structures on the site being occupied.
- *Tentative Parcel Map* – The proposed project will require approval of the tentative parcel map.
- *Certification of the EIR* – The proposed project will require certification of the EIR by Placer County.
- *Mitigation Monitoring and Reporting Program* – The proposed project will require adoption of a Mitigation Monitoring and Reporting Program by Placer County.

The following approvals would be issued by various other regulatory agencies.

- *Placer County Water Agency* - An agreement regarding facility expansion for the provision of water.
- *Placer County Local Agency Formation Commission (LAFCo)* - Approval of the project's annexation into the Nevada County Sanitation District 1.
- City of Rocklin – Approval of the project's roadway improvement plans.
- *Section 404 Permit* - The U.S. Army Corps of Engineers (Corps) regulates the placement of fill or dredged material that affects waters of the United States, which include streams, vernal pools, and wetlands. The Corps regulates these activities under authority granted through Section 404 of the Clean Water Act. Impacts to vernal pools on the project site will require the project to obtain a Section 404 permit to impact jurisdictional waters found on the project site.
- *Section 401 Water Quality Certification* – In association with the Section 404 permit issued by the Corps, the project must apply for and obtain a state Water Quality Certification from the Central Valley Regional Water Quality Control Board in compliance with Section 401 of the Clean Water Act.
- *Section 1602 Streambed Alteration Agreement* – A Streambed Alteration Agreement must be entered into with the California Department of Fish and Game for any project activities that

would "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake or use any materials from a streambed." The project would require a Section 1602 agreement for any project impacts to the pond and associated riparian vegetation.

- *Section 402 National Pollutant Discharge Elimination System (NPDES) Permit Compliance* – Any project that disturbs more than one acre of land is required to obtain a permit for stormwater discharge under the NPDES program administered by the Regional Water Quality Control Board. The proposed project would therefore be required to obtain coverage under the program for construction phase and post-construction phase stormwater discharge and would be required to develop a Storm Water Pollution Prevention Plan.

4.0
LAND USE AND AGRICULTURE

4.0 LAND USE AND AGRICULTURE

This section of the Draft Environmental Impact Report ("DEIR"; "Draft EIR") addresses the potential environmental impacts of the proposed project on land use and planning, as well as the proposed project's potential adverse environmental impacts to agricultural resources. Existing land uses at the project site and surrounding area are characterized in the context of the Placer County General Plan and Zoning Ordinance and other adopted plans and policies. The section also describes the agricultural resources on and in the vicinity of the project site.

The analysis contained in this section focuses on land use compatibility, urban-agricultural conflicts, and General Plan consistency. Information for this section was obtained primarily from applicable land use plans, site reconnaissance, and aerial photography.

The County of Placer prepared a Notice of Preparation/Initial Study (NOP/IS) for the project on February 5, 2009. Comments received during the public review period (February 5 to March 6, 2009) for the NOP/IS are contained in **Appendix A**.

4.1 EXISTING SETTING

4.1.1 Regional Setting

The project site is located in the Granite Bay Community Plan area in unincorporated Placer County, about 15 miles northeast of Sacramento and 50 miles southwest of the City of Reno. Placer County is situated in the Sierra Nevada foothills of central California, bordered by the State of Nevada to the east, as well as by the counties of Nevada and Yuba to the north, Sutter to the west, and Sacramento and El Dorado to the south. **Figure 3-1** shows the project site's regional location, while **Figure 3-2** shows the project's location in the county.

Placer County is one of the fastest growing counties in the state, due in large part to the expansion of the Sacramento metropolitan area. As of 2000, the population of Placer County was 248,399. As of January 1, 2008, the population of the county was 333,401 (DOF, 2008). The county is largely rural outside its urbanized population centers of the cities of Auburn, Colfax, Lincoln, Rocklin, and Roseville. The county has a total area of 1,507 square miles (964,480 acres), of which 1,404 square miles are land and 103 square miles are water (CSAC, 2009).

The Granite Bay community is located in southeastern Placer County. Land use patterns within the Granite Bay community have changed over the last 20 to 30 years from larger rural parcels to a mix of urban and rural-residential parcel sizes. The community plan area is currently at about 60 percent of buildout with a population of about 29,000 people. There are no airports in the Granite Bay community. The nearest airports are nearly 10 miles away in the cities of Lincoln and Auburn and in the Cameron Park area of El Dorado County (Placer County, 2005).

4.1.2 Local Setting

The project site consists of two parcels (APNs 046-050-006 and 046-050-008) totaling approximately 75 acres and is located southeast of the intersection of Sierra College Boulevard and Nightwatch Drive in southeastern Placer County. The site is also within the Granite Bay Community Plan area and near the City of Rocklin and the Town of Loomis. The project site is currently undeveloped and unoccupied, containing only fencing at the property boundaries and three unpaved roads. Two of the roads are accessed from Sierra College Boulevard, one of which leads to San Juan Water District property adjacent to the northeastern property corner. A third

road leads from Oak Hill Lane near the southwestern property corner to a pond in the south-central portion of the site. There are no existing agricultural operations on the project site.

Surrounding Land Uses

The project site is located at the junction of the City of Rocklin, the Town of Loomis and the community of Granite Bay in unincorporated Placer County (see Figure 4-1). Within the County, the project site is bordered by San Juan Water District (SJWD) property along its northeastern corner and by rural residential property along its eastern, southern and western boundaries. The SJWD property contains a large water storage pond and is accessed via an unpaved road within an access easement that runs through the project site. The surrounding residential property is largely undeveloped with sparse, large-lot residential developments located throughout. In addition, several large, estate-style homes have been recently developed or are under construction to the west along Cavitt Ranch Place. The site is bordered on the north by Sierra College Boulevard which also marks the Rocklin City limits. Further north, with the City, is the Sierra View Office Park and a large residential subdivision including areas of open space and an elementary school. The small area northeast of the site located within the Town of Loomis is undeveloped and naturally vegetated. It should also be noted that the expanded area south of the site is known to contain an organic orchard, a residential agricultural parcel, and a wholesale nursery operation.

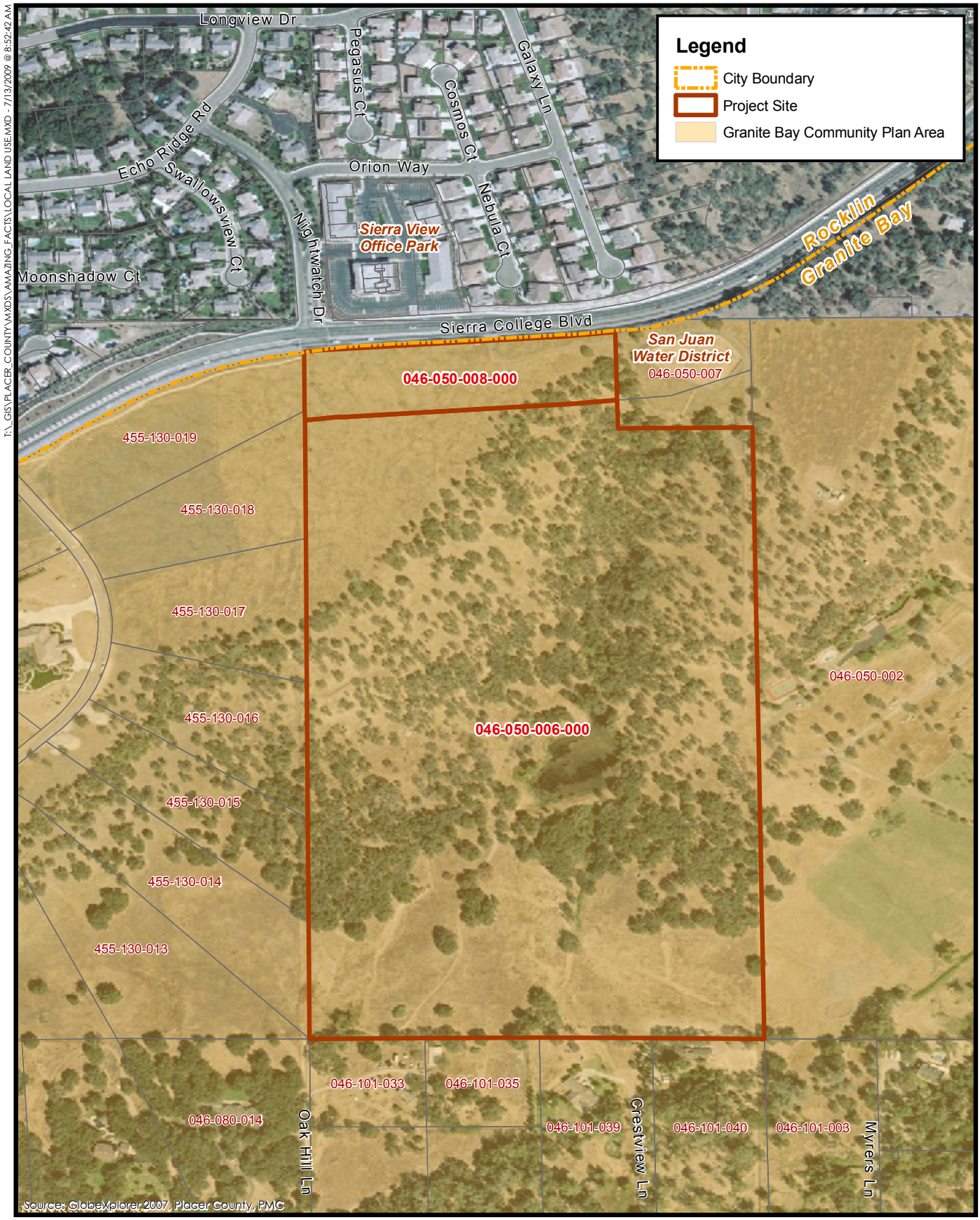

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Figure 4-1
Local Land Use Setting

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General Plan Land Use Designations and Zoning

The Placer County General Plan and Granite Bay Community Plan designate the project site as Rural Residential (RR) and Rural Estate (RE) with 4.6- to 20-acre minimum parcel sizes, respectively. Existing County and City General Plan designations on and surrounding the project site are shown on **Figure 4-2** while the existing Community Plan designations are shown on **Figure 4-3.**

The RR designation under the County General Plan is applied to areas generally located away from cities and unincorporated community centers, in hilly, mountainous, or forested terrain, and as a buffer zone where dispersed residential development on larger parcels would be appropriate and compatible with smaller-scale farming and ranching operations (Placer County, 1994). Typical land uses allowed include:

- Detached single-family dwellings and secondary dwellings;
- Agricultural uses such as crop production and grazing, equestrian facilities, and limited agricultural support businesses such as roadside stands and farm equipment and supplies sales;
- Resource extraction uses;
- Various facilities and services that support residential neighborhoods, such as churches, schools, libraries, child care, and medical facilities; and
- Parks and necessary public utility and safety facilities.

Similarly, the Granite Bay Community Plan's designation of Rural Estate (RE) is used to recognize those areas where the continued rural or agricultural uses of land are to be maintained and protected in perpetuity. This particular designation allows for a high number of family farms or hobby farms to satisfy a growing demand for home sites where an individual can raise a large home vegetable garden, orchard, Christmas tree farm, or livestock. This designation also includes areas unsuited for more dense residential development due to constraints imposed by natural features, such as soils, geology, and hydrologic factors, and man-made constraints, such as a lack of adequate roadways and unavailability of public sewers and water as well as other public services. The Community Plan does not provide a list of specifically permitted uses within this designation. However, the permitted zoning districts for this designation, Single Family Residential, Agricultural Residential, Farm and Open Space, provide further definition (Placer County, 2005). Each of these zoning districts considers houses of worship accessory uses requiring a minor use permit (Placer County, 2009a).

The site is zoned by Placer County as Farm with a Building Site combining district (F-B-X 20-acre minimum) (see **Figure 4-4**). The intent of the F zone is to provide areas for the conduct of commercial agricultural operations that can also accommodate necessary services to support agricultural uses, together with residential land uses at low population densities. Allowable uses within this zone include crop production, equestrian facilities, fisheries and game preserves, forestry, grazing, storage structures, and pipelines and transmission lines. Houses of worship, or churches, are allowable uses with issuance of a minor use permit (Placer County, 2009a).

Parcels located immediately west, south, and east of the project site are similarly designated. Parcels to the north of the project site are designated by the City of Rocklin and the Town of Loomis General Plans for residential uses (Placer County, 2005; Placer County, 2009b)

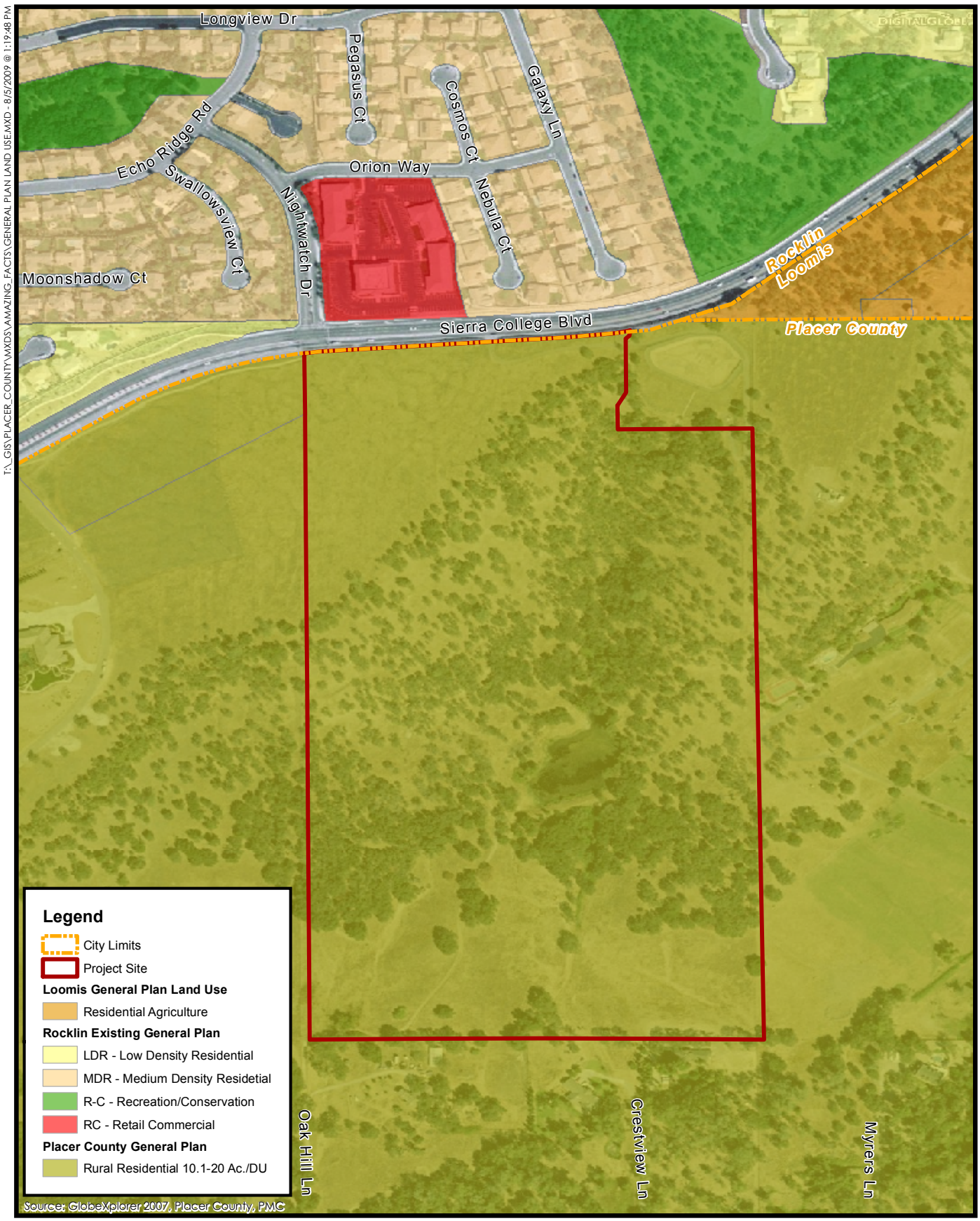

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Figure 4-2
Existing City and County General Plan Land Use Designations

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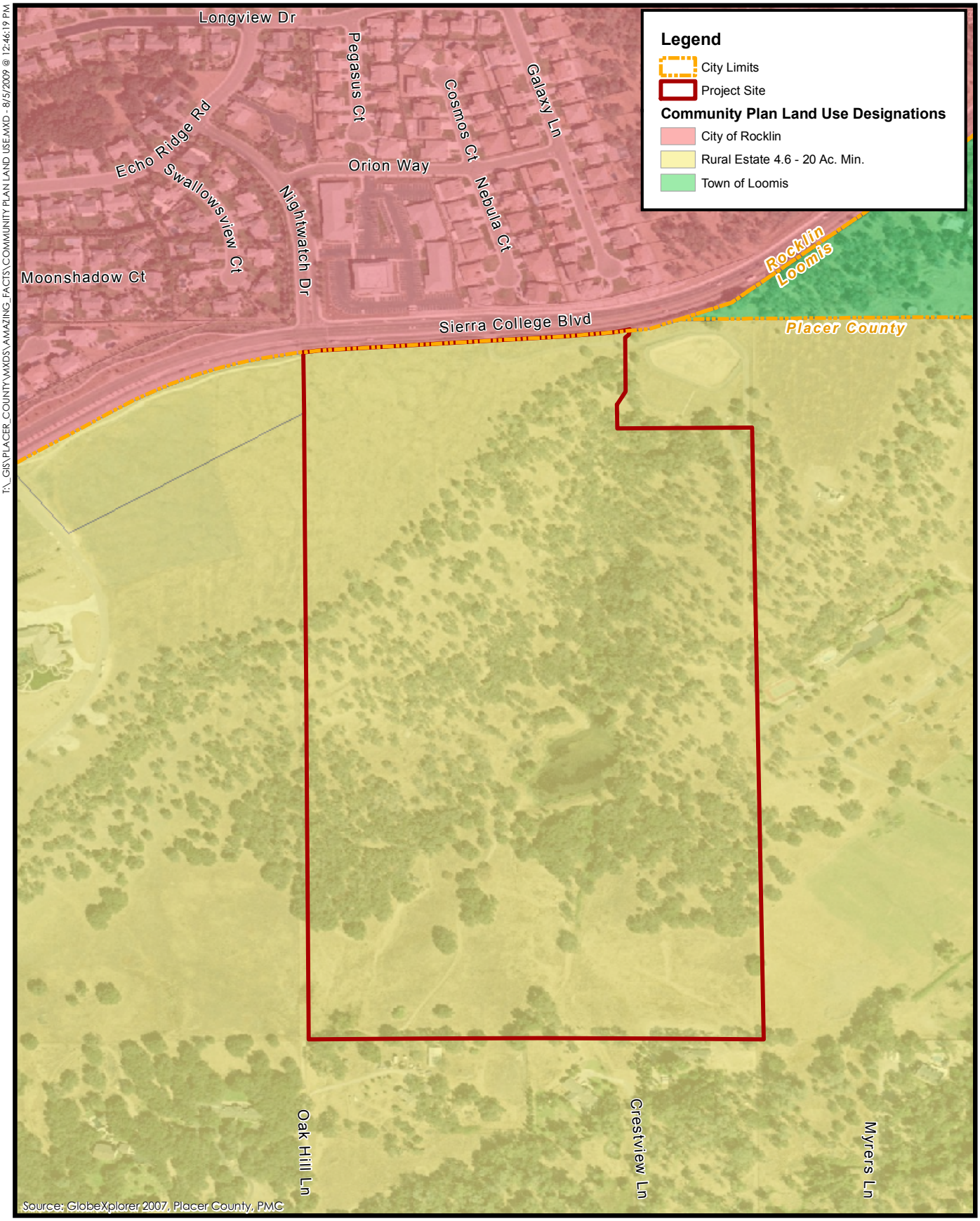

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Figure 4-3
Existing Community Plan
Land Use Designations

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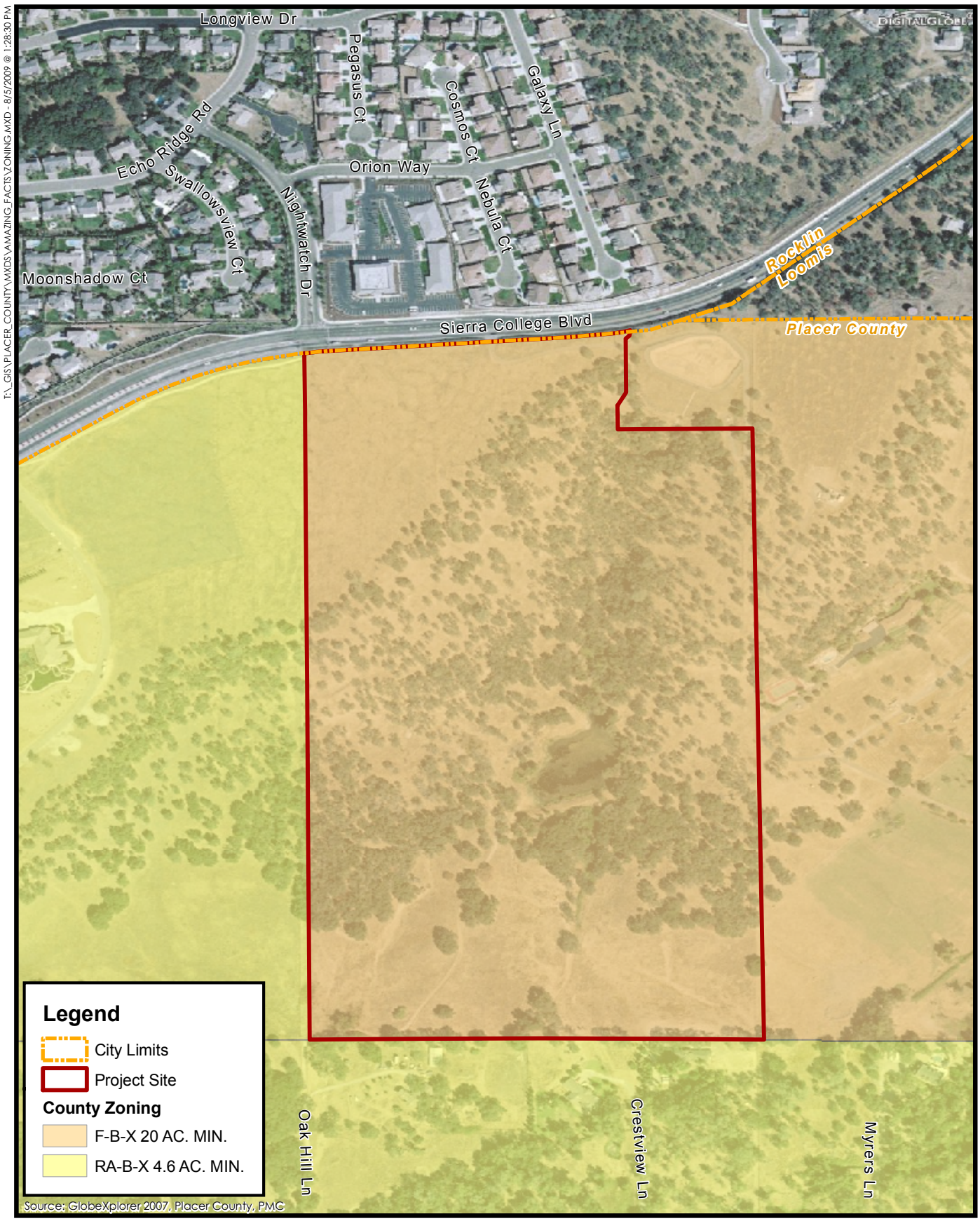

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Figure 4-4
Existing County Zoning

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Agricultural Resources

Farmland Classification and Rating System

Farmland classification programs are used to determine the agricultural productivity of a particular soil. The two systems used by the United States Department of Agriculture (USDA) and the Natural Resource Conservation Service (NRCS) to determine a soil's agricultural productivity are the Soil Capability Classification System and the Storie Index Rating System. The Soil Capability Classification System takes into consideration soil limitations, the risk of damages when the soils are used, and the way in which soils respond to treatment, whereas, the Storie Index Rating System ranks soils based on their suitability for agriculture.

Land Capability Classification System

The Land Capability Classification System is a system of grouping soils primarily on the basis of their capability to produce common cultivated crops and pasture plants without deteriorating over a long period of time. Capability classes, the broadest groups, are designated by numerals 1 through 8. The numerals indicate progressively greater limitations and narrower choices for practical use. The classes are defined in **Table 4-1** below.

TABLE 4-1
LAND CAPABILITY CLASSIFICATION SYSTEM – CLASS DEFINITIONS

Class	Definition
1	Soils have few limitations that restrict their use
2	Soils have moderate limitations that reduce the choice of plants or that require moderate conservation practices
3	Soils have severe limitations that reduce the choice of plants or that require special conservation practices, or both
4	Soils have very severe imitations that reduce the choice of plants or that require very careful management, or both
5	Soils are not likely to erode but have other limitations, impractical to remove, that limit their use
6	Soils have severe limitations that make them generally unsuitable for cultivation
7	Soils have very severe limitations that make them unsuitable for cultivation
8	Soils and miscellaneous areas have limitations that nearly preclude their use for commercial crop production

Source: USDA, 2007.

Capability subclasses are soil groups within any one soil class that indicate the specific limitation of that soil class. They are designated by adding a small letter, e, w, s, or *c*, to the class numeral, for example, 2e. The capability subclasses are defined in **Table 4-2** below.

TABLE 4-2
LAND CAPABILITY CLASSIFICATION SYSTEM – SUBCLASS DEFINITIONS

Subclass	Definition
e	Indicates that the main hazard is the risk of erosion unless close-growing plant cover is maintained
w	Indicates that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage
s	Indicates that the soil is limited mainly because it is shallow, droughty, or stoney
c	Indicates that the chief limitation is climate that is very cold or very dry (used in only some parts of the United States)

Source: USDA, 2007.

Capability subclasses are further delineated into capability units that group soils which are similar enough to be suited to the same crops and pasture plants, require similar management, and have similar productivity.

Storie Index Rating System

The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture. Ratings range from Grade 1 soils (80 to 100 rating), which have few or no limitations for agricultural production, to Grade 6 soils (rating of less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed (University of California, 1978). The six grades, ranges in index rating, and definition of grades, as defined by the NRCS, are provided below in **Table 4-3**.

TABLE 4-3
STORIE INDEX RATING SYSTEM

Grade	Index Rating	Definition
1 – Excellent	80 through 100	Soils are well suited to intensive use for growing irrigated crops that are climatically suited to the region.
2 – Good	60 through 79	Soils are good agricultural soils, although they may not be so desirable as Grade 1 because of moderately coarse, coarse, or gravelly surface soil texture; somewhat less permeable subsoil; lower plant available water holding capacity, fair fertility; less well drained conditions, or slight to moderate flood hazards, all acting separately or in combination.
3 – Fair	40 through 59	Soils are only fairly well suited to general agricultural use and are limited in their use because of moderate slopes; moderate soil depths; less permeable subsoil; fine, moderately fine or gravelly surface soil textures; poor drainage; moderate flood hazards; or fair to poor fertility levels, all acting alone or in combination.
4 – Poor	20 through 39	Soils are poorly suited. They are severely limited in their agricultural potential because of shallow soil depths; less permeable subsoil; steeper slope; or more clayey or gravelly surface soil textures than Grade 3 soils, as well as poor drainage; greater flood hazards; hummocky micro-relief; salinity; or fair to poor fertility levels, all acting alone or in combination.
5 – Very Poor	10 through 19	Soils are very poorly suited for agriculture, are seldom cultivated and are more commonly used for range, pasture, or woodland.
6 – Nonagricultural	Less than 10	Soils are not suited for agriculture at all due to very severe to extreme physical limitations, or because of urbanization.

Source: University of California, 1978.

Project Site Soil Ratings

The project site contains six individual soil types (see **Figure 12-2** in Section 12.0). **Table 4-4** provides a summary of the soil types within the project site, the acreage of each, and the corresponding Storie Index Rating and Soil Capability Classification.

TABLE 4-4
PROJECT SITE SOILS

Map Unit	Soil Name	Land Capability		Storie Index	Acres
		Non-irrigated	Irrigated		
106	Andregg coarse sandy loam, 2 to 9 percent slopes	3e	3e	54	30.8
109	Andregg coarse sandy loam, rocky, 2 to 15 percent slopes	4e	4e	34	4.8
144	Exchequer very stony loam, 2 to 15 percent slopes	7s		15	11.3
152	Inks cobbly loam, 2 to 30 percent slopes	4e	4e	21	3.8
153	Inks cobbly loam, 30 to 50 percent slopes	6e		11	22.8
194	Xerofluvents, frequently flooded	4w	4w	36	0.0
198	Water				1.2

Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the Natural Resource Conservation Service (NRCS) (formerly the Soil Conservation Service). The intent of the NRCS was to produce agricultural resource maps based on soil quality and land use across the nation. As part of the nationwide agricultural land use mapping effort, the NRCS developed a series of definitions known as Land Inventory and Monitoring (LIM) criteria. The LIM criteria classified the land's suitability for agricultural production; suitability included both the physical and chemical characteristics of soils and the actual land use. Important Farmland maps are derived from the NRCS soil survey maps using the LIM criteria (DOC, 2004).

Since 1980, the State of California has assisted the NRCS with completing its mapping in the state. The FMMP was created in the State Department of Conservation (DOC) to continue the mapping activity with a greater level of detail. DOC applied a greater level of detail by modifying the LIM criteria for use in California. The LIM criteria in California utilize the NRCA and Storie Index Rating systems, but also consider physical conditions such as a dependable water supply for agricultural production, soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth.

Important Farmland Maps for the State of California are compiled using the modified LIM criteria, as described above, and current land use information. The minimum mapping unit is 10 acres unless otherwise specified. Units of land smaller than 10 acres are incorporated into the surrounding classification. The Important Farmland Maps identify five agriculture-related categories: Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of

Local Importance, and Grazing Land. In addition, the maps identify three categories of non-agricultural land types: Urban and Built-Up Land, Other Land, and Water. The categories are described below (DOC, 2004):

- **Prime Farmland (P):** Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Farmland of Statewide Importance (S):** Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

- **Unique Farmland (U):** Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

- **Farmland of Local Importance (L):** Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. Placer County defines Farmland of Local Importance within the County as farmlands not covered by the categories of Prime, Statewide, or Unique. This designation is further defined as those lands that are zoned for agriculture by County Ordinance and the California Land Conservation Act as well as dry farmed lands, irrigated pasture lands, and other agricultural lands of significant economic importance to the County and include lands that have a potential for irrigation from Placer County water supplies.

- **Grazing Land (G):** Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities. The minimum mapping unit for Grazing Land is 40 acres.

- **Urban and Built-Up Land (D):** Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, institutional, public administrative purposes, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

- **Other Land (X):** Land not included in any other mapping category. Common examples include low-density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry, or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and non-agricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.

- **Water (W):** Perennial water bodies with an extent of at least 40 acres.

It should be noted that Important Farmland classifications are not the same as land designated for agriculture by a general plan or other land use planning document. For example, land uses

designated by the Placer County General Plan Land Use Map as Agriculture or Rural Agriculture are areas where agricultural land uses are allowed by right but are not necessarily lands designated by the Department of Conservation as Important Farmland.

Important Farmland Map

The Important Farmland Map for the project site and immediately surrounding area is shown in **Figure 4-5**. As shown in this figure, the majority of the project site is designated Farmland of Local Importance with the remaining portions designated Other Land and Urban and Built-Up Land. **Table 4-5** provides a summary of these FMMP designations on the project site.

TABLE 4-5
IMPORTANT FARMLAND DESIGNATIONS ON PROJECT SITE

Important Farmland Designation	Acreage	Percentage of Site
Farmland of Local Importance	73.8	98.7
Other Land	0.82	1.1
Urban and Built-Up Land	0.13	0.2
	74.8	**100**

Source: FMMP, 2006

North of the project site, within the City of Rocklin, land is designated as Urban and Built-Up Land. The Farmland of Local Importance on the project site continues east of the site with some Farmland of Statewide Importance beyond. Land south of the site is designated Other Land while land west of the site is designated Grazing Land. There is some additional Grazing Land located northeast of the site (FMMP, 2006).

Williamson Act Contracts and Farmland Security Zones

The project site not subject to any Williamson Act contracts or Farmland Security Zone contracts. Furthermore, there are no active Williamson Act Contracts or Farmland Security Zone contracts in the immediate vicinity of the project site.

4.2 REGULATORY FRAMEWORK

4.2.1 Federal

There are no federal standards and regulations applicable to the project site.

4.2.2 State

California Department of Conservation

The California Department of Conservation (DOC) administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program (CFCP), the Williamson Act Easement Exchange Program (WAEEP), the California Land Evaluation and Site Assessment (LESA) Model, and the Farmland Mapping and Monitoring Program. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. DOC has authority for the approval of agreements entered into

under WAEEP. The population of California is expected to grow from its current 34 million to 50 million by 2025. This population growth and the need for new homes will put strain on the nation's leading agricultural economy. Key DOC tools available for land conservation planning are conservation easement grants, tax incentives to keep land in agriculture or open space, and farmland mapping and monitoring.

Williamson Act

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, is a non-mandated state program, administered by counties and cities to preserve agricultural land and discourage the premature conversion of agricultural land to urban uses. The act authorizes local governments and property owners to (voluntarily) enter into contracts to commit agricultural land to specified uses for ten or more years. Once enforceably restricted, the land is valued for taxation based on its agricultural income rather than unrestricted market value. This results in a lower tax rate for owners. In return, the owners guarantee that these properties remain under agricultural production for an initial ten-year period. The contract is renewed automatically unless the owner files a notice of non-renewal thereby maintaining a constant ten-year contract. Currently, approximately 70 percent of the state's prime agricultural land is protected under this act. Prime farmland under Williamson Act includes land that qualifies as Class I and II in the Soil Conservation Service (SCS) classification of land that qualifies for rating 80 to 100 in the Storie index rating. Participation is on a voluntary basis by both landowners and local governments and is implemented through the establishment of Agricultural Preserves and the execution of Williamson Act contracts.

It should be noted that in July 2009, the state legislature passed several bills to balance the state budget. Included in these bills was a provision that temporarily cuts local funding for the implementation of the Williamson Act Program by approximately $35 million, effectively eliminating the program until funding is restored.

Farmland Security Zones

Since 1998, another option within the Williamson Act Program is the creation of Farmland Security Zones and contracts. A Farmland Security Zone (FSZ) is an area created within an agricultural preserve by a board of supervisors upon request by a landowner or group of landowners. An FSZ contract is a contract between a private landowner and a county that restricts land to agricultural or open space uses. The minimum initial term is 20 years. Like a Williamson Act contract, FSZ contracts renew annually unless either party files a "notice of nonrenewal" (DOC, 2003). FSZ contracts offer landowners greater property tax reductions. Land restricted by an FSZ contract is valued for property assessment purposes at 65 percent of its Williamson Act valuation or 65 percent of its Proposition 13 valuation, whichever is lower.

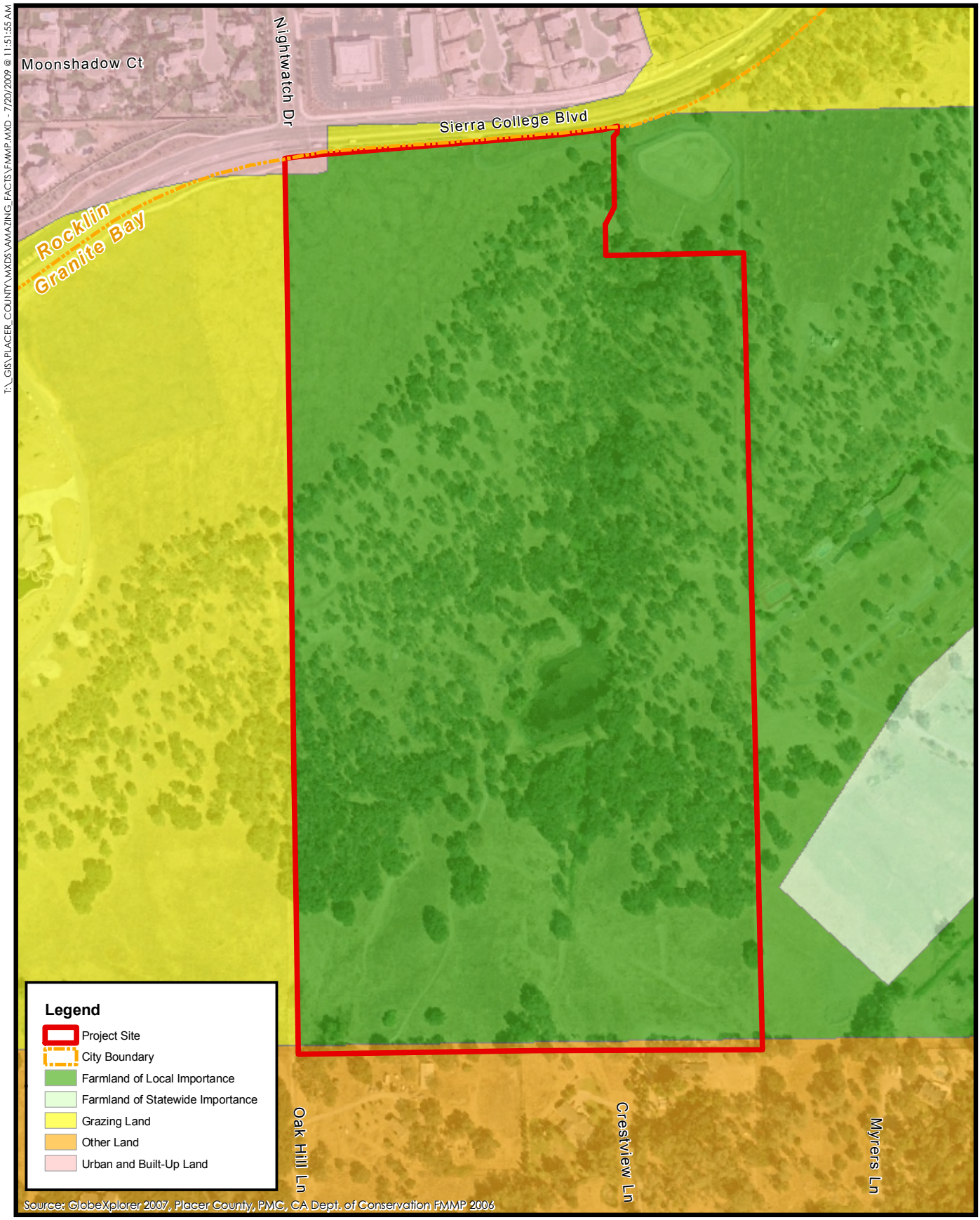

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Figure 4-5
FMMP Map

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California Farmland Conservancy Program

The California Farmland Conservancy Program (CFCP) is a statewide grant funding program that supports local efforts to establish agricultural conservation easements and planning projects for the purpose of preserving important agricultural land resources. An agricultural conservation easement is a voluntary, legally recorded deed restriction that is placed on a specific property used for agricultural production. The goal of an agricultural conservation easement is to maintain agricultural land in active production by removing the development pressures from the land. Such an easement prohibits practices that would damage or interfere with the agricultural use of the land. Because the easement is a restriction on the deed of the property, the easement remains in effect even when the land changes ownership (DOC, 2009).

The CFCP provides grants to local governments and qualified nonprofit organizations for the following purposes:

- Voluntary acquisition of conservation easements on agricultural lands that are under pressure of being converted to non-agricultural uses;
- Temporary purchase of agricultural lands that are under pressure of being converted to non-agricultural uses, as a phase in the process of placing agricultural conservation easements on farmland;
- Agricultural land conservation policy and planning projects; and
- Restoration of and improvements to agricultural land already under easement.

California Land Evaluation and Site Assessment (LESA) Model

The LESA system ranks lands for suitability and inclusion in the FPP. LESA evaluates several factors, including soil potential for agricultural use, location, market access, and adjacent land use. These factors are used to numerically rank the suitability of parcels based on local resource evaluation and site considerations. The LESA system has spawned many variations, including the California LESA model, described below.

The California Land Evaluation and Site Assessment (LESA) model was developed in 1997 and was designed based on the federal LESA system and can be used to rank the relative importance of farmland and the potential significance of its conversion on a site-by-site basis. The California LESA model considers the following factors: land capability, Storie index, water availability (drought and non-drought conditions), land uses within one quarter mile, and "protected resource lands" (e.g., Williamson Act lands) surrounding the property. A score can be derived and used to determine if the conversion of a property would be significant under CEQA. The LESA model provides a broad range of scores and other factors that can be considered in determining impact significance.

Farmland Mapping and Monitoring Program

The FMMP is a nonregulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The first Important Farmland Maps produced in 1984 covered 30.3 million acres (38 counties). The first Farmland Conversion Report was released in 1988 and detailed farmland changes from 1984 to 1986. Nine subsequent reports have included additions to the project area as modern soil surveys became available. The

FMMP now maps agricultural and urban land uses on nearly 96 percent of the state's privately held land and the coverage area is 47.9 million acres in 49 counties. It is the only statewide land use inventory conducted on a two-year basis that identifies agricultural and urban land conversions (DOC, 2009).

Assembly Bill (AB) 2881 – Right to Farm Disclosure

AB 2881 was passed by the State Legislature in 2008 and became effective January 1, 2009. This bill requires that as a part of real estate transactions, land sellers and agents must disclose whether the property is located within one mile of farmland as designated on the most recent Important Farmland Map. Any of the five agricultural categories – Prime Farmland, Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land – on the map qualifies for disclosure purposes.

4.2.3 Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 4-6** lists the General Plan policies that relate to land use and planning and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 4-6
GENERAL PLAN CONSISTENCY ANALYSIS – LAND USE AND AGRICULTURE

General Plan Policies	Consistency Determination	Analysis
Section 1: Land Use		
Policy 1.A.2: The County shall permit only low-intensity forms of development in areas with sensitive environmental resources or where natural or human-caused hazards are likely to pose a significant threat to health, safety, or property.	Consistent	The proposed church facilities will occupy only a portion of the project site and would not be considered high-intensity development. Furthermore, the sensitive environmental resources that have been identified on the project site, including wetlands and cultural resources, would be largely preserved on the site.
Policy 1.A.3: The County shall distinguish among urban, suburban, and rural areas to identify where development will be accommodated and where public infrastructure and services will be provided. This pattern shall promote the maintenance of separate and distinct communities.	Consistent	The project site is located within the established Granite Bay community, is zoned for development (Building Site combining district) and is located adjacent to existing residential and office development.
Policy 1.A.4: The County shall promote patterns of development that facilitate the efficient and timely provision of urban infrastructure and services.	Consistent	The project site is located adjacent to existing development and has been zoned for development. As such, implementation of the proposed project would be considered an efficient and timely provision of infrastructure and public services.
Policy 1.A.5: The County shall not approve intensive forms of development or land divisions into parcels of 10 acres or less within any city's	Consistent	The proposed project does not include the subdivision of any parcels. Furthermore, the project site is zoned for urban

sphere of influence where that city's general plan calls ultimately for urban development except where the County General Plan or applicable Community Plan designates the area for urban development. The County shall inform cities in a timely manner when applications for development within their sphere of influence are filed with the County and shall consider the city's ultimate plans for the relevant area during project review. In such cases, Policy #16 in Part III shall apply to such development projects.		development.
Policy 1.B.6: The County shall require new subdivided lots to be adequate in size and appropriate in shape for the range of primary and accessory uses designated for the area.	Consistent	The proposed project does not include the subdivision of any parcels. The existing parcels are of adequate size and are appropriately shaped for the proposed uses.
Policy 1.H.1: The County shall maintain agriculturally-designated areas for agricultural uses and direct urban uses to designated urban growth areas and/or cities.	Consistent	The project site is designated for rural residential uses but is zoned for agricultural uses. However, houses of worship are considered an acceptable use within the F-B-X zoning district with a minor use permit. Furthermore, the project site is not currently and has not in the past been used for agricultural production.
Policy 1.H.2: The County shall seek to ensure that new development and public works projects do not encourage expansion of urban uses into designated agricultural areas.	Consistent	The surrounding parcels are designated for residential uses. Although the site and some surrounding parcels are zoned for agricultural uses, the proposed use is permitted with a minor use permit. Furthermore, the proposed project is not a major commercial or residential development and would not be expected to encourage expansion of urban uses into the area.
Policy 1.H.4: The County shall allow the conversion of existing agricultural land to urban uses only within community plan areas and within city spheres of influence where designated for urban development on the General Plan Land Use Diagram.	Consistent	The project site is zoned for agricultural use; however, the site is not utilized for agricultural production. Furthermore, the project site is located within the Granite Bay Community Plan area.
Policy 1.H.5: The County shall require development within or adjacent to designated agricultural areas to incorporate design, construction, and maintenance techniques that protect agriculture and minimize conflicts with adjacent agricultural uses.	Consistent	There a few small-scale residential-agricultural operations in the vicinity of the project site including a small organic orchard, a nursery, and a small personal farm. These uses are not immediately adjacent to the site and would be separated from the proposed development by a large buffer consisting of the southern portion of the project site which would be required to remain undeveloped and naturally vegetated. This buffer area is undevelopable due to steep slopes and drainage issues. The proposed project would not conflict with these agricultural uses.
Policy 1.H.6: The County shall require new non-agricultural development immediately adjacent to agricultural lands to be designed to provide a buffer in the form of a setback of sufficient	Consistent	There a few small-scale residential-agricultural operations in the vicinity of the project sites southern boundary including a small organic orchard, a nursery, and a

distance to avoid land use conflicts between the agricultural uses and the non-agricultural uses. Such setback or buffer areas shall be established by recorded easement or other instrument, subject to the approval of County Counsel. A method and mechanism (e.g., a homeowners association or easement dedication to a non-profit organization or public entity) for guaranteeing the maintenance of this land in a safe and orderly manner shall be also established at the time of development approval.		small personal farm. These uses are not immediately adjacent to the site. Furthermore, the proposed development would be required to be separated from properties south of the site by a large buffer consisting of the southern portion of the project site which would remain undeveloped and naturally vegetated.

Granite Bay Community Plan

The Granite Bay Community Plan was adopted by the Placer County Board of Supervisors in 1989 and updated in 2005 (Resolution #2005-149). **Table 4-7** lists the Community Plan policies that relate to land use and agricultural resources and the proposed project and provides an analysis of the project's consistency with these policies.

TABLE 4-7
COMMUNITY PLAN CONSISTENCY ANALYSIS – LAND USE AND AGRICULTURE

General Plan Goals and Policies	Consistency Determination	Analysis
General Community Policies		
Policy 1: Land uses in the Granite Bay Community shall be compatible with the Community Plan.	Consistent	The project site is designated by the Community Plan as Rural Estate (RE) with 4.6- to 20-acre minimum parcel size. According to the permitted zoning districts for this land use designation, houses of worship are considered accessory uses requiring a minor use permit (MUP). The proposed project includes an application for a MUP. Should the project be approved by the County, the MUP would be issued and the project would be consistent with the Granite Bay Community Plan.
Policy 2: Uses of land in the Granite Bay Community shall, in general, be restricted to residential sites; conservation and open space preserves for watershed protection, air quality protection, scenic enjoyment and recreation; agricultural pursuits and such public, private and commercial uses as are necessary to serve the frequent needs of the community and to provide reasonable or accustomed services to local residents.	Consistent	The proposed church would be a public use that would serve the ongoing needs of the surrounding community. Furthermore, Houses of worship are considered accessory uses under the project site's General Plan and Community Plan land use designations and zoning district.
Policy 3: The magnitude and intensity of land use within the Granite Bay area should be limited by natural and other planning constraints.	Consistent	The proposed development is appropriately designed for the natural conditions of the site as well as the planning constraints that apply to the site as provided in the County General Plan, the Granite Bay Community Plan, the County Zoning Code and other applicable plans.

General Plan Goals and Policies	Consistency Determination	Analysis
Land Use Element Policies		
Policy 6: Strive to minimize negative impacts of development on the existing agricultural operations.	Consistent	The project site is not used for agricultural production of any kind. There are a few agricultural operations located near the southern boundary of the project site. However, the proposed project would not conflict with any of these operations and a large buffer consisting of the entire southern portion of the project site would be provided to the south of the church facilities.
Policy 17: Landscaped buffer yards shall be provided wherever necessary to minimize the adverse effects of higher intensity uses upon lower intensity uses.	Consistent	The proposed site layout would provide a large buffer separating the project from all adjacent parcels with the exception of three parcels to the west and one parcel to the east. The parcels to the west would be separated from the project by the primary access road on the site which would be curbed and landscaped, thereby providing a buffe. The parcel to the east is owned and operated by the San Juan Water District and would not require a buffer. North of the site is Sierra College Boulevard, the frontage of which would be landscaped as part of the project.
Intensity of Use Policies		
Policy 1: The planning area shall have the low intensity of development which is appropriate to its location on the fringe of the urban areas of the City of Roseville and the County of Sacramento, and should provide a transition between the urban densities in the adjoining communities and non-intensive land uses to the north and west.	Consistent	The proposed development would be low intensity with only a small portion of the site being developed with urban uses. In addition, the site is immediately south of existing intensive development within the City of Rocklin and would therefore provide a transition between the city and the primarily undeveloped area to the south within unincorporated Placer County.
Public and Private Institutions Policies		
Policy 1: Institutional uses shall be limited to those which provide non-commercial services or facilities for local residents and contribute to the general well-being of the community.	Consistent	The proposed project would provide only non-commercial services and facilities that would be available to all local residents. A church facility would generally be considered to contribute to the well-being of the community.
Policy 2: The intensity of use of an institutional site shall be limited to that which is compatible with adjoining uses and in keeping with the rural character of Granite Bay; the institution should not generate excessive noise or traffic.	Consistent	Though the proposed development would only occupy a small portion of the entire project site, the size and scale of the proposed church would not be consistent with the adjoining rural residential uses to the south of the project site. However, the project site is adjacent to a similarly scaled office complex to the north. In addition, mitigation measure MM 4-2a requires the applicant to apply for and gain approval of an amendment to the Granite Bay Community Plan to allow for the development of houses of worship to the

General Plan Goals and Policies	Consistency Determination	Analysis
		scale and size as proposed by the project.
Policy 3: Institutional buildings shall be of a size and scale compatible with the rural atmosphere of the community.	Consistent	The proposed development would develop only a small portion of the site with urban uses. Though the proposed buildings will develop the first level of the main building below grade and utilize some natural building materials and neutral-toned architectural coatings, the mass and scale of the proposed buildings, with large structures, parking lots and nighttime lighting, will change the existing rural character of 17 acres of undeveloped land. However, mitigation measure MM 4-2a requires the applicant to apply for and gain approval of an amendment to the Granite Bay Community Plan to allow for the development of houses of worship to the scale and size as proposed by the project.

Placer County "Right-to-Farm" Ordinance

Chapter 5, Section 5.24.040 of the Placer County Code contains a "right-to-farm" ordinance. The ordinance is intended to reduce the loss of commercial agricultural resources by limiting the circumstances under which agricultural operations may be deemed to constitute a nuisance. The ordinance acknowledges that when nonagricultural land uses extend into agricultural areas, agricultural operations often become the subject of nuisance suits. As a result, agricultural operations are sometimes forced to cease or are substantially curtailed and others may be discouraged from making investments in agricultural improvements. In order to protect agricultural operations, the ordinance states that no agricultural activity conducted for commercial purposes shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after the same has been in operation for more than one year if it was not a nuisance at the time it began. In addition, the ordinance requires each prospective buyer of property in unincorporated Placer County to be informed by the seller or his/her authorized agent of the right-to-farm ordinance.

Western Placer County Agricultural Land Assessment and Agricultural Land Conservation Evaluation Criteria

The Western Placer Agricultural Land Assessment and Agricultural Land Conservation Evaluation Criteria report identifies a means of achieving the County's goal of conserving and protecting valuable agricultural lands. The report includes a comprehensive assessment of the existing agricultural resources within western Placer County and provides a program to protect valuable agricultural resources and avoid premature conversion of agricultural lands in the unincorporated areas through the use of existing conservation programs, conservation easements, and other methods. The study area for the report includes all of south, west and mid Placer County, extending approximately 25 miles east of Auburn (Placer County, 2003).

Placer County Zoning Code

The Placer County Zoning Ordinance is Chapter 17 of the Placer County Code. It is currently in its fifth edition and was printed in January 1998. The primary purposes of the Zoning Ordinance

are to carry out the goals and objectives of the County General Plan and community plans, manage land use in a manner that will assure the orderly development and beneficial use of the unincorporated areas of the county, manage the distribution of population, protect and preserve important features of the county's natural environment, and reduce public hazards resulting from the inappropriate location, use, or design of buildings and land uses.

As described in the Existing Setting section above, the project site is zoned as Farm (F) with a Building Site combining district (F-B-X 20-acre minimum). The intent of the F zone is to provide areas for the conduct of commercial agricultural operations that can also accommodate necessary services to support agricultural uses, together with residential land uses at low population densities. Allowable uses within this zone include crop production, equestrian facilities, fisheries and game preserves, forestry, grazing, storage structures, and pipelines and transmission lines. Houses of worship, or churches, are allowable uses with issuance of a minor use permit (Placer County, 2009a). The purpose of the minor use permit process is to evaluate whether a marginal use, such as the proposed project, is appropriate for an individual site.

4.3 IMPACTS

4.3.1 Standards of Significance

Based on Appendix G of the State CEQA Guidelines, a project would have significant land use and agricultural resource impacts if it would:

1) Physically divide an established community.

2) 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 impact.

3) Conflict with any applicable habitat conservation plan or natural community conservation plan.

4) 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 nonagricultural use.

5) Conflict with existing zoning for agricultural use or a Williamson Act contract.

6) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland to nonagricultural use.

7) In regard to criteria 5 above, the project site does not contain and is not adjacent to any land under an active Williamson Act contract. Therefore, no land under a Williamson Act contract would be converted as a result of the proposed project. This issue is not discussed further in this DEIR.

Methodology

The following evaluation of potential land use and planning impacts analyzes the proposed project's consistency with applicable land use planning documents as well as the project's

consistency with the types and intensities of the existing and planned land uses on and surrounding the project site, including surrounding agricultural uses. Potential land use conflicts or incompatibilities include agricultural-urban conflicts as well as conflicts that are typically the result of other environmental effects, such as the generation of noise, traffic, or objectionable odors. Potential land use conflicts resulting from the effects of project construction and operation are summarized here. The reader is also referred to other DEIR sections (Noise, Aesthetics, Transportation, Air Quality, etc.) for more detailed discussions of other relevant environmental effects.

Evaluation of potential land use impacts associated with the proposed project was based on review of applicable land use planning documents including the Placer County General Plan and Zoning Ordinance and the Granite Bay Community Plan, as well as consultation with appropriate agencies and field review of the project site and surrounding area.

4.3.2 Project Level Impacts and Mitigation Measures

IMPACT 4-1: Divide an Established Community

The proposed project is a house of worship and will not have any associated residential development on the site. The project site is undeveloped with no existing residential component and is located at the edge of urban development surrounded primarily by office and single-family residential uses. The site does not provide any important roadway or pedestrian connections to any surrounding communities. Implementation of the proposed project will not result in the division of any established communities. Thus, the project would have **no impact** and no mitigation is required.

IMPACT 4-2: Conflict with Applicable Land Use Plans, Policies, or Regulations

As described previously in this section, the approximately 75-acre project site is designated by the Placer County General Plan as Rural Residential (RR) which, in addition to residential development, allows for various facilities and services that support residential neighborhoods, including churches. The project site is specifically zoned by the Placer County Zoning Ordinance as Farm with a Building Site combining district (F-B-X 20-acre minimum). Again, this zoning district allows for houses of worship, or churches, with issuance of a minor use permit.

As such, the proposed project would be consistent with the County General Plan land use designation and would not require an amendment to this plan. This impact is considered to be **less than significant**.

However, the project site is also located within the Granite Bay Community Plan and designated Rural Estate (RE) 4.6- to 20-acre minimum. This designation generally allows for rural and agricultural uses such as family farms and hobby farms. Allowable uses within this designation are further defined by the zoning districts permitted within this designation, each of which requires a minor use permit for the development of a house of worship. Houses of worship are generally considered compatible with rural residential land uses; however, the proposed project appears to be regional in scale and may be larger than that contemplated by the Granite Bay Community Plan. The physical change from an undeveloped parcel with natural scenic qualities to a regional-scale facility will unavoidably alter the character of the site and introduce potential land use compatibility conflicts with nearby residential uses. The proposed project would provide landscaping and screening, increased setbacks, circulation planning, and a variety of other site

design measures to minimize impacts. These measures will reduce visual impacts but will not alter the inconsistency with the Granite Bay Community Plan that the house of worship is not rural in scale and character. As proposed, the project is not consistent with policies in the Granite Bay Community Plan as they relate to the size, scale, and character of land development and the intent to maintain a rural setting, and this is a **potentially significant** impact.

Mitigation Measure 4-2a Revise the Granite Bay Community Plan

Prior to approval of the project, the applicant shall apply for and gain approval of an amendment to the Granite Bay Community Plan to allow for the development of houses of worship to the scale and size as proposed by the project.

Mitigation Measure 4-2b Preserve the remainder of the project site as undeveloped land

The applicant shall enter into an agreement with the County of Placer to preserve the remainder of the project site to the south of the proposed house of worship in perpetuity as undeveloped land.

Implementation of **MM 4-2a** and **4-2b** would mitigate this impact to a **less than significant** level by requiring an amendment to the Granite Bay Community Plan that would allow for the development of houses of worship to the scale and size as proposed by the project.

IMPACT 4-3: Conflict with any Habitat Conservation Plan or Natural Community Conservation Plan

The county presently has not adopted a habitat conservation plan or a natural community conservation plan. As such, the proposed project poses no conflict with such plans and there will be **no impact** to such plans and no mitigation is required.

IMPACT 4-4: Convert Farmland of Local Importance

Implementation of the proposed project would result in the direct conversion of about 17 acres of the project site to urban uses, the majority of which is designated by the FMMP as Farmland of Local Importance. The remainder of the site would remain undeveloped but would no longer be available for any type of agricultural use as it would be utilized for site drainage and would be preserved to protect existing wetland areas. Therefore, the project would result in a loss of about 73.8 acres of land designated by the FMMP as Farmland of Local Importance. This loss would be permanent and irreversible and is considered a **potentially significant** impact.

Mitigation Measure 4-4 Preserve offsite farmland at a one to one ratio

The applicant shall protect one acre of existing farmland or land of equal or higher quality for each acre of Farmland of Local Importance that would be converted as a result of the project. This protect may consist of the establishment of a farmland conservation easement, farmland deed restriction or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts. The farmland/wildlife habitat land to be preserved shall be located within unincorporated Placer County and must have adequate water supply to support agricultural use. In deciding whether to approve the land proposed for preservation by the project

applicant, the County shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland shall occur prior to the County's approval of the project's first building permit. In addition, the County shall impose the following minimum conservation easement content standards:

a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land;

b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land;

c) The document shall prohibit any activity which substantially impairs or diminished the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land.

d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.

e) Interests in agricultural/wildlife habitat mitigation land shall be held in trust by an entity acceptable to the County in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the County.

f) The applicant shall pay to the County an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the County Board of Supervisors, not to exceed 15 percent of the easement price paid by the applicant.

g) The County shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the County.

h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the County.

i) Before committing to the preservation of any particular farmland pursuant to this measure, the project proponent shall obtain the County's approval of the farmland proposed for preservation.

Implementation of **MM 4-4** would partially offset this impact by requiring the preservation of similar farmland at another location; however, a net loss of farmland would still occur in the County which cannot be fully mitigated and this impact would remain **significant and unavoidable.**

IMPACT 4-5: Conflict with Williamson Act Contract

As previously mentioned, the project site is not subject to any Williamson Act contracts or Farmland Security Zone contracts. Furthermore, there are no active Williamson Act Contracts or

Farmland Security Zone contracts in the immediate vicinity of the project site. Therefore, the proposed project would have **no impact** relative to lands subject to a Williamson Act contract and no mitigation is required.

IMPACT 4-6: Agricultural/Urban Interface Conflicts

The proposed project would result in the placement of urban uses adjacent to agricultural uses. This is considered a **potentially significant** impact.

The proposed project site is not located immediately adjacent to any existing agricultural operation. However, there are a few small agricultural operations in the area south of the project site including an organic orchard, a nursery and a residential agricultural parcel. Therefore, implementation of the proposed project would place an urbanized land use (church) in close proximity to these existing agricultural uses, resulting in a potentially significant agricultural/urban interface conflict. Agricultural land uses in close proximity to urban land uses can result in agricultural/urban interface conflicts that include, but are not limited to, the following:

- Inconveniences or discomforts associated with dust, smoke, noise, and odor from agricultural operations;
- Restrictions on agricultural operations (such as pesticide application) along interfaces with urban uses;
- Conflicts with farm equipment and vehicles using roadways;
- Noise pollution from farm equipment, such as trucks, wind turbines, and aircraft used in pesticide application;
- Trespassing and vandalism on active farmlands; and
- Growth pressure to convert land to urban uses as a result of above-mentioned conflicts and increases in property value.

These conflicts typically occur when residential land uses are placed adjacent to agricultural operations. The proposed project consists of a church facility, which may be considered appropriate and consistent with the existing and planned development in the surrounding area, and does not involve any new residential uses on the site. Particularly, north of Sierra College Boulevard, within the City of Rocklin, there is a significant amount of recent residential development as well as a small office building complex and an elementary school. Furthermore, the proposed project would not expose additional residents to inconveniences associated with agricultural operations nor would it result in an increase in trespassing and vandalism on active farmlands as no residential uses that would generate additional population in the area are proposed. The proposed house of worship is consistent with the County General Plan and the Granite Bay Community Plan land use designation and underlying Farm zone. In addition, project traffic would occur on Saturday evenings and would not be expected to conflict with farm equipment and vehicles using roadways. Water quality, stream alteration, and surface runoff impacts associated with the proposed project are discussed in Section 13.0 Hydrology and Water Quality of this DEIR.

There are currently no existing agricultural operations or timber resources occurring on-site, but the property is located in an area where residential agricultural parcels exist and there is the potential that existing and future agricultural operations could be adversely impacted by the proposed development. However, the County has adopted a right-to-farm ordinance which allows existing agricultural operations to continue, in a manner consistent with the underlying zoning. Existing agricultural operations surrounding the project site would be protected by the County's right-to-farm ordinance. As discussed under the Regulatory Framework section above, the right-to-farm ordinance limits the circumstances under which agricultural operations may be deemed to constitute a nuisance.

Mitigation Measure 4-6 Comply with County's Right-to-Farm Ordinance

Consistent with the County's right-to-farm ordinance (Chapter 5, Section 5.24.040 of the County Code), the project applicant shall acknowledge receipt of the right-to-farm ordinance.

Implementation of mitigation measure **MM 4-6** would ensure that existing agricultural operations would be protected from nuisance claims consistent with the County's right-to-farm ordinance and that the approval of this project would not impact the ability of existing and future agricultural operations to continue in a manner consistent with the underlying zoning regulations. In addition, the project is consistent with existing land use designations on the site and in the surrounding area. Therefore, this potential impact would be reduced to a **less than significant** impact.

5.0
POPULATION AND HOUSING

5.0 POPULATION, HOUSING, AND EMPLOYMENT

This section of the Draft Environmental Impact Report ("DEIR"; "Draft EIR") analyzes the potential impacts of the proposed project on local population, housing, and employment characteristics. It characterizes the area's current population and housing stock; assesses recent changes to the area's population, employment, and housing; and identifies the proposed project's impacts on the area's population, housing stock, and employment. Mitigation measures are provided as appropriate to mitigate for significant project impacts.

5.1 ENVIRONMENTAL SETTING

5.1.1 Current Population and Growth Trends

Placer County is located in northern California at the base of the Sierra Nevada range. The county encompasses six incorporated cities and towns: Auburn, Colfax, Lincoln, Roseville, Rocklin, and Loomis. The county's 2009 population was estimated at 339,577 with about 32.5 percent residing in the unincorporated county and the remaining 67.5 percent residing in the county's incorporated cities. The county's 2030 population is projected to be about 512,509 with an average projected growth rate of 3.4 percent between 2000 and 2030 (DOF, 2007b). However, due to the current declines in the housing market and the economy as a whole, these projections may currently be overstated.

The growth projections for surrounding counties, as provided by the Department of Finance (DOF), are generally lower than that of Placer County with the exception of Sutter and Yuba counties which are slightly higher. **Table 5-1** below provides growth projections for the surrounding counties of Nevada, Yuba, Sutter, Sacramento, and El Dorado through 2030.

TABLE 5-1
CURRENT AND PROJECTED POPULATION – PLACER AND SURROUNDING COUNTIES

County	2000 Population	Projected Population			Percentage Average Annual Growth Rate (2000–2030)
		2010	2020	2030	
Placer	252,223	347,543	428,535	512,509	3.4
El Dorado	158,621	189,308	221,140	247,570	1.9
Nevada	92,532	102,649	114,451	123,940	1.1
Sacramento	1,233,575	1,451,866	1,622,306	1,803,872	1.5
Sutter	79,632	102,326	141,159	182,401	4.3
Yuba	60,598	80,411	109,216	137,322	4.2

Source: Department of Finance, 2007b

Table 5-2 compares the population estimates for the period 1990 through 2009 for Placer County, its incorporated cities and town, and the State of California. According to DOF (2009) population estimates, the county had a population of 339,577 in 2009, a nearly 2 percent increase from the previous year.

TABLE 5-2
POPULATION ESTIMATES 1990 THROUGH 2008 – PLACER COUNTY, INCORPORATED CITIES, STATE OF CALIFORNIA

Municipality	Population		Percentage Change (1990–2000)	Population	Percentage Change (2000–2009)	Percentage Average Annual Growth Rate (1990–2009)
	1990	2000		2009		
Placer County	172,796	248,399	+43.8	339,577	+36.7	+5.1
City of Auburn	10,653	12,462	+17.0	13,432	+7.8	+1.4
City of Colfax	1,306	1,520	+16.4	1,878	+23.6	+2.3
City of Lincoln	7,248	11,205	+54.6	40,060	+257.5	+23.8
Town of Loomis	5,705	6,260	+9.7	6,677	+6.7	+0.9
City of Rocklin	18,806	36,330	+99.6	54,754	+50.7	+10.1
City of Roseville	44,685	79,921	+78.9	112,343	+40.6	+8.0
California	29,558,000	33,873,086	+14.6	38,049,462	+12.3	+1.6

Source: Department of Finance, 2007a; Department of Finance, 2009

According to the population estimates shown in **Table 5-2**, the county has experienced an average annual growth rate of about 5.1 percent between 1990 and 2009. This growth has occurred at a relatively steady pace and at a higher rate than the state as a whole.

5.1.2 Housing

Housing Trends

Population projections are converted to numbers of households by using an average household size for each year. The average household size in the county is low compared to the state average (2.564 persons for the county, compared to 2.923 persons for the state) and has been falling slightly over the past decade (see **Table 5-3**).

TABLE 5-3
HOUSEHOLD SIZE (PERSONS PER HOUSEHOLD) 2000-2008 – PLACER COUNTY, STATE OF CALIFORNIA

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Average
Placer County (including cities)	2.629	2.631	2.614	2.587	2.561	2.543	2.520	2.514	2.513	2.524	2.564
California	2.873	2.898	2.919	2.933	2.942	2.940	2.931	2.930	2.938	2.940	2.923

Source: Department of Finance, 2009

The county was estimated to contain about 149,265 housing units in 2009, about 78 percent of which were detached single-family units (see **Table 5-4**). Attached single-family units represent only 3.2 percent of the housing stock while multi-family units represent about 15.5 percent and mobile homes represent about 3.2 percent of the housing stock.

TABLE 5-4
HOUSING UNITS BY TYPE – PLACER COUNTY

Housing Unit Type	2000		2009		Percentage Change
	Units	Percentage of Total*	Units	Percentage of Total*	
Single-Family					
Detached	81,465	75.9	116,629	78.1	+43.2
Attached	4,136	3.9	4,781	3.2	+15.6
Total Single-Family	85,601	79.8	121,410	81.3	+41.8
Multi-Family					
2 - 4 Units	5,675	5.3	6,369	4.3	+12.2
5+ Units	11,357	10.6	16,743	11.2	+47.4
Total Multi-Family	17,032	15.9	23,112	15.5	+35.7
Mobile Homes	4,669	4.3	4,743	3.2	+1.6
Total Units	**107,302**	**100**	**149,265**	**100**	**+39.1**

Source: Department of Finance, 2009

5.1.3 Employment

Employment Trends

Employment by Industry and Occupation

In 2000, the county had a total workforce of 159,696 people over the age of 16 (excluding government workers), an increase of 35,727 workers since 1990. This represents a 43.1 percent increase for the period or an average annual growth rate of about 14.3 percent. County employment trends by industry and occupation are summarized in **Tables 5-5** and **5-6** below.

TABLE 5-5
INDUSTRY EMPLOYMENT STATUS IN PLACER COUNTY

Industry	Employment 1990	Employment 2000	Percentage Average Annual Growth Rate	Employment Distribution (2000)
Total employed over 16 years of age	82,920	118,647	+14.3	100
Agriculture, Forestry, Fishing/Hunting, and Mining	2,179	1,120	-9.5	0.9
Construction	9,212	10,860	+1.8	9.1
All Manufacturing	8,924	11,789	+3.2	9.9
Wholesale Trade	3,255	4,332	+3.3	3.6
Retail Trade	14,318	14,440	+0.1	12.2
Transportation, Communications, Information, Warehousing, and Utilities	6,248	9,466	+5.2	8.0

Industry	Employment 1990	Employment 2000	Percentage Average Annual Growth Rate	Employment Distribution (2000)
Finance, Insurance, Real Estate, and Rental and Leasing	6,597	10,180	+5.4	8.9
Professional, Educational, Health, Entertainment, Recreation and Other Services	25,426	47,628	+8.7	40.0
Public Administration	6,761	8,832	+3.1	7.4

Source: U.S. Census Bureau, 1990; U.S. Census Bureau, 2000

TABLE 5-6
LABOR FORCE BY OCCUPATION

Occupation	Employment 1990	Employment 2000	Percentage Annual Growth Rate	Employment Distribution (2000)
Total employed over 16 years of age	82,920	118,647	+14.3	100
Management, Professional, and Related Occupations	23,755	47,106	+9.8	39.7
Service	9,823	15,664	+6.0	13.2
Technical, Sales and Office/Administrative	27,569	33,174	+2.0	27.9
Farming, Fishing, and Forestry	1,737	609	-6.5	5.1
Construction, Extraction, Repair and Maintenance, Operators, Laborers, Production, Transportation, and Material Moving	20,036	22,094	+1.0	18.6

Source: U.S. Census Bureau, 1990; U.S. Census Bureau, 2000

Unemployment

Placer County's 2000 unemployment rate was estimated to be about 2.6 percent (U.S. Census, 2000). The recent economic climate has resulted in a significant increase in the unemployment rate within the county as well as throughout the state and country. As of May 2009, the county's unemployment rate was estimated at 10.9 percent (EDD, 2009).

Major Employers

The economy of Placer County is largely within the service, retail trade, and manufacturing industries. The top ten employers in Placer County are shown in **Table 5-7**. The majority of these employers are located in the City of Roseville with the exception of Placer County which has its main administrative buildings located in the Auburn area.

TABLE 5-7
MAJOR EMPLOYERS WITHIN PLACER COUNTY

Company	Number of Employees
Hewlett-Packard	3,800
Placer County	3,092
Sutter Health	2,605
Kaiser Permanente	2,418
PRIDE Industries, Inc.	1,429
Union Pacific Railroad Co., Inc.	1,324
City of Roseville	1,243
Raley's, Inc.	1,195
Roseville Joint Union High School District	1,018
Dry Creek Joint Elementary School District	992
	19,116

Source: City of Rocklin, 2009

Household Income

The household income within the county was estimated at $37,601 in 1989 and at $57,535 in 1999, a 53 percent increase. The county household income is summarized for these two years in **Table 5-8** below.

TABLE 5-8
HOUSEHOLD INCOME IN 1989 AND 1999 – PLACER COUNTY

1989			1999			Percentage Increase
Income Range	Households	Percentage of Households	Income Range	Households	Percentage of Households	
< $10,000	6,569	10.1	< $10,000	4,437	4.7	-32.5
$10,000–14,999	4,432	6.8	$10,000–14,999	3,793	4.1	-14.4
$15,000–24,999	9,030	14.0	$15,000–24,999	8,054	8.6	-10.8
$25,000–34,999	9,582	14.9	$25,000–34,999	9,408	10.1	-1.8
$35,000-49,999	12,844	20.0	$35,000–49,999	14,132	15.1	+10.0
$50,000–74,999	12,914	20.0	$50,000–74,999	20,570	22.0	+59.3
$75,000–99,999	5,100	7.9	$75,000–99,999	13,909	14.9	+173
$100,000–149,999	2,747	4.3	$100,000–149,999	12,063	12.9	+339
> $150,000	1,284	2.0	$150,000–199,999	7,144	7.6	+456
	64,502	**100**		**93,510**	**100**	

Source: U.S. Census, 1990; U.S. Census 2000

Commuting Patterns

In 2000, the mean travel time to work of employed Placer County residents was 27 minutes, with about 94 percent of residents working outside the home and 6 percent working within the home (U.S. Census, 2000).

5.2 REGULATORY FRAMEWORK

5.2.1 Federal

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970

The Uniform Act, passed by Congress in 1970, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Uniform Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects. The act is implemented by government-wide regulations set forth in 49 CFR Part 24.

Title 24 – Housing and Urban Development Part 42

Displacement, Relocation Assistance, and Real Property Acquisition for HUD and HUD-Assisted Programs

Section 104(d) of the Housing and Community Development Act (HCD) provides minimum requirements for federally funded programs or projects when units that are part of a community's low-income housing supply are demolished or converted to a use other than lower moderate-income dwellings.

Section 104(d) requirements include:

- Replacement, on a one-for-one basis, of all occupied and vacant occupiable low- or moderate-income dwelling units that are demolished or converted to a use other than low- or moderate-income housing in connection with an activity assisted under the HCD act; and
- Provision of certain relocation assistance to any lower-income person displaced as a direct result of the following activities in connection with federal assistance:
  - Demolition of any dwelling unit, or
  - Conversion of a low- or moderate-income dwelling unit to a use other than a low- or moderate-income residence.

Section 104(d) requirements are triggered by the use of HOME, CDBG, Section 108 Loan Guarantee, or UDAG funding in a project involving the demolition or conversion of low- or moderate-income housing.

5.2.2 State

California Relocation Statute – Government Code Section 7260

The California Relocation Statute is a California law that establishes minimum standards for state-funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The statute's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for state-funded projects. The statute is intended for the benefit of displaced persons, to ensure that such persons receive fair and equitable treatment and do not suffer disproportionate injuries as the result of programs designed for the benefit of the public as a whole. Title 25, Division 1, Chapter 6 of the California Code of Regulations provides the regulatory guidelines to enforce the statute.

Title 25 Division 1 Chapter 6 Subchapter 1 – Relocation Assistance and Real Property Acquisition

This section of Title 25 provides guidelines to assist public entities in the development of regulations and procedures implementing Government Code Section 7260. The guidelines are designed to carry out the following policies of Section 7260:

1) To ensure that uniform, fair, and equitable treatment is afforded persons displaced from their homes, businesses, or farms as a result of the actions of a public entity in order that such persons shall not suffer disproportionate injury as a result of action taken for the benefit of the public as a whole; and

2) In the acquisition of real property by a public entity, to ensure consistent and fair treatment for owners of real property to be acquired, to encourage and expedite acquisition by agreement with owners of such property in order to avoid litigation and relieve congestion in courts, and to promote confidence in public land acquisition.

Proposition 46

In November 2002, the "Housing and Emergency Shelter Trust Fund Act of 2002" was passed by the voters of California. Prop. 46 created a trust fund to provide shelters for battered women, clean and safe housing for low-income senior citizens, emergency shelters for homeless families with children, housing with social services for homeless and mentally ill persons, repairs/accessibility improvements to apartments for families and handicapped citizens, veteran homeownership assistance, and security improvements/repairs to existing emergency shelters. Funded by a bond issue of $2.1 billion, Prop. 46 makes cities and counties eligible to receive specified funds and subjects expenditures to independent audit. Prop. 46 also appropriates money from the state General Fund to repay bonds.

State Housing Policies

State law requires each local government in California to adopt a comprehensive, long-term general plan for the physical development of their city or county. The housing element is one of the seven mandated elements of the general plan. State law requires local government plans to address the existing and projected housing needs of all economic segments of the community through their housing elements. The purpose of the housing element is to identify the community's housing needs, to state the community's goals and objectives with regard to housing production, rehabilitation, and conservation to meet those needs, and to define the policies and

programs that the community will implement to achieve the stated goals and objectives The Placer County Housing Element provides goals, polices, and implementation programs for the planning and development of housing throughout unincorporated Placer County. The Housing Element Background Report identifies the nature and extent of the county's housing needs in the unincorporated areas of the county, which in turn provides the basis for the County's response to those needs in the Housing Element Policy Document. In addition to identifying housing needs, the Background Report also presents information on the setting in which the needs occur, which provides a better understanding of the community and facilitates planning for housing.

State law sets out a process for determining each local jurisdiction's fair share of regional housing needs, called the Regional Housing Needs Determination. As a first step in the process, the State Department of Housing and Community Development assigns each regional council of governments a needed number of new housing units for that region, including affordable housing.

5.2.3 Local

Placer County General Plan

The Housing Element of the Placer County General Plan provides goals, objectives, and policies regarding housing in the county. General Plan housing policies applicable to the proposed project are summarized in **Table 5-9**. While this DEIR analyzes the project's consistency with the Placer County General Plan pursuant to CEQA Section 15125(d), the Placer County Board of Supervisors will ultimately make the determination of the project's consistency with the General Plan.

TABLE 5-9
GENERAL PLAN CONSISTENCY ANALYSIS – POPULATION AND HOUSING

General Plan Policies	Consistency Determination	Analysis
Policy 1.N.4: The County shall focus economic development efforts on projects that will maximize long-term net revenues to the County.	Consistent	The proposed project would produce revenue for the County through the recording studio facility.
Policy 1.N.10: The County shall support the development of primary wage earner job opportunities in the South Placer area to provide residents an alternative to commuting to Sacramento.	Consistent	The proposed project would create about 80 new jobs in the South Placer area.

Granite Bay Community Plan

The Granite Bay Community Plan establishes specific goals and policies which are intended to address population, employment, and housing issues in the Granite Bay area. However, no population, housing, or employment policies exist that pertain to the proposed project. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with the Community Plan rests with the Placer County Board of Supervisors.

5.3 IMPACTS

5.3.1 Significance Criteria

The population and housing impact analysis provided below is based on the application of the following State CEQA Guidelines Appendix G thresholds of significance, as specifically defined for the proposed project. A project is considered to have a significant impact if it would:

1) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.

2) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

3) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).

The Notice of Preparation issued for this project identified that there would not be a significant impact regarding displacement of housing, because the project site is currently undeveloped and vacant, and no housing would be removed or relocated as part of the project. Since the project would not displace a substantial number of housing units, displacement of people would also not occur. These issues will not be further discussed in this DEIR.

Methodology

PMC staff conducted research on demographic and housing conditions, utilizing existing documents and other information sources. Information was obtained from governmental agencies through their websites. Among these agencies were the U.S. Bureau of the Census and the California Department of Finance. The Housing Elements of Placer County and the Granite Bay Community Plan were additional sources of information on housing and economic conditions as well as on housing policy.

5.3.2 Project Level Impacts and Mitigation Measures

IMPACT 5-1: Displace Substantial Numbers of Existing Housing or People

The proposed project site is currently undeveloped and does not contain any residential uses. Therefore, the proposed project would not displace substantial numbers of existing housing or people and would not require the construction of replacement housing elsewhere. Therefore, **no impact** associated with housing or population displacement would occur and no mitigation is required.

IMPACT 5-2: Induce Population Growth

The proposed project consists of the construction and operation of a church facility. No residential uses would be constructed as a part of the project. The facility is estimated to employ approximately 80 workers at full buildout (Phases I, II, and III) and is not considered to be a significant new employment center. Given the large labor force within the county and the high unemployment rate, it is anticipated that these positions would likely be filled by workers within the area. Should new workers move into the area to work at the proposed project, the county's housing stock would be sufficient to accommodate this shift. Furthermore, development of the

site would not remove any barriers to development of the surrounding area or result in the construction of new roadways or infrastructure that could indirectly result in additional development or associated population growth. Therefore, the proposed project would not be expected to result in any population growth, either directly or indirectly, and this impact is considered **less than significant** and no further mitigation is required.

6.0
BIOLOGICAL RESOURCES

6.0 BIOLOGICAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") describes the existing biological resources including the special-status species and sensitive habitats known to occur or that potentially occur in the Amazing Facts Ministries project site (herein referred to as Project Study Area or PSA), the regulations and programs which provide for their protection, and an assessment of the potential impacts of implementing the proposed project. This section also includes a discussion of mitigation measures necessary to reduce impacts to a less than significant level, where feasible.

The biological resources within the Project Study Area were determined from a review of previous environmental documentation for the PSA including the *Biological Resources Assessment for the ±76-acre Amazing Facts Study Area* (North Fork Associates 2007a), *Oak Woodland Assessment for the ±76-acre Amazing Facts Study Area* (North Fork Associates 2007b), *Federally-listed Large Branchiopod Sampling at the Amazing Facts Project* (Helm Biological Consulting, LLC 2008), Dry-Season Sampling for *Federally-listed Large Branchiopos at the Amazing Facts Project* (Helm Biological Consulting, LLC 2007), and the *Kelley (Amazing Facts) Property, Placer County, California, Revised Wetland Delineation* (ECORPS Consulting, Inc. 2005). A number of other resources were used for this assessment including the *Placer County Conservation Plan, Phase 1—Western Placer County* (Placer County Planning Department 2005), an online list of federally listed species provided by the U.S. Fish and Wildlife Service (USFWS) Endangered Species Office (USFWS 2009a), the California Department of Fish and Game's (CDFG) California Natural Diversity Data Base (CNDDB) (CDFG 2009), and the California Native Plant Society's (CNPS) Electronic Inventory (CNPS 2009) for the Rocklin, California U.S. Geological Survey (USGS 1967) 7.5-minute quadrangle and surrounding quadrangles (**Appendix 6**). Methodology utilized in the analysis is described further under subsection 6.3 (Project-Level Impacts).

6.1 ENVIRONMENTAL SETTING

6.1.1 Local Setting

The PSA is located on the valley floor and in the rolling foothills bordering the Sierra Nevada range. The PSA is located within the northern portion of Granite Bay and is within the boundaries of the Granite Bay Community Plan area. Elevations at the PSA range from approximately 300 to 520 feet above mean sea level (MSL) with the general slope trending to the south. The northwestern portion of the PSA, where the church is proposed to be sited, is a relatively flat ridge top that borders Sierra College to the north. Ground slopes range from flat to 35 percent.

Climate within the PSA and vicinity is characterized as hot and semi-arid to subhumid (USDA 1997). Temperatures range from an annual average minimum of 45.4 degrees Fahrenheit (°F) to an annual average maximum of 74.4°F, with an average low of 34.9°F (December–January) and an average high of 96.5°F (July) (WRCC 2009). Average annual total precipitation for the City of Rocklin area, located adjacent to the PSA, is 22.8 inches (WRCC 2009) and the mean freeze-free period is about 250 to 300 days (USDA 1997).

The PSA is located on the Merhten Formation with intermittent rock outcroppings across the PSA. The regional geology of the PSA has been influenced by mountain uplift and volcanic activity in the Sierra Nevada range and by erosion off the crest of the mountains. Soils within the PSA are generally of poor quality. Five soil types are found on the PSA: Angregg coarse sandy loam, two to nine percent slopes; Angregg coarse sandy loam, rocky, two to 15 percent slopes; Exchequer very stony loam, two to 15 percent slopes; Inks cobbly loam, two to 30 percent slopes;

and Inks cobbly loam, 30 to 50 percent slopes (North Fork Associates 2007a). None of these soil types are expected to support special-status plant species. Further information regarding geology and soils can be found in Section 12.0, Geology, Soils, and Seismicity).

According to the wetland delineation prepared by ECORPS Consulting, Inc. (2005), the PSA contains a number of wetlands and drainage features. There are a total of 38 vernal pools (approximately 0.223 acre) within the PSA. All of these vernal pools are located on the northwestern portion of the PSA with the exception of one pool which is located within the southeastern corner of the PSA. Seasonal wetlands and seasonal swales, an intermittent drainage, an ephemeral drainage, and a man-made pond are located primarily in the southern half of the PSA. Drainage from the PSA flows south to an off-site, unnamed tributary to Miner's Ravine. Further information regarding hydrology can be found in Section 13.0, Hydrology and Water Quality.

The site is currently undeveloped with the exception of a few man-made features including pipelines, pump houses, and a pond (as mentioned in the preceding paragraph) which retains water for local, downstream use. Surrounding land uses include rural residential to the south and west (Cavitt Ranch Estates), a wholesale nursery to the southeast, commercial/professional areas and residential areas to the north in the City of Rocklin, and rural residential uses and the San Juan Water District detention basin to the east (see Section 4.0, Land Use and Agriculture).

6.1.3 Biological Setting

The PSA is situated within two geographic subdivisions of the California Floristic Province: Sacramento Valley and Northern Sierra Nevada Foothills. Grassland is the dominant natural vegetation associated with the lowlands of the PSA, and oak woodlands are the most common natural vegetation in the foothills. These major vegetation types encompass smaller natural communities including riparian woodlands, vernal pools, and freshwater emergent wetlands. The PSA lies within western Placer County, which is bounded north and south by two major rivers: the Bear and the American. Numerous drainages form in the foothills, and a few flow through the PSA. These multiple drainages create a patchwork of small watersheds (Placer County 2005).

Biotic communities within and immediately surrounding the PSA consist primarily of annual grassland, blue oak woodland, and waters of the U.S. including vernal pools, seasonal wetlands, and drainages. These communities, and their associated wildlife species, are described below. **Figure 6-1** depicts the biological communities within the PSA. The community descriptions below are derived from the classification system from Mayer and Laudenslayer (1988). Individual references are provided where necessary. A complete list of plant and wildlife species observed within the PSA is provided in the *Biological Resources Assessment for the ±76-acre Amazing Facts Study Area*, prepared by North Fork Associates (2007a).

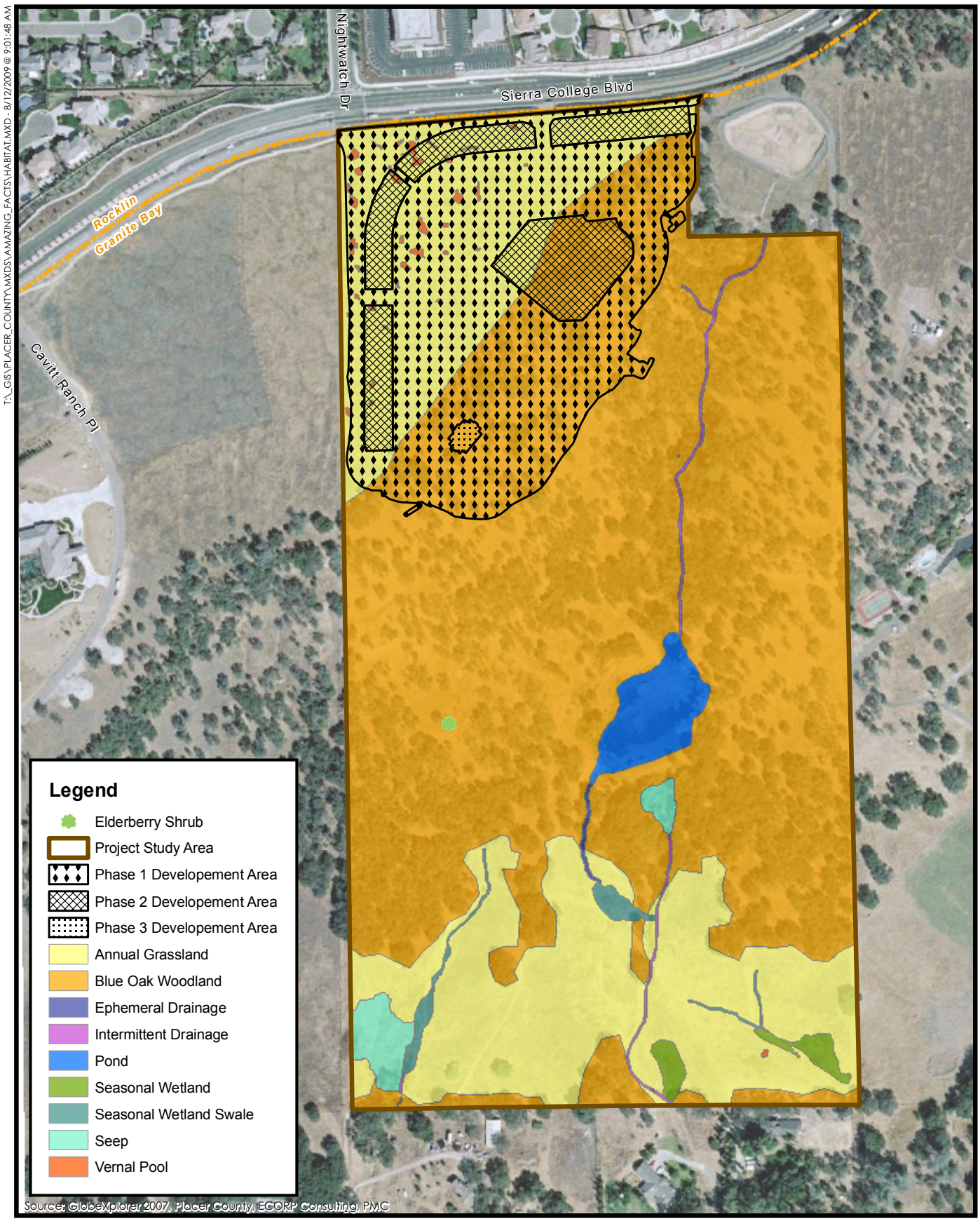

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Figure 6-1
Biological Communities

PMC®

Annual Grassland

In general, annual grassland generally occurs on flat plains to gently rolling foothills throughout the Central Valley, in the coastal mountain ranges to Mendocino County, and in scattered locations in the southern portion of the state. This community is characterized by annual grasses and forbs, which are predominantly non-native species. Annual grassland may include common species such as wild oat (*Avena fatua*), slender oat (*Avena barbata*), soft brome (*Bromus hordeaceus*), wild onion (*Allium atrorubens* var. *cristatum*), foxtail fescue (*Vulpia myuros* var. *hirsuta)*, broadleaf filaree (*Erodium botrys*), turkey mullein (*Eremocarpus setigerus*), perennial ryegrass (*Lolium perenne*), wild mustard (*Brassica nigra*), wild radish (*Raphanus sativus*), prickly lettuce (*Lactuca serriola*), and cocklebur (*Xanthium strumarium*). (Kie 1988)

Within the PSA, common annual grassland species include medusahead (*Taeniatherum caput-medusae*), soft brome, Italian ryegrass (*Lolium multiflorum*), and broadleaf filaree.

Various wetland types are typically found in association with annual grasslands. Within the PSA mapped wetland types include vernal pool, seasonal wetland, seasonal wetland swale, seep, pond, intermittent drainage, and ephemeral drainage (ECORPS Consulting, Inc. 2005). Waters of the U.S., including wetlands, are described in greater detail below.

Many wildlife species use annual grasslands for foraging and/or breeding. Characteristic reptiles that breed in annual grasslands include western fence lizard (*Sceloporus occidentalis*), common garter snake (*Thamnophis sirtalis*), and western rattlesnake (*Crotalus viridis*). Common bird species observed or expected to occur in this community include western scrub jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), killdeer (*Charadrius vociferus*), and mourning dove (*Zenaida macroura*). This community also provides important foraging habitat for several raptor species such as white-tailed kite (*Elanus leucurus*), American kestrel (*Falco sparverius*), Swainson's hawk (*Buteo swainsoni*; state-threatened) and prairie falcon (*Falco mexicanus*). Mammals typically found in this community include the black-tailed jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), and coyote (*Canis latrans*). (Kie 1988)

Blue Oak Woodlands

In general, blue oak woodlands have an overstory composed of scattered trees, although the canopy can be nearly closed on high-quality sites. Canopies are dominated by broad-leaved trees, which are five to 15 meters in height and commonly form open savanna-like stands on dry ridges and gentle slopes. Blue oak woodlands include blue oak (*Quercus douglasii*) and interior live oak (*Quercus wislizenii*). Blue oaks may reach 25 meters in height. Blue oaks are the dominant species, comprising 85 to 100 percent of the trees present. Shrubs are often present but rarely extensive, often occurring on rock outcrops. Associated shrub species include western poison-oak (*Toxicodendron diversilobum*), California coffeeberry (*Frangula californica*), sedgeleaf buckbrush (*Ceanothus cuneatus* var. *fascicularis*), California buckeye (*Aesculus californica*), and manzanita (*Arctostaphylos* spp.) species. Typical understory is composed of annual grassland vegetation. The groundcover comprises mainly annuals such as brome grass *(Bromus orcuttianus)*, wild oats, foxtail (*Alopecurus* spp.), needlegrass *(Achnatherum* spp.*)*, filaree (*Erodium* spp.), fiddleneck (*Amsinckia* spp.), and others. (Ritter 1988)

Within the PSA, blue oaks dominate the upper slopes while interior live oaks are more prominent on the lower slopes. Gray pines (*Pinus sabiniana*) are found scattered throughout the woodland but are not common. The understory lacks a substantial shrub layer, but a few shrubs are present

including poison oak and buckbrush. Canopy cover varies from about 20 to 30 percent to nearly 100 percent in parts of the PSA (North Fork Associates 2007b). Patches of annual grassland occur within openings, including purple needlegrass (*Nassella pulchra*).

Oak habitats are important to wildlife in California. Twenty-nine species of amphibians and reptiles, 57 species of birds, and 10 species of mammals find mature stages of oak habitats suitable or optimum for breeding, assuming that other special habitat requirements are met. Blue oak acorns buried by western scrub jays, yellow-billed magpies (*Pica nuttali*), western gray squirrels (*Sciurus griseus*), and California ground squirrels are more likely to germinate because the seeds root well and are less likely to be eaten. Many wildlife species benefit from the use of oaks and even enhance oak germination. (Ritter 1988)

Sensitive Habitats and Other Protected Resources

Sensitive habitats include those that are of special concern to resource agencies or those that are protected under the California Environmental Quality Act (CEQA), Section 1600 of the California Fish and Game Code, and/or Sections 401 and 404 of the Clean Water Act.

Oak Woodlands

Impacts to the oak woodland community within the PSA are regulated by the Oak Woodlands Management Plan (Placer County Planning Department 2009) (see subsection 6.3, Project-Level Impacts).

Waters of the U.S., Including Wetlands

A total of 3.728 acres of waters of the U.S. mapped within the PSA including vernal pool (0.223 acre), seasonal wetland (0.445 acre), seasonal wetland swale (0.445 acre), seep (0.852 acre), pond (1.377 acre), intermittent drainage (0.320 acre), and ephemeral drainage (0.066 acre) (ECORPS Consulting, Inc. 2005). These features were verified by the U.S. Army Corps of Engineers (USACE) on June 29, 2005. This verification is valid for a period of five years, thus the current wetland delineation is valid until June 29, 2010. The wetland features and drainages within the PSA may require reverification.

The intermittent drainage traverses the PSA from the north to south and collects in a ±1-acre pond in the lower south-central portion of the PSA. The drainage then continues to the southern portion of the property where it is hydrologically connected to seasonal wetlands. The pond is an earthen man-made feature with a dam approximately 17 feet high and 300 feet long and acts as a detention basin. The volume of the pond is estimated to be six acre-feet.

In general, both jurisdictional waters of the U.S. and isolated wetland features provide for a variety of functions for plants and wildlife. Drainages and wetlands provide habitat, foraging, cover, migration/movement corridors, and water sources for both special-status and other species. In addition to habitat functions, these features provide physical conveyance of surface water flows as well as channels for the handling of large stormwater events. Large storms can produce extreme flows that cause bank cutting and sedimentation of open waters and streams. Jurisdictional waters can slow these flows and lessen the effects of these large storm events, protecting habitat and other resources.

Vegetation associated with the wetland features within the PSA include Vasey's coyote thistle (*Eryngium vaseyi*), stipitate popcornflower (*Plagiobothrys stipitatus* var. *micranthus*), annual hairgrass (*Deschampsia danthonioides*), narrow-leaved cattail (*Typha angustifolia*), fiddle dock (*Rumex pulcher*), Himalayan blackberry (*Rubus discolor*), tall flatsedge (*Cyperus eragrostis*),

creeping spikerush (*Eleocharis macrostachya*), purslane speedwell (*Veronica peregrina* ssp. *xalapensis*), Mexican rush (*Juncus mexicanus*), narrow-leaved willow (*Salix exigua* var. *exigua*), Goodding's black willow (*Salix gooddingii*), and Fremont cottonwood (*Populus fremontii*) (North Fork Associates 2007a).

Wildlife Movement Corridors

Wildlife movement zones are important for the movement of migratory wildlife populations. Corridors provide foraging opportunities and shelter during migration. Generally, wildlife movement zones are established migration routes for many species of wildlife. Movement corridors often occur in open areas or riverine habitats that provide a clear route for migration in addition to supporting ample food and water sources during movement. The riverine habitat (drainages) and open space areas within the PSA may provide corridors for wildlife movement. However, wildlife movement outside of the PSA is currently partially hindered as existing development surrounds portions of the PSA (see **Figure 4-1**).

Special-status Species

Special-status plant and animal species are those that are afforded special recognition by federal, state, or local resource agencies or organizations. Special-status species are of relatively limited distribution and generally require specialized habitat conditions. Special-status species are defined as:

- Listed, proposed, or candidate for listing under the state or federal endangered species acts;
- Protected under other regulations (e.g., local policies, Migratory Bird Treaty Act);
- California Department of Fish Game's Species of Special Concern and California Fully Protected Species;
- Listed as species of concern (List 1A , 1B, or 2 plants) by California Native Plant Society; or
- Species that receive consideration during environmental review under CEQA.

The potential for special-status species to occur within the PSA was evaluated by querying the CNDDB (CDFG 2009), the USFWS (2009a), and the CNPS (2009) for previously recorded occurrences of special-status species within the Rocklin, California, USGS (1967) 7.5-minute quadrangle and surrounding quadrangles (Clarksville, Folsom, Roseville, Lincoln, Citrus Heights, Pilot Hill, Auburn, and Gold Hill) (**Appendix 6**).

CDFG maintains records for the distribution and known occurrences of sensitive species and habitats in the CNDDB. The CNDDB is organized into map areas based on 7.5-minute topographic maps produced by the U.S. Geological Survey (USGS). The CNDDB is based on actual recorded occurrences but does not constitute an exhaustive inventory of every resource. The absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from that area, but that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location where there is evidence of potential occurrence.

Table 1a and **Table 1b** in **Appendix 6** identify the special-status plant and animal species, respectively, which have potential to be affected by the proposed project. The habitat preferences for each special-status species were carefully reviewed and considered in the context of the PSA

and surrounding vicinity. Species having no potential for occurrence are not expected to occur based on the known elevation or distribution range of the species or the lack of suitable habitat. Species that do have potential for occurrence are described in more detail below. **Tables 1a** and **1b** of **Appendix 6** include the common name and scientific name for each species, regulatory status, habitat descriptions, and potential for occurrence within the PSA.

Special-status Plants

Eleven special-status plant species identified in **Table 1a** (**Appendix 6)** have the potential to occur within the PSA and are included in this analysis. The CNDDB (CDFG 2009) identified the occurrence of five sensitive plants within 5 miles of the PSA boundary; there are no recorded occurrences within 1 mile of the PSA (**Appendix 6**). The PSA does not contain designated critical habitat for any listed plant species (USFWS 2009b).

Special-status Wildlife

Twelve special-status wildlife species identified in **Appendix 6, Table 1b** have the potential to occur within the PSA and are included in this analysis. The CNDDB (CDFG 2009) identified the occurrence of eight special-status wildlife species within 5 miles of the PSA boundary; there are no recorded occurrences within 1 mile of the PSA (**Appendix 6**). The PSA does not contain designated critical habitat for any listed wildlife species (USFWS 2009b).

Protocol-level surveys (both dry and wet season) for federally listed branchiopods were conducted within the PSA in 2007 and 2008 by Helm Biological Consulting, LLC (2007, 2008). These surveys resulted in negative findings, thus conservancy fairy shrimp (*Branchinecta conservatio*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*) are not considered further in this document.

Potential Special-status Plant and Wildlife Species Occurrences

Provided below are species accounts for each of the special-status plant and wildlife species identified in **Tables 1a** and **1b** of **Appendix 6** that, based on results of vegetation/habitat surveys of the PSA and the known elevation and geographic distributions of these species, have potential to occur within the PSA and therefore have been considered in the impact analysis.

Information for the life history accounts provided below was obtained from the California Wildlife Habitat Relationships (CWHR) program version 8 (CDFG 2002), CNDDB (CDFG 2009), CNPS online inventory (CNPS 2009), and the Placer County Conservation Plan. (Placer County Planning Department 2005)

Special-status Plants

Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*) is designated as a List 1B plant species by CNPS. This small annual herb of the rush family (Juncaceae) is endemic to California and known from only six occurrences. It is found in valley and foothill grasslands with a moderate or well-balanced supply of moisture. This species blooms from March to May. Approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*) is designated as a List 1B plant species by CNPS. It is a perennial herbaceous member of the Asteraceae family that grows from a fleshy taproot and is found in cismontane woodland and valley and foothill grassland, sometimes on serpentine soils. The yellow disk flowers bloom from April through May. The annual

grassland and oak woodland communities (total of approximately 71 acres) within the PSA provide suitable habitat for this species. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Boggs Lake hedge-hyssop (*Gratiola heterosepala*) is listed as endangered by CDFG and is designated as a List 1B plant species by CNPS. This semi-aquatic annual herb of the figwort family (Scrophulariaceae) grows up to 10 centimeters (cm) tall (4 inches) and produces small, white and pale yellow flowers. This species grows in marshes, swamps, lake margins, and vernal pools with clay soils. This species blooms from April to June, while the vernal pools are still inundated with less than 5 cm (2 inches) of water. Bogg's Lake hedge-hyssop is currently known from only three occurrences in the western Placer County area, two of which are located within 5 miles of the PSA (CDFG 2009). Two of the three occurrences are located between Rocklin and Roseville; the third is located just north of Lincoln. Two of the three populations in Placer County were reportedly threatened by proposed urban development in 1987 and 1989 (Placer County Planning Department 2005). The current status of these populations is unknown; however, they are presumed to be extant. The third population was observed in 1986 on private land and has not been observed since, although it is presumed extant (Placer County Planning Department 2005). In addition to the pond margins, approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA.

Brandegee's clarkia (*Clarkia biloba* ssp. *brandegeeae*) is an herbaceous perennial in the evening primrose family (Onagraceae) and is designated as a List 1B plant species by CNPS. Brandegee's clarkia is typically found in chaparral and cismontane woodlands, frequently in roadcuts and other clearings. This species typically flowers from May through July. Approximately 49 acres of suitable habitat (oak woodland) are present within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Dubius pea (*Lathyrus sulphureus* var. *argillaceus*) is designated as a List 1B plant species by CNPS. This perennial herb in the Fabaceae family occurs in El Dorado, Nevada, Placer, Shasta, and Tehama counties. Suitable habitat for this species includes cismontane woodland, lower montane coniferous forest, and upper montane coniferous forest. Dubius pea blooms from April to May. Approximately 49 acres of suitable habitat (oak woodland) are present within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Dwarf downingia (*Downingia pusilla*) is designated as a List 2 plant species by CNPS. This herbaceous, annual flowering plant grows between 3 and 15 cm tall. Dwarf downingia is restricted to vernal pools and similar seasonal wetlands, including mesic grassland and the margins of small lakes or stock ponds. Seeds germinate in the standing water of the vernal pools. The plants grow to near full-size while the pools are still inundated. This species blooms from March to May. Approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA. There are two recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Hispid bird's-beak (*Cordylanthus mollis* ssp. *hispidus*) is designated as a List 1B plant species by CNPS. An annual herb in the figwort family (Scrophulariaceae), hispid bird's beak occurs in Alameda, Kern, Merced, Placer, and Solano counties. Hispid bird's-beak, a hemiparasite, grows in saline or alkaline soils in vernal pools, meadows, sinks, and inland playas within valley and foothill grasslands. It blooms June through September. Approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Legenere (*Legenere limosa*) is designated as a List 1B plant species by CNPS. Legenere is endemic to northern California in the Coast and Cascade ranges and the Central Valley. A majority of the known extant occurrences are concentrated in Solano and Sacramento counties, with the remainder scattered in Lake, Napa, Placer, San Joaquin, San Mateo, Shasta, Sonoma, Tehama, and Yuba counties. The species is currently known from only two extant occurrences in the western Placer area. One of the occurrences is located north of Pleasant Grove Creek, south of Placer Boulevard, and east of SR 65; the second occurrence is at the Orchard Creek Conservation Bank approximately 3 miles southwest of Lincoln, California (Placer County Planning Department 2005).

Legenere is an inconspicuous annual plant that grows to approximately 10 to 15 cm (4 to 6 inches) tall but that can attain heights of up to 30 cm (12 inches). It is found in vernal pools and swales, seasonal marshes, artificial ponds, floodplains of intermittent streams, and other seasonally inundated habitats. Wetlands that support legenere are typically inundated for long periods and range in size from slightly more than 3.7 square meters (40 square feet) to 40 hectares (100 acres). In addition to the pond and intermittent stream margins, approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Pincushion navarretia (*Navarettia myersii* ssp. *myersii*) is designated as a List 1B plant species by CNPS. This annual herb of the phlox family (Polemoniaceae) is endemic to vernal pools along California's central valley, especially the east side. This species has tiny whitish flowers in usually single heads. This species blooms in May at elevations from 20 to 330 meters. Approximately 0.223 acre of suitable habitat (vernal pools) is present within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Red Bluff dwarf rush (*Juncus leiospermus* var. *leiospermus*) is designated as a List 1B plant species by CNPS. Red Bluff dwarf rush is endemic to northern California where it occurs in Butte, Placer, Shasta, and Tehama counties. This species is found on vernally mesic sites within chaparral, valley and foothill grassland, and cismontane woodland communities, and sometimes on the edges of vernal pools. Only one population of Red Bluff dwarf rush, located near Roseville, has been recorded in Placer County. The population was last seen in 1982; however, a habitat survey conducted in 1997 indicates that the habitat is still present. Because of extensive recent development that has occurred in and around Roseville, this population may have been extirpated; accordingly, confirmation is needed (Placer County Planning Department 2005). Approximately 1.965 acres of suitable habitat (seasonal wetlands/swale, vernal pools, seep) are present within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Sanford's arrowhead (*Sagittaria sanfordii*) is designated as a List 1B plant species by the CNPS. This perennial herb of the water-plantain family (Alismitaceae) occurs in assorted shallow freshwater marshes and swamps and artificial ponds and lakes. This species blooms from May to October. Shallow portions of the ±1.377-acre pond provide suitable habitat for this species within the PSA; however no suitable habitat is found within the proposed project site (Phase 1, 2, or 3) and therefore will not be impacted by the proposed project. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Special-status Wildlife

Invertebrates

Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federally listed threatened species. This species is dependent on elderberry shrubs (*Sambucus* spp.) for breeding and feeding habitat. Elderberry shrubs are a common component of riparian forests and adjacent upland habitats in California's Central Valley. The valley elderberry longhorn beetle spends most of its life in the larval stage, living within the stems of the elderberry plant. USFWS considers all elderberry shrubs with stems one inch or greater in diameter at ground level within the species' range to be potential habitat (USFWS 1999). There are five previously recorded occurrences within 5 miles of the PSA (CDFG 2009).

One elderberry shrub with stems of suitable size was observed within the southern half of the PSA during a reconnaissance-level survey conducted by a qualified biologist on May 20, 2009. The shrub was not located within a riparian vegetation community (**Figure 6-1**). The shrub contained five stems greater than 5 inches in diameter and another three stems between 1 and 3 inches in diameter. The stems were briefly inspected and no exit holes were observed.

Amphibians

Western spadefoot (*Spea hammondii*) is a California species of special concern. Western spadefoot primarily occurs in California, but it has been recorded from the vicinity of Redding in Shasta County south into Baja California. Western spadefoots have been recorded from 17 counties either in or bordering the Central Valley. Western spadefoot occurs in the vicinity of the PSA, along the interface of the Central Valley and Sierra Nevada foothills (Placer County Planning Department 2005).

Western spadefoot toads can be found in dry grassland habitat close to seasonal wetlands such as vernal pool complexes, typically near extensive areas of friable (but not usually sandy) soil. Although spadefoot populations primarily occur in grassland settings, they are occasionally found in valley-foothill woodlands. Western spadefoots can also be found in creeks, drainages, and ponds. Western spadefoots require seasonal wetlands for reproduction and metamorphosis. The specific physical attributes that make such wetlands and adjacent uplands suitable for spadefoots are not well known, but suitable ponds must exhibit sufficient depth and surface area to persist at least several weeks. It is assumed that spadefoots require loose soils for subsurface dormancy; however, there is some evidence that spadefoots may also use rodent burrows. Also, most sites that support western spadefoots are moderately to heavily grazed (Placer County Planning Department 2005). The seasonal wetland/swale/vernal pool/seep features (1.965 acres) and the intermittent drainage (0.320 acre) within the PSA provide suitable habitat for this species. The pond margins may also provide suitable habitat. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Reptiles

Northwestern pond turtle (*Actinemys marmorata marmorata*) is a CDFG species of special concern. The western pond turtle (*Actinemys marmorata*) species is currently divided into two subspecies, the northwestern pond turtle which occurs from the vicinity of the American River in California northward to the lower Columbia River in Oregon and Washington, and the southwestern pond turtle (*Actinemys marmorata pallida*) which occurs in coastal drainages from the vicinity of Monterey, California, south to northwestern Baja California, Mexico. There is an

intergraded zone of both subspecies south of the American River and north of Monterey (Stebbins 2003).

Western pond turtles are habitat generalists and occur in a wide variety of permanent or nearly permanent aquatic habitats; normally ponds, lakes, streams, and irrigation ditches with basking sites. Basking sites are typically submerged logs, rocks, mats of floating vegetation, or open mud banks. Western pond turtles typically leave aquatic sites to reproduce, aestivate, and over-winter in upland habitats such as annual grasslands and oak woodlands. Breeding occurs in late April or early May, and eggs may be laid from April through August (Stebbins 2003). Nests are typically dug in a substrate with a high clay or silt content and located on an unshaded slope. Females lay between 3 and 11 eggs and may lay additional clutches during a year. Because hatchling turtles have almost never been observed in aquatic sites during the fall, it is thought that hatchling turtles hatch and over-winter in the nest. Pond turtles can be seen from February through mid-November in the north and all year in the south. As an omnivorous species, this species feeds on aquatic plant material and a variety of aquatic invertebrates (Stebbins 2003). There are no CNDDB records of this species occurring within 5 miles of the PSA (CDFG 2009); however, the pond (1.377 acre) and intermittent drainage (0.320 acre) within the PSA provide suitable habitat for this species. However no suitable habitat is found within the proposed project site (Phase 1, 2, or 3) and therefore will not be impacted by the proposed project.

Birds

Swainson's hawk (*Buteo swainsoni*) is state listed as threatened and is protected under the Migratory Bird Treaty Act (MBTA). In California, Swainson's hawk nesting distribution includes Great Basin sage-steppe communities and associated agricultural valleys in extreme northeastern California, isolated valleys in the Sierra Nevada in Mono and Inyo counties, the Sacramento and San Joaquin valleys, and at least one known isolated breeding site in the Mojave Desert. The historic breeding distribution also included much of southern California, particularly the inland valleys, where the species was once considered common (Placer County Planning Department 2005).

In California, Swainson's hawk habitat generally consists of large, flat, open, undeveloped landscapes that include suitable grassland or agricultural foraging habitat and sparsely distributed trees for nesting. Swainson's hawks usually nest in large, native trees such as valley oaks, cottonwoods (*Populus fremontii*), and willows (*Salix* spp.), although non-native trees such as eucalyptus (*Eucalyptus* spp.) are also used. Nests occur in riparian woodlands, roadside trees, trees along field borders, isolated trees, small groves, trees in windbreaks, and the edges of remnant oak woodlands. Swainson's hawks typically forage in large fields that support low vegetative cover (to provide access to the ground) and provide the highest densities of prey. The blue oak woodland (49.081 acres) and annual grassland (21.810 acres) communities within the PSA provide suitable nesting and foraging habitat for this species. There are no recorded occurrences for this species within 5 miles of the PSA; however, there are two recorded occurrences within 10 miles of the PSA (CDFG 2009).

California black rail (*Laterallus jamaicensis coturniculus*) is protected under the MBTA, is state-listed as threatened, and is a California fully protected species. California black rail populations were previously thought to be restricted to the San Francisco Bay Area, Bolinas Lagoon, Tomales Bay, Morro Bay, Suisun Bay, the Delta region to White Slough in San Joaquin County, the Salton Sea area, and the Lower Colorado River Valley. In 1994, however, new populations were discovered in the western Sierra Nevada foothills of Yuba County, and subsequent surveys revealed previously unknown populations in the foothills of Butte and Nevada counties. As of 1999, there were 71 known black rail locations at elevations below 250 meters (820 feet) in the foothills of Butte, Nevada, and Yuba counties. Based on continual

presence throughout the year, the Sierra Nevada foothill population is thought to be non-migratory (Placer County Planning Department 2005).

Black rails in the Sierra Nevada foothills are found in perennial wetlands that are dominated by rushes and cattails, often with associated species such as bulrush (*Scirpus* spp.), spikerush (*Eleocharis* spp.), and *Paspalum* spp. These wetlands are in open grasslands, grazed pastures, or oak savannas. Nesting habitat is characterized by water depths of less than 3 cm (1.2 inches) that do not fluctuate during the year and by dense vegetation that provides adequate cover. The pond within the PSA provides marginally suitable nesting habitat for this species; however no suitable habitat is found within the proposed project site (Phase 1, 2, or 3) and therefore will not be impacted by the proposed project. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Grasshopper sparrow (*Ammodramus savannarum*) is a California species of special concern and is protected by the MBTA. Grasshopper sparrows are primarily found from the Great Plains to the eastern seaboard, with a few isolated populations in the western United States, including some in California. Their statewide distribution is best described as sparse and irregular. In California, grasshopper sparrows require dry, well-drained grasslands with patches of bare ground for nesting. This species is a ground nester. Grasslands often include scattered, taller shrubs or annuals that are used for song perches. In Placer and adjacent counties, grasshopper sparrows have been found on rolling hills with extensive patches of rye grass (*Lolium* spp.) along the western and eastern edges of the Central Valley (Placer County Planning Department 2005). Portions of the annual grassland community within the PSA provide nesting suitable habitat for this species. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Purple martin (*Progne subis*) is a California species of special concern and is protected under the MBTA. It is an uncommon to rare, local summer resident in a variety of wooded, low-elevation habitats throughout the state, a rare migrant in spring and fall, and absent in winter. It uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats, though is absent from higher slopes of the Sierra Nevada (CDFG 2002). Purple martin inhabits open forests, woodlands, and riparian areas in the breeding season. This species is found in a variety of open habitats during migration, including grassland, wet meadow, and fresh emergent wetland, usually near water. The blue oak woodland within the PSA provides suitable nesting habitat for this species. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Tricolored blackbird (*Agelaius tricolor*) is a California species of special concern and is protected under the MBTA. Tricolored blackbirds are largely endemic to California, and more than 99 percent of the global population occurs in the state. In any given year, more than 75 percent of the breeding population can be found in the Central Valley. The species' historical breeding range in California included the Sacramento and San Joaquin valleys, lowlands of the Sierra Nevada south to Kern County, the coast region from Sonoma County to the Mexican border, and sporadically on the Modoc Plateau (Placer County Planning Department 2005). Tricolored blackbirds have three basic requirements for selecting their breeding colony sites: open accessible water; a protected nesting substrate, including either flooded or thorny/spiny vegetation; and suitable foraging space providing adequate insect prey within a few miles of the nesting colony.

Foraging habitats in all seasons include annual grasslands and seasonal wetlands, agricultural fields (e.g., large tracts of alfalfa with continuous mowing schedules and recently tilled fields), cattle feedlots, and dairies. Tricolored blackbirds also forage occasionally in riparian scrub

habitats and along marsh borders. Grassland and rice fields characterize the landscape in much of the species' breeding range and preferred foraging habitats in the area encompassing the PSA. The pond and surrounding vegetation within the PSA provide suitable breeding habitat for this species; however no suitable habitat is found within the proposed project site (Phase 1, 2, or 3) and therefore will not be impacted by the proposed project. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

White-tailed kite (*Elanus leucurus*) is protected under the MBTA and is a California fully protected species. They nest in trees adjacent to grasslands, oak woodland, and on the edges of riparian habitats. This species roosts communally, is a resident year-round, and breeds from February to October. Edges of the blue oak woodland adjacent to annual grasslands provide suitable nesting habitat for this species within the PSA. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Cooper's hawk (*Accipiter cooperi*) is protected under the MBTA. The Cooper's hawk is a woodland species and a typical accipiter in every respect; it sticks closely to cover, venturing out in search of food. A swift flyer, the Cooper's hawk has a rapid wingbeat and is able to negotiate heavily vegetated woodland habitats of the foothills where it is typically found. They spend much of their time sitting on a perch, waiting to ambush passing birds. They use cover, including man-made structures, to conceal approach. In open areas Cooper's hawks may drop on prey from high flight. They capture birds at bird feeders as well. Cooper's hawks feed mainly on birds, which they chase relentlessly through the woods. They also take small mammals and, in California, large insects, lizards, and snakes. Although a forest bird, the frequency of such birds as meadowlarks in its diet shows that it is not averse to hunting over open fields (Placer County Planning Department 2005).

A breeding resident throughout most of the wooded portion of the state, Cooper's hawks are found in dense stands of live and blue oak, riparian deciduous, savanna/grassland edge, and at times suburban/wildlands interface. The Cooper's hawk is primarily a yearlong resident; however, some hawks from more northern areas migrate into California and from the Sierra Nevada range downslope and south from areas of heavy snow in autumn and then return to these areas in the spring (Placer County Planning Department 2005). The blue oak woodland provides suitable nesting habitat for this species within the PSA. There are no recorded occurrences for this species within 5 miles of the PSA (CDFG 2009).

Mammals

Pallid bat (*Antrozous pallidus*) is a California species of special concern. Pallid bats roost in rock crevices, tree hollows, mines, caves, and a variety of anthropogenic structures, including vacant and occupied buildings, mines, and natural caves. They occur primarily in arid habitats. Colonies are usually small and may contain 12 to 100 bats. Trees within the blue oak woodland provide potentially suitable roosting habitat for this species within the PSA. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

Western red bat (*Lasiurus blossevillii*) is a California species of special concern. This species roosts primarily in trees and less often in shrubs. Roost sites often are in edge habitats adjacent to streams, fields, or urban areas. The western red bat is strongly associated with riparian habitats, particularly mature stands of cottonwood (*Populus* sp.) and sycamore (*Plantanus* sp.). The western red bat feeds over a wide variety of habitats including grasslands, shrublands, open woodlands and forests, and croplands. The blue oak woodland within the PSA provides suitable habitat for this species. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

6.2 REGULATORY FRAMEWORK

Federal, state, and local regulations have been enacted to require consideration and protection of ecological habitats and the species they support. A brief discussion of the specific regulations that apply to the biological resources likely to occur in the PSA is included below.

6.2.1 Federal

Endangered Species Act

Provisions of the federal Endangered Species Act (FESA), as amended (16 USC 1531), protect federally listed threatened and endangered species and their habitats from unlawful take. "Take" under the FESA includes activities such as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." USFWS regulations define harm to include some types of "significant habitat modification or degradation." In the case of *Babbitt, Secretary of Interior, et al., Petitioners v. Sweet Home Chapter of Communities for a Great Oregon, et al.* (No. 94-859) (U.S. Supreme Court 1995), the United States Supreme Court ruled on June 29, 1995, that "harm" may include habitat modification "...where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering."

For projects with a federal nexus, Section 7 of the FESA requires that federal agencies, in consultation with USFWS or National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries), use their authorities to further the purpose of the FESA and to ensure that their actions are not likely to jeopardize the continued existence of listed species or result in destruction or adverse modification of critical habitat. Section 10(a)(1)(B) allows nonfederal entities to obtain permits for incidental taking of threatened or endangered species through consultation with USFWS or NOAA Fisheries. In general, NOAA Fisheries is responsible for protection of federally listed marine species and anadromous fish while other listed species come under USFWS jurisdiction. Key provisions of the FESA are summarized below under the section that implements them.

Section 10

Section 10 of the FESA provides a means for nonfederal entities (states, local agencies, and private parties) that are not permitted or funded by a federal agency to receive authorization to disturb, displace, or kill (i.e., take) threatened and endangered species. It allows USFWS and/or NOAA Fisheries to issue an incidental take permit authorizing take resulting from otherwise legal activities, as long as the take would not jeopardize the continued existence of the species. Section 10 requires the applicant to prepare a Habitat Conservation Plan (HCP) addressing project impacts and proposing mitigation measures to compensate for those impacts. The HCP is subject to USFWS and/or NOAA Fisheries review and must be approved by the reviewing agency or agencies before the proposed project can be initiated. Because the issuance of the incidental take permit is a federal action, USFWS and/or NOAA Fisheries must also comply with the requirements of the FESA Section 7 and the National Environmental Policy Act (NEPA).

Section 7

Section 7 of the FESA applies to the management of federal lands as well as other federal actions, such as federal approval of private activities through the issuance of federal permits, licenses, funding, or other actions that may affect listed species. Section 7 directs all federal agencies to use their existing authorities to conserve threatened and endangered species and, in consultation with USFWS, to ensure that their actions do not jeopardize listed species or destroy or adversely

modify critical habitat. Critical habitat is defined as specific areas that are essential to the conservation of federally listed species.

Clean Water Act, Section 404

The objective of the Clean Water Act (CWA 1977, as amended) is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Discharge of fill material into waters of the U.S., including wetlands, is regulated by the U.S. Army Corps of Engineers (USACE) under Section 404 of the federal Clean Water Act (33 USC 1251–1376). USACE regulations implementing Section 404 define waters of the U.S. to include intrastate waters, including lakes, rivers, streams, wetlands, and natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce. Wetlands are defined for regulatory purposes as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3; 40 CFR 230.3). The jurisdictional boundaries for other waters of the U.S. are identified based on the presence of an ordinary high water mark (OHWM) as defined in 33 CFR 328.3(e). The placement of structures in "navigable waters of the U.S." is also regulated by USACE under Section 10 of the federal Rivers and Harbors Act (33 USC 401 et seq.). Projects are permitted under either individual or general (e.g., nationwide) permits. Specific applicability of permit type is determined by USACE on a case-by-case basis.

In 1987, USACE published a manual that standardized the manner in which wetlands were to be delineated nationwide. To determine whether areas that appear to be wetlands are subject to USACE jurisdiction (i.e., are "jurisdictional" wetlands), a wetlands delineation must be performed. Under normal circumstances, positive indicators from three parameters, (1) wetland hydrology, (2) hydrophytic vegetation, and (3) hydric soils, must be present to classify a feature as a jurisdictional wetland. More recently, USACE developed the Arid West Regional Supplement (USACE 2006) for identifying wetlands and distinguishing them from aquatic habitats and other nonwetlands. The Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. For any wetland delineations submitted after June 5, 2007, USACE is requiring that the site be surveyed according to both the 1987 manual and the Supplement guidelines. In addition to verifying wetlands for potential jurisdiction, USACE is responsible for the issuance of permits for projects that propose filling of wetlands. Any permanent loss of a jurisdictional wetland as a result of project construction activities is considered a significant impact.

Clean Water Act, Section 401

Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board regulates Section 401 requirements (see under State).

Migratory Bird Treaty Act

Migratory birds are protected under the Migratory Bird Treat Act (MBTA) of 1918 (16 USC 703–711). The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed in 50 CFR Part 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The vast majority of birds found in the project area are protected under the MBTA.

Bald and Golden Eagle Protection Act

The bald eagle and golden eagle are federally protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668–668c). It is illegal to take, possess, sell, purchase, barter, offer to sell or purchase or barter, transport, export, or import at any time or in any manner a bald or golden eagle, alive or dead; or any part, nest, or egg of these eagles unless authorized by the Secretary of the Interior. Violations are subject to fines and/or imprisonment for up to one year. Active nest sites are also protected from disturbance during the breeding season.

Executive Order 13112 – Invasive Species

This executive order directs all federal agencies to refrain from authorizing, funding, or carrying out actions or projects that may spread invasive species. The order further directs federal agencies to prevent the introduction of invasive species, control and monitor existing invasive species populations, restore native species to invaded ecosystems, research and develop prevention and control methods for invasive species, and promote public education on invasive species. As part of the proposed action, USFWS and USACE would issue permits and therefore would be responsible for ensuring that the proposed action complies with Executive Order 13112 and does not contribute to the spread of invasive species.

The Fish and Wildlife Coordination Act of 1958 (16 USC 661 et seq.)

The Fish and Wildlife Coordination Act (FWCA) requires that whenever any body of water is proposed or authorized to be impounded, diverted, or otherwise controlled or modified, the lead federal agency must consult with USFWS, the state agency responsible for fish and wildlife management, and the National Marine Fisheries Service. Section 662(b) of the act requires the lead federal agency to consider the recommendations of USFWS and other agencies. The recommendations may include proposed measures to mitigate or compensate for potential damages to wildlife and fisheries associated with a modification of a waterway.

Executive Order 11990 Protection of Wetlands (42 FR 26961, 25 May 1977)

Executive Order 11990 requires federal agencies to provide leadership and take action to minimize destruction, loss, or degradation of wetlands and to preserve and enhance the natural qualities of these lands. Federal agencies are required to avoid undertaking or providing support for new construction located in wetlands unless (1) no practicable alternative exists; and (2) all practical measures have been taken to minimize harm to wetlands.

6.2.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFG has the responsibility for maintaining a list of endangered and threatened species (California Fish and Game Code Section 2070). CDFG maintains a list of “candidate species” which are species that CDFG formally notices as being under review for addition to the list of endangered or threatened species. CDFG also maintains lists of “species of special concern” which serve as species “watch lists.” Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed endangered or threatened species may be present in the project site and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFG encourages informal consultation on any proposed project that may impact a candidate species.

Project-related impacts to species on the CESA endangered or threatened list would be considered significant. State-listed species are fully protected under the mandates of CESA. Take of protected species incidental to otherwise lawful management activities may be authorized under California Fish and Game Code Section 206.591. Authorization from CDFG would be in the form of an Incidental Take Permit.

California Fish and Game Code

Native Plant Protection Act

The Native Plant Protection Act (California Fish and Game Code Sections 1900–1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered (as defined by CDFG). An exception to this prohibition in the act allows landowners, under specified circumstances, to take listed plant species, provided that the owners first notify CDFG and give that state agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed (Fish and Game Code Section 1913 exempts from take prohibition "the removal of endangered or rare native plants from a canal, lateral ditch, building site, or road, or other right of way"). Project impacts to these species are not considered significant unless the species are known to have a high potential to occur within the area of disturbance associated with construction of the proposed project.

Birds of Prey

Under Section 3503.5 of the California Fish and Game Code it is unlawful to take, possess, or destroy any birds in the orders of 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 this code or any regulation adopted pursuant thereto.

"Fully Protected" Species

California statutes also accord "fully protected" status to a number of specifically identified birds, mammals, reptiles, and amphibians. These species cannot be taken, even with an incidental take permit. Section 3505 of the California Fish and Game Code makes it unlawful to take "any aigrette or egret, osprey, bird of paradise, goura, numidi, or any part of such a bird." Section 3511 protects from take the following fully protected birds: (a) American peregrine falcon (*Falco peregrinus anatum*); (b) brown pelican (*Pelecanus occidentalis*); (c) California black rail (*Laterallus jamaicensis coturniculus*); (d) California clapper rail (*Rallus longirostris obsoletus*); (e) California condor (*Gymnogyps californianus*); (f) California least tern (*Sterna albifrons browni*); (g) golden eagle; (h) greater sandhill crane (*Grus canadensis tabida*); (i) light-footed clapper rail (*Rallus longirostris levipes*); (j) southern bald eagle (*Haliaeetus leucocephalus leucocephalus*); (k) trumpeter swan (*Cygnus buccinator*); (l) white-tailed kite (*Elanus leucurus*); and (m) Yuma clapper rail (*Rallus longirostris yumanensis*).

California Fish and Game Code Section 4700 identifies the following fully protected mammals that cannot be taken: (a) Morro Bay kangaroo rat (*Dipodomys heermanni morroensis*); (b) bighorn sheep (*Ovis canadensis*), except Nelson bighorn sheep (subspecies *Ovis canadensis nelsoni*); (d) Guadalupe fur seal (*Arctocephalus townsendi*); (e) ring-tailed cat (genus *Bassariscus*); (f) Pacific right whale (*Eubalaena sieboldi*); (g) salt-marsh harvest mouse (*Reithrodontomys raviventris*); (h) southern sea otter (*Enhydra lutris nereis*); and (i) wolverine (*Gulo gulo*).

Fish and Game Code Section 5050 protects from take the following fully protected reptiles and amphibians: (a) blunt-nosed leopard lizard (*Crotaphytus wislizenii silus*); (b) San Francisco garter snake (*Thamnophis sirtalis tetrataenia*); (c) Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*); (d) limestone salamander (*Hydromantes brunus*); and (e) black toad (*Bufo boreas exsul*).

Fish and Game Code Section 5515 also identifies certain fully protected fish that cannot lawfully be taken even with an incidental take permit. The following species are protected in this fashion: (a) Colorado River squawfish (*Ptychocheilus lucius*); (b) thicktail chub (*Gila crassicauda*); (c) Mohave chub (*Gila mohavensis*); (d) Lost River sucker (*Catostomus luxatus*); (e) Modoc sucker (*Catostomus microps*); (f) shortnose sucker (*Chasmistes brevirostris*); (g) humpback sucker (*Xyrauchen texanus*); (h) Owens River pupfish (*Cyprinoden radiosus*); (i) unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*); and (j) rough sculpin (*Cottus asperrimus*).

California Wetlands and Other Waters Policies

The California Resources Agency and its various departments do not authorize or approve projects that fill or otherwise harm or destroy coastal, estuarine or inland wetlands. Exceptions may be granted if all of the following conditions are met:

- The project is water-dependent.
- No other feasible alternative is available.
- The public trust is not adversely affected.
- Adequate compensation is proposed as part of the project.

Porter-Cologne Water Quality Control Act of 1966 (California Water Code Sec. 13000 et seq.; CCR Title 23, Chapter 3, Subchapter 15)

Porter-Cologne is the primary state regulation that addresses water quality. The requirements of the act are implemented by the State Water Resources Control Board (SWRCB) at the state level and at the local level by the Regional Water Quality Control Board (RWCQB). The RWQCB carries out planning, permitting, and enforcement activities related to water quality in California. The act provides for waste discharge requirements and a permitting system for discharges to land or water. Certification is required by the RWQCB for activities that can affect water quality.

Clean Water Act, Section 401 Water Quality Certification

Section 401 of the CWA (33 USC 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards. The appropriate Regional Water Quality Control Board (in California) regulates Section 401 requirements. The Central Valley Regional Water Quality Control Board (CVRWQCB) is responsible for enforcing water quality criteria and protecting water resources within the project area. CVRWQCB is responsible for controlling discharges to surface waters of the state by issuing waste discharge requirements (WDR) or commonly by issuing conditional waivers to WDRs. CVRWQCB requires that a project proponent obtain a CWA Section 401 water quality certification for Section 404 permits granted by USACE. A request for water quality certification (including WDRs) by CVRWQCB and a Notice of Intent (NOI) application for a General Permit for Storm Water Discharges Associated with Construction Activities are

prepared and submitted following completion of the CEQA environmental document and submittal of the wetland delineation to USACE.

Stream and Lake Protection

CDFG has jurisdictional authority over streams and lakes and the wetland resources associated with these aquatic systems under California Fish and Game Code Sections 1600 et seq. through administration of lake or streambed alteration agreements. Such agreements are not a permit, but rather a mutual accord between CDFG and the project proponent. California Fish and Game Code Section 1600 et seq. was repealed and replaced in October of 2003 with the new Section 1600–1616 that took effect on January 1, 2004 (Senate Bill No. 418). Under the new code, CDFG has the authority to regulate work that will "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river lake or stream." CDFG enters into a streambed alteration agreement with the project proponent and can impose conditions in the agreement to minimize and mitigate impacts to fish and wildlife resources. Because CDFG includes under its jurisdiction streamside habitats that may not qualify as wetlands under the federal CWA definition, CDFG jurisdiction may be broader than USACE jurisdiction.

A project proponent must submit a notification of streambed alteration to CDFG before construction. The notification requires an application fee for streambed alteration agreements, with a specific fee schedule to be determined by CDFG. CDFG can enter into programmatic agreements that cover recurring operation and maintenance activities and regional plans. These agreements are sometimes referred to as Master Streambed Alteration Agreements (MSAAs).

Nongovernmental Agency

California Native Plant Society

CNPS is a nongovernmental agency that classifies native plant species according to current population distribution and threat level, in regard to extinction. The following description of the CNPS classification system is relevant to identifying potential impacts to biological resources due to implementation of the project.

CNPS maintains a list of plant species native to California that have low numbers, limited distribution, or are otherwise threatened with extinction. This information is published in the *Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2001). Potential impacts to populations of CNPS-listed plants receive consideration under CEQA review.

The following identifies the definitions of the CNPS listings:

List 1A: Plants believed to be extinct

List 1B: Plants that are rare, threatened, or endangered in California and elsewhere

List 2: Plants that are rare, threatened, or endangered in California, but are more numerous elsewhere

All of the plant species on List 1 and List 2 meet the requirements of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (CESA) of the California Fish and Game Code and are eligible for state listing. Plants appearing on List 1 or List 2 are considered to meet the criteria of CEQA Section 15380 and effects on these species are considered "significant" in

this Draft Environmental Impact Report (DEIR). Classifications for plants listed under "List 3: Plants about which we need more information (a review list)" and/or "List 4: Plants of limited distribution (a watch list)," as defined by CNPS, are not currently protected under state or federal law. Therefore, no detailed descriptions were provided or impact analysis performed for qualifying species under these classifications.

6.2.3 Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 6-1** lists the General Plan policies that relate to natural resources and the proposed project and provides an analysis of the project's consistency with these policies. Policies that relate to water resources can be found in Section 13.0, Hydrology and Water Quality.

TABLE 6-1
GENERAL PLAN CONSISTENCY ANALYSIS – NATURAL RESOURCES

General Plan Policies	Consistency Determination	Analysis
Policy 6.B.1: The County shall support the "no net loss" policy for wetland areas regulated by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. Coordination with these agencies at all levels of project review shall continue to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed.	Consistent	Impacts to wetland areas will be mitigated as provided under **MM 6-8**.
Policy 6.B.2: The County shall require new development to mitigate wetland loss in both regulated and non-regulated wetlands to achieve "no net loss" through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource; or (3) compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.	Consistent	Impacts to wetland areas will be mitigated as provided under **MM 6-8**.
Policy 6.B.4: The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetlands and riparian areas that are critical to the survival and nesting of wetland and riparian species.	Consistent	Wetland areas and adjacent upland areas have been identified as stated in this section. Mitigation measures **6-1, 6-4, 6-5, 6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.

General Plan Policies	Consistency Determination	Analysis
Policy 6.B.5: The County shall require development that may affect a wetland to employ avoidance, minimization, and/or compensatory mitigation techniques. In evaluating the level of compensation to be required with respect to any given project, (a) on-site mitigation shall be preferred to off-site, and in-kind mitigation shall be preferred to out-of-kind; (b) functional replacement ratios may vary to the extent necessary to incorporate a margin of safety reflecting the expected degree of success associated with the mitigation plan; and (c) acreage replacement ratios may vary depending on the relative functions and values of those wetlands being lost and those being supplied, including compensation for temporal losses. The County shall continue to implement and refine criteria for determining when an alteration to a wetland is considered a less than-significant impact under CEQA.	Consistent	Impacts to wetland areas will be mitigated as provided under **MM 6-8**.
Policy 6.C.1: The County shall identify and protect significant ecological resource areas and other unique wildlife habitats critical to protecting and sustaining wildlife populations. Significant ecological resource areas include the following: Wetland areas including vernal pools. Stream environment zones. Any habitat for rare, threatened or endangered animals or plants. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway. Important spawning areas for anadramous fish.	Consistent	Significant ecological resource areas have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-0** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 6.C.2: The County shall require development in areas known to have particular value for wildlife to be carefully planned and, where possible, located so that the reasonable value of the habitat for wildlife is maintained.	Consistent	Value areas for wildlife have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 6.C.4: The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by California Department of Fish and Game officials, the U.S. Fish and Wildlife Service, and the Placer County Resource Conservation District.	Consistent	Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 6.C.6: The County shall support preservation of the habitats of rare, threatened, endangered, and/or other special status species. Federal and state agencies, as well as other resource conservation organizations, shall be encouraged to acquire and manage endangered species' habitats.	Consistent	Habitats potentially supporting special-status species have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.

General Plan Policies	Consistency Determination	Analysis
Policy 6.C.7: The County shall support the maintenance of suitable habitats for all indigenous species of wildlife, without preference to game or non-game species, through maintenance of habitat diversity.	Consistent	Suitable habitats for indigenous wildlife species have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 6.C.9: The County shall require new private or public developments to preserve and enhance existing native riparian habitat unless public safety concerns require removal of habitat for flood control or other public purposes. In cases where new private or public development results in modification or destruction of riparian habitat for purposes of flood control, the developers shall be responsible for acquiring, restoring, and enhancing at least an equivalent amount of like habitat within or near the project area.	Consistent	The proposed project will not impact riparian habitat.
Policy 6.C.10: The County will use the California Wildlife Habitat Relationships (WHR) system as a standard descriptive tool and guide for environmental assessment in the absence of a more detailed site specific system.	Consistent	The California WHR was used during the preparation of this section to the extent possible.
Policy 6.C.11: Prior to approval of discretionary development permits involving parcels within a significant ecological resource area, the County shall require, as part of the environmental review process, a biotic resources evaluation of the sites by a wildlife biologist, the evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of rare, threatened, or endangered species of plants or animals. Such evaluation will consider the potential for significant impact on these resources, and will identify feasible measures to mitigate such impacts or indicate why mitigation is not feasible. In approving any such discretionary development permit, the decision-making body shall determine the feasibility of the identified mitigation measures. Significant ecological resource areas shall, at a minimum, include the following: a. Wetland areas including vernal pools. b. Stream environment zones. c. Any habitat for rare, threatened or endangered animals or plants. d. Critical deer winter ranges (winter and summer), migratory routes and fawning habitat. e. Large areas of non-fragmented natural habitat, including Blue Oak Woodlands, Valley Foothill Riparian, vernal pool habitat. f. Identifiable wildlife movement zones, including but not limited to, non-fragmented stream environment zones, avian and mammalian migratory routes, and known concentration areas of waterfowl within the Pacific Flyway. Important spawning areas for anadramous fish.	Consistent	Biological surveys of the PSA were conducted by various firms including North Fork Associates (2007a and b), Helm Biological Consulting, LLC (2007, 2008), and ECORPS Consulting, Inc. (2005). Preparation of this section also satisfies this policy.

General Plan Policies	Consistency Determination	Analysis
Policy 6.D.3: The County shall support the preservation of outstanding areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.	Consistent	Outstanding areas of natural vegetation have been identified as stated in this section. Mitigation measures **6-8** and **6-10** provide for protection and/or adequate mitigation for these areas within the PSA.
Policy 6.D.4: The County shall ensure that landmark trees and major groves of native trees are preserved and protected. In order to maintain these areas in perpetuity, protected areas shall also include younger vegetation with suitable space for growth and reproduction.	Consistent	Mitigation measure **6-10** provides for protection and/or adequate mitigation for trees (oak woodland) within the PSA.
Policy 6.D.6: The County shall ensure the conservation of sufficiently large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife.	Consistent	Areas of native vegetation have been identified as stated in this section. Mitigation measures **6-1, 6-8,** and **6-10** provide for protection and/or adequate mitigation for these areas within the PSA.
Policy 6.D.7: The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient catchment, and wildlife habitats. Such communities shall be restored or expanded, where possible.	Consistent	The proposed project would not impact riparian habitat and avoids wetland habitat throughout much of the PSA.
Policy 6.D.8: The County shall require that new development preserve natural woodlands to the maximum extent possible.	Consistent	Mitigation measure **6-10** provides for protection and/or adequate mitigation for trees (oak woodland) within the PSA.
Policy 6.D.13: The County shall support the preservation of native trees and the use of native, drought-tolerant plant materials in all revegetation/landscaping projects.	Consistent	The blue oak woodland within the PSA is largely avoided; only a few trees along the northern perimeter of the woodland may be impacted by the proposed project. Mitigation measure **6-10** provides for protection and/or adequate mitigation for trees (oak woodland) within the PSA.
Policy 6.D.14: The County shall require that new development avoid, as much as possible, ecologically-fragile areas (e.g., areas of rare or endangered species of plants, riparian areas). Where feasible, these areas should be protected through public acquisition of fee title or conservation easements to ensure protection.	Consistent	Areas potentially supporting rare or endangered species have been identified as stated in this section. Mitigation measures **6-8** and **6-10** provide for protection and/or adequate mitigation for these areas within the PSA.

Granite Bay Community Plan

The Granite Bay Community Plan was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). **Table 6-2** lists the Community Plan policies that relate to biological resources and the proposed project and provides an analysis of the project's consistency with these policies.

TABLE 6-2
COMMUNITY PLAN CONSISTENCY ANALYSIS – BIOLOGICAL RESOURCES

General Plan Goals and Policies	Consistency Determination	Analysis
Policy 1: The natural resources and features of a site proposed for development shall be one of the planning factors determining the scope and magnitude of development.	Consistent	Natural resources have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 3: Conservation of the natural landscape, including minimizing disturbance to natural terrain and vegetation, shall be an overriding consideration in the design of any subdivision or land development project, paying particular attention to its protection and the preservation of existing native vegetation.	Consistent	Natural resources have been identified as stated in this section. Mitigation measures **6-1, 6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA. The blue oak woodland, drainages, and many wetlands within the PSA are avoided to the extent possible.
Policy 6: Those areas rich in wildlife or of a fragile ecological nature, e.g. areas of rare or endangered species of plants, riparian areas, etc., shall be avoided in land development. Where necessary, in order to preserve these areas, they should be publicly acquired to ensure protection.	Consistent	Natural resources have been identified as stated in this section. Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA. The blue oak woodland, drainages, and many wetlands within the PSA are avoided to the extent possible.
Policy 7: An inventory of important natural resources, such as streams, bodies of water, wildlife habitat, vegetation, and geological features shall be created so that they may be more easily identified during project review and specific measures can be designed for their protection.	Consistent	Biological surveys, including a wetland delineation and an oak woodland assessment, of the PSA were conducted by various firms including North Fork Associates (2007a and b), Helm Biological Consulting, LLC (2007, 2008), and ECORPS Consulting, Inc. (2005). Mitigation measures **6-1, 6-4, 6-5, 6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 10: Continue to identify and preserve any rare, significant or endangered environmental features and conditions.	Consistent	Biological surveys, including a wetland delineation and an oak woodland assessment, of the PSA were conducted by various firms including North Fork Associates (2007a and b), Helm Biological Consulting, LLC (2007, 2008), and ECORPS Consulting, Inc. (2005). Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 15: Retain in their natural condition all stream influence areas, including floodplains and riparian vegetation areas, while allowing for limited stream crossings for public roads, trails, and utilities.	Consistent	The proposed project would not impact floodplains, riparian areas, or streams.
Policy 16: Identify and protect all important fish and wildlife areas within the Plan boundaries.	Consistent	Biological surveys, including a wetland delineation and an oak woodland assessment, of the PSA were conducted by various firms including North Fork Associates (2007a and b), Helm Biological

General Plan Goals and Policies	Consistency Determination	Analysis
		Consulting, LLC (2007, 2008), and ECORPS Consulting, Inc. (2005). Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 17: A qualified biologist shall delineate those areas rich in wildlife or of a fragile ecological nature. These areas shall be preserved through land use regulation or through dedication or acquisition where necessary.	Consistent	Biological surveys, including a wetland delineation and an oak woodland assessment, of the PSA were conducted by various firms including North Fork Associates (2007a and b), Helm Biological Consulting, LLC (2007, 2008), and ECORPS Consulting, Inc. (2005). Mitigation measures **6-1**, **6-4**, **6-5**, **6-8**, and **6-10** provide for protection and/or adequate mitigation for biological resources within the PSA.
Policy 18: Environmental impact studies shall take into consideration the impact of development proposals on wildlife habitats.	Consistent	Preparation of this section satisfies this policy.
Policy 21: Blocks of undisturbed oak woodlands and annual grassland habitat that have significant value to wildlife shall be preserved as Open Space, Resource Conservation Zones, or the equivalent, where an appropriate mechanism to do so can be identified.	Consistent	The blue oak woodland within the PSA is largely avoided; only a few trees along the northern perimeter of the woodland may be impacted by the proposed project. Mitigation measure **6-10** provides for protection and/or adequate mitigation for trees (oak woodland) within the PSA.
Policy 22: Field studies shall be required to document the location of vernal pools and preserve priority vernal pools in the Granite Bay Community Plan area.	Consistent	A wetland delineation was conducted within the PSA by ECORPS Consulting, Inc. (2005). Mitigation measure **6-8** provides for protection and/or adequate mitigation of vernal pools within the PSA.
Policy 23: Site specific surveys shall be required prior to development to delineate wetlands in the Granite Bay Community Plan area. All development proposals involving wetlands shall be coordinated with the California Department of Fish and Game, Corps of Engineers, and U.S. Fish and Wildlife Service. A "no-net-loss" policy requiring preservation of all wetland sites or preservation of priority wetlands and compensation for wetland losses should continue to be implemented by these agencies.	Consistent	A wetland delineation was conducted within the PSA by ECORPS Consulting, Inc. (2005). Mitigation measure **6-8** provides for protection and/or adequate mitigation of vernal pools within the PSA.
Policy 24: Field studies to document the possible occurrence of special status plants and wildlife in vernal pools shall be required and the species and their vernal pool habitats shall be preserved if they occur.	Consistent	Protocol-level surveys for vernal pool branchiopods were conducted by Helm Biological Consulting, LLC (2007, 2008). Mitigation measure **6-1** provides for protection and/or adequate mitigation of special-status plants should they occur.

Placer County Conservation Plan (PCCP)

Placer County is pursuing a Natural Community Conservation Plan (NCCP) (2005) under the State of California Natural Community Conservation Planning Act and a Habitat Conservation Plan (HCP) under the federal Endangered Species Act (FESA) for western Placer County. This plan, termed the Placer County Conservation Plan (PCCP), includes a program designed to ensure

the continued conservation of threatened and endangered species in Placer County and to resolve potential conflicts between otherwise lawful urban development activities and the conservation of the species on nonfederal land in the county. Conservation planning for all of Placer County is being undertaken in phases.

The PCCP is intended to address the impacts associated primarily with unincorporated growth in western Placer County. Development in western Placer County will require the preservation of approximately 54,300 acres of land between now and 2050. The Administrative Draft of the PCCP was released on February 22, 2005, and is currently being revised. The final Reserve Maps, EIR/EIS, and Implementation Agreement are yet to be completed.

The Placer County Conservation Plan for Western Placer County generally addresses approximately 269,800 acres of Placer County bordered on the west by Sutter County, on the north by Yuba and Nevada counties, on the east by El Dorado County, and on the south by Sacramento County. The area contains 53,966 acres of incorporated land within the cities of Lincoln, Auburn, Loomis, Rocklin, and Roseville. The entire area is variously referred to as "Western Placer" or the "Western Placer Area."

The Incidental Take Permit (ITP) issued in conjunction with the PCCP applies to covered activities within the Western Placer Area that occur within unincorporated Placer County or the City of Lincoln (the only city participating in the PCCP). This geographic subset of Western Placer is approximately 221,150 acres and is variously referred to as the "PCCP PSA," "PCCP Area," or "Plan Area." The ITP also applies to certain activities conducted by the Placer County Water Agency (PCWA) occurring throughout the Western Placer Area, including within portions of the nonparticipating cities.

The PSA falls within the PCCP planning area boundaries; however, the PCCP has not yet been adopted and thus does not provide any regulatory requirements.

Placer County Tree Preservation Ordinance

Placer County Code Chapter 12, Article 12.16 provides language concerning general tree preservation policy throughout the county, mainly "to preserve trees wherever feasible, through the review of all proposed development activities where trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner . . . this article does not categorically prohibit tree removal and contains numerous exemptions for specific types of activities. It is also recognized, that due to the extremely diverse terrain and vegetation within the county, different policies may be applicable to specific areas of the county." The ordinance is applicable to all native, landmark trees, riparian zone trees, and certain commercial firewood operations, except as exempted in cases of public safety, designated commercial lots (e.g., Christmas tree farms), and bona fide active agricultural uses.

All activities subject to this ordinance require permits and/or commercial licenses, and environmental impact review and all applicable regulatory permitting must be completed before issuing a permit or other discretionary approval.

Placer County Oak Woodland Management Plan

Placer County's Oak Woodland Management Plan (2009) provides a consistent policy for oak woodland habitats throughout the county and complements programs and policies including: (1) projects subject to an environmental assessment under the CEQA; (2) projects subject to the Placer County Tree Preservation Ordinance; and (3) projects evolving out of the PCCP. The goal

of the plan is to adequately mitigate the impact of the loss of oak woodland communities and provide guidance on the conservation of the oak woodland communities. The management plan also takes into consideration other trees and plants associated with the oak woodland-dominated natural communities and the value these communities provide to wildlife, air and water quality benefits, and quality of life. While the plan is countywide in nature, it provides opportunities to address oak woodland issues on a project-priority basis to achieve oak woodland protection.

6.3 IMPACTS

6.3.1 Standards of Significance

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance:

1) 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.

2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by CDFG or USFWS.

3) 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.

4) 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.

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

6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

7) Reduce the number or restrict the range of an endangered, rare, or threatened plant or animal species or biotic community, thereby causing the species or community to drop below self-sustaining levels.

Methodology

The impact assessment below discusses impacts from implementation of the proposed project. The impact assessment was based on the project description (Section 3.0), information described in the environmental setting, and the standards of significance described above. In order to determine specific impacts to biological communities, the site plan of the proposed project (Phase 1, Phase 2, and Phase 3) was overlaid onto the mapped biological communities figure (**Figure 6-1**). It should be noted that the future conceptual development plan area was used to determine cumulative impacts but was not specifically analyzed for project-related impacts. **Table 6-3** illustrates each special-status species that has suitable habitat within Phase 1, 2, or 3 and has potential to be affected by the proposed project.

TABLE 6-3
SPECIAL-STATUS SPECIES AND THEIR ASSOCIATED HABITATS THAT MAY BE AFFECTED BY THE PROPOSED PROJECT

Habitat	Associated Special-status Species	Impacted Acres
Annual Grassland	White-tailed kite Grasshopper sparrow Swainson's hawk – foraging	9.30
Blue Oak Woodland	Big-scale balsamroot Brandegee's clarkia White-tailed kite Purple martin Swainson's hawk – nesting Migratory birds protected under the MBTA Pallid bat Western red bat	7.97
Vernal Pool	Ahart's dwarf rush Boggs Lake hedge-hyssop Dubius pea Dwarf downingia Hispid bird's-beak Legenere Pincushion navarretia Red Bluff dwarf rush Western spadefoot	0.21

Habitat Assessment: Habitats/vegetation communities within the PSA were defined based upon species composition, abundance, and spatial distribution. Field studies have been conducted by North Fork Associates (2007a, b), ECORPS Consulting, Inc. (2005), and Helm Biological Consulting, LLC (2007, 2008). A reconnaissance-level survey of the PSA was also conducted by a PMC biologist on May 20, 2009. Methods for determining vegetation communities/habitats are further described in the *Biological Resources Assessment for the ±76-acre Amazing Facts Study Area* (North Fork Associates 2007a).

Special-status Species Assessment: For the analysis in this DEIR, a species was determined to have potential to occur in the PSA if its documented geographic range from the literature and database search includes the project vicinity, and if suitable habitat for the species was identified within or near the PSA. The CNDDB was queried for a list of special-status plant and wildlife resources that are known to occur within the PSA or vicinity (CDFG 2009). A database search was performed for special-status species within the Rocklin, California, USGS (1967) 7.5-minute quadrangle and surrounding quadrangles (Clarksville, Folsom, Roseville, Lincoln, Citrus Heights, Pilot Hill, Auburn, and Gold Hill) (**Appendix 6**).

The CNPS electronic online inventory was also searched for rare or endangered plants that may occur within the PSA and surrounding vicinity (CNPS 2009). This query was performed for CNPS List 1A, List 1B, List 2, and List 3 special-status plants occurring in the USGS 7.5-minute quadrangles listed above. List 1A species are presumed extinct in California. List 1B species are considered rare or endangered in California and elsewhere. List 2 species are considered rare or endangered in California but are more common elsewhere. List 3 species require further review

and consideration. However, as described further above, CNPS List 3 plants are not included in this analysis but are included in **Table 1a** of **Appendix 6** for informational purposes.

In addition, an official online USFWS species list for federally endangered, threatened, proposed, and candidate species that may occur in the vicinity of the Rocklin, California, USGS (1967) 7.5-minute quadrangle and surrounding quadrangles was reviewed for species that could potentially be affected by the proposed project (USFWS 2009a).

Appendix 6 presents the results of the CNDDB, CNPS, and USFWS queries for special-status species that have the potential to occur within the PSA and surrounding vicinities.

Critical Habitat: When the USFWS lists a species as threatened or endangered under FESA, areas of habitat considered essential to its conservation and survival may be designated as critical habitat. These areas may require special consideration and/or protection due to their ecological importance. Potential critical habitat designations within the general vicinity of the PSA were checked using the USFWS Critical Habitat Portal (USFWS 2009b). There is no designated critical habitat within the PSA or immediately surrounding areas.

This impact analysis is organized by the significance criteria noted above: special-status plant and wildlife species, sensitive vegetation communities, federally protected wetlands, wildlife movement corridors, and compliance with local plans and policies or existing Habitat Conservation Plans (HCP). Each impact category includes a description of the specific potential impacts, as well as avoidance and mitigation measures that can potentially reduce and mitigate potentially significant impacts. The reader is referred to Section 3.0, Project Description, for specific details on the project.

6.3.2 Project-Level Impacts and Mitigation Measures

IMPACT 6-1: Impacts to Special-status Plant Species

Implementation of the proposed project could result in the substantial adverse effect, either directly or through habitat modifications, on special-status plant species. For the impacted areas included in Phase 1, Phase 2, and Phase 3, approximately 0.21 acre of vernal pool habitat will be impacted by the proposed project. These vernal pools provide suitable habitat for eight special-status plant species listed in **Table 6-3**. Approximately 7.97 acres of blue oak woodland provide suitable habitat for two special-status plant species, as illustrated in **Table 6-3**.

Mitigation Measure 6-1a Conduct Special-Species Surveys

The applicant shall retain a qualified biologist to perform focused surveys to determine the presence/absence of special-status plant species with potential to occur within and adjacent to (within 25 feet, where appropriate) the proposed impact area, as listed in Table 6-3. These surveys shall be conducted in accordance with CDFG-approved guidelines for conducting field surveys. Specifically, the guidelines are outlined in Guidelines for Assessing Effects of Proposed Developments on Rare Plants and Plant Communities (Nelson 1994). These guidelines require rare plant surveys to be conducted at the proper time of year when rare or endangered species are both “evident” and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during periods of phonological development that are necessary to identify the plant species of concern.

Mitigation Measure 6-1b Implement Avoidance Measures to Protect Special-status Species

If any state- or federally listed, CNPS List 1, or CNPS List 2 plant species are found within or adjacent to (within 25 feet) the proposed impact area during the surveys, these plant species shall be avoided to the extent possible. Avoidance measures shall include fencing of the population(s) before construction, exclusion of project activities from the fenced-off areas, and construction monitoring by a qualified biologist. Avoidance areas shall be identified on project plans. If these plants cannot be avoided, the following measures shall be applied:

- Before the approval of grading plans or any ground-breaking activity within the PSA, the applicant shall submit a mitigation plan concurrently to CDFG and USFWS (if appropriate) for review and comment, and the applicant may consult with these entities before approval of the plan. The plan shall include mitigation measures for the population(s) to be directly affected. Possible mitigation for the population(s) that would be removed during construction of the project includes implementation of a program to transplant, salvage, cultivate, or re-establish the species at suitable sites (if feasible). The mitigation ratio for directly impacted plant species shall be at a minimum ratio of 2:1. The actual level of mitigation may vary depending on the sensitivity of the species (its rarity or endangerment status), its prevalence in the area, and the current state of knowledge about overall population trends and threats to its survival. Alternatively, replacement credits may be purchased by the applicant at an approved mitigation bank should such credits be available. It should be noted that currently, replacement credits are not available at a conservation bank that has a service area encompassing the PSA. The Laguna Terrace East Conservation Bank out of Rocklin, California, only offers vernal pool preservation credits to include Ahart's dwarf rush.

- Any special-status plant species that are identified adjacent to the PSA, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on project plans.

- In some cases involving state-listed plants where it may be necessary to obtain an incidental take permit under Section 2081 of the Fish and Game Code, the applicant shall consult with CDFG to determine the applicability of an incidental take permit. The applicant may be required to prepare an application for this permit. It should be noted that the application for this permit requires a project description, a detailed analysis of impacts to species, and an analysis of the probability of the species' long-term survival as related to the impacts.

Implementation of the proposed project may result in adverse impacts to special-status plant species should they be present; this is considered a **potentially significant** impact. Implementation of mitigation measures **MM 6-1a** and **MM 6-1b** will reduce this effect to a **less than significant** level.

IMPACT 6-2: Impacts to Western Spadefoot Toad

Implementation of the proposed project could result in the loss of populations or essential habitat for the western spadefoot toad. The vernal pools within the project impact area provide suitable habitat for the western spadefoot toad. There is one recorded occurrence for this species within 5 miles of the PSA (CDFG 2009).

A total of 0.21 acre of vernal pools will be impacted by the proposed project. As such, construction and operational activities proposed within the PSA under Phases 1, 2, and 3 may impact habitat and/or result in the take of individuals of western spadefoot toad should they be

present. However, implementation of the proposed project is not expected to reduce the populations of this species below self-sustaining levels within the region. As such, impacts to these species are considered **less than significant** and further mitigation measures are not required.

IMPACT 6-3: Impacts to Swainson's Hawk

Implementation of the proposed project could result in the loss of populations or essential habitat for the Swainson's hawk. The blue oak woodland (49.2 acres) and annual grassland (21.9 acres) communities within the PSA provide suitable nesting and foraging habitat, respectively, for Swainson's hawk. There are no known recorded occurrences of Swainson's hawk within 5 miles of the PSA; however, there are two recorded occurrences of nesting Swainson's hawks within 10 miles of the PSA (CDFG 2009). These occurrences are from 1996 and 2001, and it is unknown at this time if these are still considered active nests. Since the PSA is potentially located within 10 miles of an active nest, the PSA is considered foraging habitat (CDFG 1994). CDFG regards the loss of suitable foraging habitat within 10 miles of an active Swainson's hawk nest a substantial adverse effect on breeding birds (CDFG 1994). According to CDFG (1994), an active nest is one that has been used within the past five years. Implementation of the proposed project would result in the loss of 17.27 acres of potential foraging habitat (annual grasslands and blue oak woodland) for the Swainson's hawk. This impact would be considered **potentially significant** unless mitigation is incorporated.

Mitigation Measure 6-3 Mitigate for Loss of Swainson's Hawk Habitat

- Impacts from project implementation would result in the loss of the approximately 13.99 acres of foraging habitat. Measures to minimize impacts to Swainson's hawk foraging habitat include restoration of foraging habitat temporarily disturbed by project construction activities. After construction is completed, all temporarily disturbed areas shall be stabilized with hydroseed and replanted with a mixture of native and non-native plants (as deemed appropriate by a CDFG-approved biologist).

- In order to compensate for the permanent loss of potential foraging habitat, the applicant shall acquire suitable Swainson's hawk foraging habitat, as determined by CDFG and approved by Placer County.

- Trees located within the PSA may support nesting activity for Swainson's hawks; however, no Swainson's hawks were observed within the PSA during a reconnaissance-level survey conducted by a PMC biologist on May 20, 2009, or by North Fork Associates (2007a) during their survey work. As such, the following measures are recommended as a precaution:

  - When possible, schedule construction activities to avoid nesting activities. Swainson's hawks generally breed from March 1 through August 15. As such, construction activities should occur between August 16 and February 28 to the extent possible.

  - If construction avoids the breeding season, pre-construction surveys are not necessary. However, if construction occurs during the breeding season, the applicant shall retain a qualified biologist to conduct pre-construction surveys for Swainson's hawk nests within 0.5 mile of the proposed project per CDFG (1994) and the Swainson's Hawk Technical Advisory Committee (SHTAC 2000) recommendations. Pre-construction surveys to determine the presence of active Swainson's hawk nests shall be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance and/or

construction activities. If an active nest is detected within 0.5 mile of the proposed project, consultation with CDFG is required.

- In the event that Swainson's hawk nesting occurs within 500 feet of the proposed project footprint, the applicant's qualified biologist shall consult with CDFG to determine if the potential for nest abandonment exists. If an adequate buffer is present (more than 500 feet) between the nest and the proposed project footprint to prevent nest abandonment, then construction may proceed with on-site monitoring of the nesting birds by a qualified biologist or biological monitor. Monitoring shall be performed in accordance with CDFG (1994) guidelines. Monitoring frequency would be determined by the distance of the nest from the activity and the timing, duration, and nature of the construction activity in consultation with CDFG. The biological monitor shall have the authority to cease construction if there is any sign of distress to the raptor. If the applicant's qualified biologist and CDFG determine that the potential for nest abandonment exists, modifications to construction activities may be required by CDFG until young have fledged. If construction activity is determined to need modification to avoid nesting disturbance, modifications to construction activity would be identified and implemented, in consultation with CDFG, to reduce and avoid adverse effects.

Implementation of the mitigation measure **MM 6-3** would reduce impacts to Swainson's hawks to a **less than significant** level.

IMPACT 6-4: Impacts to Special-status Avian Species, Including Raptors

Implementation of the proposed project could result in the loss of populations or essential habitat for special-status avian species, including raptors.

The PSA may support nesting and/or foraging activities for special-status avian species that may be present as identified in **Table 1b** (**Appendix 6**) and **Table 6-3**. Furthermore, migratory birds not identified in **Table 1b**, which are protected under the MBTA, may be impacted by project implementation should they be present. All native breeding birds (except game birds during the hunting season), regardless of their listing status, are protected under the MBTA. There are numerous trees within the PSA that may support nesting activity. Trees removed during the nesting season as a result of project implementation would result in direct impacts to nesting birds should they be present. Furthermore, noise and other human activity may result in nest abandonment if nesting special-status birds are present within 100 feet (200 feet for raptors) of a work site. There are 49.2 acres of blue oak woodlands within the PSA; approximately 7.97 acres will be impacted by Phases 1, 2, and 3. This is a **potentially significant** impact.

Mitigation Measure 6-4 Mitigate for Impacts to Special-status Avian Species, Including Raptors

- If proposed site disturbance and construction activities are planned to occur within the PSA during the nesting season for local avian species (typically February 15 through August 31), the applicant shall retain a qualified biologist to conduct a focused survey for active nests of special-status birds within and in the vicinity of (up to 200 feet and no less than 100 feet outside project boundaries, where possible) the disturbance and construction area no more than 30 days prior to ground disturbance or tree removal. If active nests are found, trees/shrubs with nesting birds shall not be disturbed until abandoned by the birds or a qualified biologist deems disturbance potential to be minimal (in consultation with USFWS and/or CDFG, where appropriate). If applicable, tree removal shall be restricted to a period following fledging of chicks, which typically occurs between late July and early August.

- If an active nest is located within the 100 feet (200 feet for raptors) of construction activities, other restrictions may include establishment of exclusion zones (no ingress of personnel or equipment at a minimum radius of 100 feet or 200 feet, as appropriate, around the nest as confirmed by the appropriate resource agency) or alteration of the construction schedule. Reference to this requirement and the MBTA shall be included in the construction specifications.

- If construction activities or tree removal are proposed to occur during the non-breeding season (September 1 through February 14), a survey is not required, no further studies are necessary, and no mitigation is required.

Implementation of mitigation measure **MM 6-4** would reduce impacts to special-status birds, including raptors, to a **less than significant** level.

IMPACT 6-5: Impacts to Special-status Bat Species

Implementation of the proposed project could result in the loss of populations or essential habitat for special-status bat species through tree removal or other construction activities. Two special-status bat species, pallid bat and western red bat as identified in **Table 6-3**, could potentially occur within the PSA. There is one recorded occurrence of the pallid bat within 5 miles of the PSA (CDFG 2009). The pallid bat prefers open spaces such as buildings and porches for roosting, which are not present within the PSA, but may also use tree hollows. Western red bats roost in trees. Direct impacts from project implementation include removal of roosting sites (trees) or disturbance to roosting sites which may lead to roost abandonment. Indirect impacts include noise, dust, and increased human activity. However, implementation of the proposed project is not expected to reduce the population of these species below self-sustaining levels within the region. As such, impacts to these species are considered **less than significant** and mitigation measures are not required.

IMPACT 6-6: Impacts to Jurisdictional Waters of the U.S., Including Wetlands

A total of 3.728 acres of waters of the U.S. were mapped within the PSA including vernal pool (0.223 acre), seasonal wetland (0.445 acre), seasonal wetland swale (0.445 acre), seep (0.852 acre), pond (1.377 acre), intermittent drainage (0.320 acre), and ephemeral drainage (0.066 acre) (ECORPS Consulting, Inc. 2005). These features were verified by USACE on June 29, 2005. This verification is valid for a period of five years. Thus, the wetland features and drainages within the PSA may require re-verification if the applicant obtains a permit from USACE after June 29, 2010.

Implementation of the proposed project would result in the loss of 0.21 acre of vernal pools within the northwest corner of the PSA. Authorization for such fill shall be secured from USACE through the CWA Section 404 permitting process prior to project implementation. If a CWA Section 404 permit were to be required from USACE, a CWA Section 401 permit would be also required from CVRWQCB. If it is determined by a qualified wetland biologist and through consultation with CVRWQCB that features that qualify as waters of the state would be affected, the applicant would be required to obtain an authorization from CVRWQCB to fill/disturb these features prior to project implementation. Furthermore, construction-related impacts to water quality would be mitigated through a National Pollutant Discharge Elimination System (NPDES) permit. Disturbance and/or loss of jurisdictional waters and wetlands from implementation of the proposed project are considered **potentially significant** unless mitigation is incorporated.

Mitigation Measure 6-6 Mitigate for Impacts to Jurisdictional Wetlands

If jurisdictional waters cannot be avoided, the applicant shall apply for a CWA Section 404 permit from USACE and a Section 401 permit from CVRWQCB. These permits shall be obtained prior to issuance of grading permits and implementation of the proposed project.

The applicant shall ensure that the project will result in no net loss of waters of the U.S. by providing mitigation through impact avoidance, impact minimization, and/or compensatory mitigation for the impact, as determined in the CWA Section 404/401 permits. Compensatory mitigation may consist of (a) obtaining credits from a mitigation bank; (b) making a payment to an in-lieu fee program that will conduct wetland, stream, or other aquatic resource restoration, creation, enhancement, or preservation activities; these programs are generally administered by government agencies or non-profit organizations that have established an agreement with the regulatory agencies to use in-lieu fee payments collected from permit applicants; and/or (c) providing compensatory mitigation through an aquatic resource restoration, establishment, enhancement, and/or preservation activity. This last type of compensatory mitigation may be provided at or adjacent the impact site (i.e., on-site mitigation) or at another location, usually within the same watershed as the permitted impact (i.e., off-site mitigation). The project proponent/permit applicant retains responsibility for the implementation and success of the mitigation project. Evidence of compliance of with this mitigation measure shall be provided prior to issuance of construction and grading activities for the proposed project.

Implementation of mitigation measure **MM 6-6** would reduce impacts to wetlands and other waters of the U.S. to a **less than significant** level.

IMPACT 6-7: Impacts to Migratory Corridors

Implementation of the proposed project would not interfere with the movement of native resident or migratory wildlife species. Implementation of Phases 1, 2, and 3 of the proposed project would not result in the obstruction of movement of migratory birds or other wildlife. Migratory birds or other wildlife species may use the habitats within the PSA during migration; however, the northwest corner of the PSA proposed for development does not provide adequate water resources, cover, and vegetation to be used as a migratory corridor for common and special-status wildlife species. Therefore the potential for the project to impact migration corridors is **less than significant** and no mitigation is required.

IMPACT 6-8: Impacts to Protected Trees

Implementation of the proposed project could result in the removal of or damage to protected tree species during construction. If existing protected trees are removed or damaged, this would be considered a **potentially significant** impact unless mitigation is incorporated.

Placer County has adopted a local tree ordinance (Code Chapter 12, Article 12.16) “to preserve trees wherever feasible, through the review of all proposed development activities where trees are present on either public or private property, while at the same time recognizing individual rights to develop private property in a reasonable manner.” The ordinance is applicable to all native, landmark trees, riparian zone trees, and certain commercial firewood operations, except as exempted in cases of public safety, designated commercial lots (e.g., Christmas tree farms), and bona fide active agricultural uses. Provisions of this article are applicable to discretionary projects and to certain areas of the county (Dry Creek-West Placer Community Plan, Granite Bay Community Plan, portions of the Loomis Basin General Plan, and the Auburn-Bowman Community Plan) and therefore are applicable to the project site. According to the ordinance, “no person, firm, corporation or county agency shall conduct any development activities within the

protected zone of any protected tree on public or private land, or harm, destroy, kill or remove any protected tree unless authorized by a tree permit or as permitted pursuant to approval of a discretionary project."

North Fork Associates (2007b) conducted an oak woodland assessment which satisfies one of the conditions of the Placer County tree ordinance permit application process. The oak woodland assessment included all oak woodland habitat and significant oak trees (single trunk ≥24 inches diameter at breast height) proposed for removal due to project implementation.

Mitigation Measure 6-8 Protect Significant Trees

For all qualifying trees proposed for removal, the applicant shall prepare and submit a tree permit to the County. Mitigation for tree removal shall be in accordance with Section 12.16.80 of the Placer County tree ordinance (Code Chapter 12, Article 12.16).

However, in order to protect all significant trees, mitigation measure **MM 6-8** is proposed. Implementation of mitigation measure **MM 6-8** would reduce impacts to protected trees to a **less than significant** level.

IMPACT 6-9: Impacts to Sensitive Biological Communities

Implementation of the proposed project may result in the disturbance, degradation, and/or removal of sensitive biological communities and would result in the disturbance, degradation, and/or removal of wetlands which are considered sensitive habitats by resource agencies. Implementation of the proposed project would also impact the oak woodlands within the PSA. Impacts to wetlands and to oak woodlands are considered **potentially significant**.

Mitigation Measure 6-9 Mitigate for Loss of Sensitive Biological Communities

Implement mitigation measures MM 6-6 and MM 6-8.

However, implementation of mitigation measure **MM 6-9** would reduce impacts to sensitive habitats to a **less than significant** level.

IMPACT 6-10: Conflicts with Local Policies or Ordinances Protecting Biological Resources (Other than Protected Trees)

Implementation of the proposed project is not expected to conflict with any local policies or ordinances protecting biological resources. Placer County has not adopted any biological ordinances that conflict with this project. As such, **no impact** is anticipated and no mitigation is required. Please refer to **Impact 6-8** for potential impacts to protected trees.

IMPACT 6-11: Conflicts with an Adopted Habitat Conservation Plan, Natural Community Conservation Plan, or Any Adopted Biological Resources Recovery or Conservation Plan of Any Federal or State Agency

Implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any adopted biological resources recovery or conservation plan of any federal or state agency. The Administrative Draft of the Placer County Conservation Plan (PCCP) was released on February 22, 2005, and is currently being revised. The final Reserve Maps, EIR/EIS, and Implementation Agreement are yet to be completed. The PCCP is intended to address the impacts associated primarily with

unincorporated growth in western Placer County. Development in western Placer County will require the preservation of approximately 54,300 acres of land between now and 2050. As the proposed project would not conflict with the PCCP, **no impact** from the proposed project is anticipated and no mitigation is required.

7.0
CULTURAL RESOURCES

7.0 CULTURAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") considers and evaluates the potential impacts of the proposed project on historical, cultural, and paleontological resources. Cultural resources are defined as prehistoric and historic sites, structures, and districts, or any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or any other reason. Paleontological resources include fossil remains, as well as fossil localities and formations which have produced fossil material.

For analysis purposes, cultural resources may be categorized into four groups: archaeological resources (prehistoric and historical); historic properties, buildings, and districts; areas of importance to Native Americans; and paleontological resources (fossilized remains of plants and animals). Cultural resource impacts include those to existing historic resources (i.e., historic districts, landmarks, etc.) and to archaeological and paleontological resources.

Concepts and Terminology for Evaluation of Cultural Resources

The following definitions are common terms used to discuss the regulatory requirements and treatment of cultural resources:

Cultural resources is the term used to describe several different types of properties: prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans.

Historic properties is a term defined by the National Historic Preservation Act (NHPA) as any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion on, the National Register of Historic Places (NRHP), including artifacts, records, and material remains related to such a property.

Historical resource is a California Environmental Quality Act (CEQA) term that includes buildings, sites, structures, objects, or districts, each of which may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance, and is eligible for listing or is listed in the California Register of Historical Resources (CRHR) or a local registry of historical resources.

Paleontological resource is defined as including fossilized remains of vertebrate and invertebrate organisms, fossil tracks and trackways, and plant fossils. A unique paleontological site would include a known area of fossil-bearing rock strata.

7.1 ENVIRONMENTAL SETTING

7.1.1 Cultural Setting

The project site is located southeast of the intersection of Sierra College Boulevard and Nightwatch Drive in southeastern Placer County. Based on Rocklin 7.5-minute United States Geological Survey (USGS) Topographic Map, the site is located in the southwest quarter of Section 28, Township 11, North 7 Range East MDM (see Figure 7-1)

7.1.1.1 Prehistory

Until recently, only a small number of archeological studies had been conducted in the project region. This is because earlier archaeological excavations had focused either on the large village sites in the San Joaquin Delta region and along the larger waterways in the Central Valley or on the higher elevation areas in proposed reservoir sites, along major waterways in the Sierra Nevada. The project site is located between three areas with defined archaeological sequences: the Oroville locality to the north, the Central Sierra area to the east, and the Central Valley/Delta area to the west. These sequences include many similar artifact types and dates for major cultural changes, but there are also significant differences between them. At this time, it has not been defined which of these sequences best reflects the prehistory of the project region or whether a separate local sequence is necessary to adequately describe the region. It appears that the prehistoric cultures in the project region may have been more closely related to the Sierra Nevada native cultures than those of either the Delta or Oroville area (City of Rocklin, 2008; Peak and Associates, 2007). The reader is referred to **Appendix 7** for greater details on the region's prehistory provided in the Cultural Resource Assessment conducted for the project by Peak and Associates, Inc., in October 2007.

7.1.1.2 Ethnography

Prior to the arrival of Euroamericans in the region, California was inhabited by groups of Native Americans speaking more than 100 different languages and occupying a variety of ecological settings. Kroeber (1925) and others recognized the uniqueness of California Native Americans and classified them as belonging to the California culture area. Kroeber (1925) further subdivided California into four subculture areas: Northwestern, Northeastern, Southern, and Central. The Central area encompasses most of the project Area and includes the Nisenan, which were the southern linguistic group of the Maidu tribe. Kroeber (1925) indicated that the range of the Maidu tribe may be described as being "the region from the Sacramento River east to the crest of the Sierra Nevada" and that the Maidu are the second branch of the Penutian family. The Nisenan spoke a dialect which identified them from the Northern Maidu and they diverged into two distinct cultural groups known as the Valley Nisenan and the Mountain (or Foothill and Hill) Nisenan (Placer County Historical Society, 2009). Kroeber (1925) distinguished three dialects of Nisenan – Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan.

The Foothill and Hill Nisenan peoples (also known as Mountain Nisenan), which were found in the project area, were distinctive from the Valley Nisenan and were loosely organized into tribelets or districts with large central villages, surrounded by smaller villages. These are often referred to as winter villages by older Native Americans. These central villages and their leaders seemed to have had power or control over the surrounding smaller villages and camps and specific surrounding territory. The Nisenan depended on activities attuned to the seasons and the accompanying growth of plant foods, the seasonal movements and migration of the animals, and the runs of fish (Wilson, 1978; City of Rocklin, 2008).

While the Hill Nisenan to the east in the foothills carried on trade with the valley peoples and shared some of the cultural traits, their culture was said to lack the complexity and richness of the Valley Nisenan. The Hill Nisenan had a different natural resource base to utilize, which required more movement and more intense use of the available resources. They developed a local culture that was more closely related to the gathering, storage,

and year-round use of the acorn, continual foraging of resources by everyone in the village group, and specialized hunting methods. The foothill people relied more on foraging for food than the Valley people, for immediate use or short-term storage, and did not gather for future needs. As a result, they were required to travel in their use of the land. The Hill Nisenan people had lower population densities and a higher number of campsites than Valley people, which reflected their more limited ability to acquire and use the fewer available resources (City of Rocklin, 2008).

The reader is referred to **Appendix 7** for greater details on the region's ethnography provided in the Cultural Resource Assessment conducted for the project by Peak and Associates, Inc., in October 2007.

7.1.1.3 History

Euroamerican contact with Native American groups living in the Central Valley of California began during the last half of the eighteenth century. The Spanish period in California lasted from about 1769 to 1821. This was a time when the Spanish missions dominated lives of both the Spanish and the Native Americans in California. The Nisenan had brief contact with the Spanish when explorer Gabriel Moraga traveled through the valley in 1806, Father Duran in 1818, and with the Spanish and Mexican expeditions and escaping missionized Indians. This early contact with the Spanish was said to be limited to the southern edge of Nisenan territory. No record exists of the Nisenan being removed to the missions. They did experience the pressures of Miwoks displaced from their lands on their southern borders (Placer County Historical Society, 2009; Wilson and Towne, 1978).

The Mexican Period (ca. 1821-1848) in California is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system. The Nisenan's first real contact with the Anglos came with the trappers such as Jed Smith and the Hudson Bay Company men after 1828. The trappers established camps in the Nisenan territory and these contacts were peaceful. A devastating epidemic, said to be malaria, spread through the Sacramento Valley in 1833. This epidemic was disastrous to the Valley Nisenan. It is estimated that 75 percent of the native population died in this epidemic. The mountain Nisenan were not largely affected by the epidemic or early settlers until the discovery of gold and the ensuing Gold Rush. The end of the Mexican-American War and the signing of the Treaty of Guadalupe Hidalgo in 1848 marked the beginning of the American period (ca. 1848-Present) in California history.

James Marshall discovered gold, while working for John Sutter, near the settlement of Coloma in 1848. The persecution of the Nisenan began and their culture soon was no longer viable (Wilson and Towne, 1978). The Gold Rush of the mid-nineteenth century permanently disrupted the culture of the Nisenan as the gold rush settlers killed many of them or chased them from the land. Descendents of the nineteenth century Nisenan still reside in south Placer County but the traditional lifeways have not been seen in the Rocklin area since 1904 (Placer County Historical Society, 2009).

The latter half of the nineteenth century witnessed a growing immigration of Euroamericans into the area. The population growth in the area was accompanied by regional cultural and economic changes. These changes are highlighted by the development of Sacramento and other towns in the area. Placer County was formed three years after the discovery of gold – the fast-growing county was formed from portions of

Sutter and Yuba counties on April 25, 1851, with Auburn as the county seat. Placer County was named from the Spanish word for sand or gravel deposits containing gold. Miners washed away the gravel, leaving the heavier gold, in a process known as "placer mining." Gold mining was a major industry through the 1880s, but gradually the new residents transitioned to farming the fertile foothill soil and harvesting lumber, as well as finding employment with the Southern Pacific Railroad (Placer County Historical Society, 2009).

Please refer to **Appendix 7-0** for greater details on the region's history as provided in the Cultural Resource Assessment conducted for the project, by Peak and Associates, Inc., in October 2007.

7.1.1.4 Known Cultural Resources

A search was completed at the North Central Information Center on September 10, 2007 (Peak and Associates, 2007). No reports were on file for any previous surveys on the project site and no archaeological resources have been recorded in the vicinity of the project site. Surveys have been conducted in the vicinity of the project, however and there is one recorded prehistoric site near the project site. The project site was surveyed in its entirety on July 11, 2003. Archaeologists reviewed the site for evidence of prehistoric or historic resources and, where necessary, small holes were excavated to allow examination of the subsurface area. No evidence of prehistoric or historic sites was identified (Peak and Associates, 2007).

Native American Coordination

PMC requested a sacred lands search and a list of Native American contacts from the Native American Heritage Commission (NAHC). The results of the sacred lands search were received on July 15, 2008, and did not identify any Native American sacred lands within the project site. However, NAHC noted that "the absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area." PMC contacted all tribal representation groups on the list provided by the NAHC, through written correspondence. PMC received a letter from the United Auburn Indian Community of the Auburn Rancheria regarding the project and EIR. The letter stated, "Should excavations for site testing or data recovery become necessary, we would like to be informed in order to provide on-site tribal monitors." This request has been incorporated in the mitigation measures for the project.

7.1.2 Paleontological Setting

Paleontology is defined as a science dealing with the life of past geological periods as known from fossil remains. Paleontological resources include fossil remains, as well as fossil localities and formations that have produced fossil material. Such locations and specimens are important nonrenewable resources. CEQA offers protection for these sensitive resources and requires that they be addressed during the environmental impact report process.

A search of the University of California Museum of Paleontology paleontological database conducted by PMC did not identify any previously identified paleontological resources on the project site, but there is a potential for the inadvertent discovery of

unique archaeological resources during ground-disturbing project activities (University of California, Berkeley, 2009.)

7.2 REGULATORY FRAMEWORK

7.2.1 Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation's master inventory of known historic resources. The NRHP is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Structures, sites, buildings, districts, and objects over 50 years of age can be listed in the NRHP as significant historic resources. However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP. The criteria for listing in the NRHP include resources that:

a) Are associated with events that have made a significant contribution to the broad patterns of history;

b) Are associated with the lives of persons significant in our past;

c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

d) Have yielded or may likely yield information important in prehistory or history.

7.2.2 State

California Environmental Quality Act

Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." Pursuant to Public Resources Code (PRC) Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether proposed projects would have effects on unique archaeological resources.

"Historical resource" is a term with a defined statutory meaning (PRC, Section 21084.1; determining significant impacts to historical and archaeological resources is described in the State CEQA Guidelines, Section 15064.5[a], [b]). Under State CEQA Guidelines Section 15064.5(a), 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, Section 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 a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

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 a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register of Historical Resources (Public Resources Code, Section 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 a 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.

As noted above, CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. Public Resources Code Section 21083.2, subdivision (g), states that " 'unique archaeological resource' means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

    1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

    2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

3) Is directly associated with a scientifically recognized important prehistoric or historic event or person."

Treatment options under Section 21083.2 include activities that preserve such resources in place in an undisturbed state. Other acceptable methods of mitigation under Section 21083.2 include excavation and curation or study in place without excavation and curation (if the study finds that the artifacts would not meet one or more of the criteria for defining a unique archaeological resource).

Section 7050.5(b) of the California Health and Safety Code (CHSC) specifies protocol when human remains are discovered. The code states:

In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code.

State CEQA Guidelines Section 15064.5, subdivision (e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains. If the county coroner determines that the remains are those of Native Americans, the Native American Heritage Commission must be contacted within 24 hours. At that time, the lead agency must consult with the appropriate Native Americans, if any, as timely identified by the Native American Heritage Commission. Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

In addition to the mitigation provisions pertaining to accidental discovery of human remains, the State CEQA Guidelines also require that a lead agency make provisions for the accidental discovery of historical or archaeological resources, generally. Pursuant to Section 15064.5, subdivision (f), these provisions should include "an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be an historical or unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation should be available. Work could continue on other parts of the building site while historical or unique archaeological resource mitigation takes place."

Paleontological resources are classified as nonrenewable scientific resources and are protected by state statute (Public Resources Code Chapter 1.7, Section 5097.5, Archeological, Paleontological, and Historical Sites, and Appendix G of the CEQA Guidelines). No state or local agencies have specific jurisdiction over paleontological resources. No state or local agency requires a paleontological collecting permit to allow for the recovery of fossil remains discovered as a result of construction-related earth-moving on state or private land in a project site.

7.2.2 LOCAL

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 7-1** lists the General Plan policies that relate to cultural and paleontological resources and the proposed project and provides an analysis of the project's consistency with these policies. While this DEIR analyzes the project's consistency with the Placer County General Plan pursuant to CEQA Section 15125(d), the Placer County Board of Supervisors will ultimately make the determination of the project's consistency with the General Plan.

TABLE 7-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

General Plan Policies	Consistent with General Plan?	Analysis
Policy 5.D.6: The County shall require that discretionary development projects identify and protect from damage, destruction, and abuse, important historical, archaeological, paleontological, and cultural sites and their contributing environment. Such assessments shall be incorporated into a Countywide cultural resource data base, to be maintained by the Department of Museums.	Consistent	A Cultural Resource Assessment for the proposed project was performed by Peak & Associates, Inc. in October 2007 and is attached to this document as **Appendix 7-0**.
Policy 5.D.7: The County shall require that discretionary development projects are designed to avoid potential impacts to significant paleontological or cultural resources whenever possible. Unavoidable impacts, whenever possible, shall be reduced to a less than significant level and/or shall be mitigated by extracting maximum recoverable data. Determination of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups), historical, or paleontological consultants, depending on the type of resources in question.	Consistent, with Mitigation	All potentially significant cultural and paleontological resource impacts are reduced to less than significant levels with the incorporation of mitigation measures **MM 7-2** and **MM 7-3**.

Granite Bay Community Plan

The Granite Bay Community Plan was adopted by the Placer County Board of Supervisors in 1989 and updated in 2005 (Resolution #2005-149). **Table 7-2** lists the Community Plan policies that relate to cultural and paleontological resources and the proposed project and provides an analysis of the project's consistency with these policies. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with the Community Plan rests with the Placer County Board of

Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this DEIR.

TABLE 7-2
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistent with Community Plan?	Analysis
Cultural Resources Policy 1: Identify and protect from destruction and abuse all representative and unique historical and archaeological sites.	Consistent, With Mitigation	All potentially significant cultural and paleontological resource impacts are reduced to less than significant levels with the incorporation of mitigation measures **MM 7-2** and **MM 7-3**.

7.3 IMPACTS

7.3.1 Standards of Significance

Following PRC Sections 21083.2 and 21084.1, and Section 15064.5 and Appendix G of the State CEQA Guidelines, cultural resource impacts are considered to be significant if implementation of the project considered would result in any of the following:

1) Cause a substantial adverse change in the significance of a historical resource as defined in Public Resources Code Section 21084.1 and CEQA Guidelines Section 15064.5, respectively;

2) Cause a substantial adverse change in the significance of an archaeological resource as defined in Public Resources Code Sections 21083.2 and 21084.1, and CEQA Guidelines Section 15064.5, respectively;

3) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature; or

4) Disturb any human remains, including those interred outside of formal cemeteries.

State CEQA Guidelines Section 15064.5 defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource is materially impaired.

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:

1) 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

2) 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

3) 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.

CEQA requires that if a project would result in an effect that may cause a substantial adverse change in the significance of a historical resource, or would cause significant effects on a unique archaeological resource, then alternative plans or mitigation measures must be considered. Therefore, prior to assessing effects or developing 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 and unique archaeological resources;
- Evaluate the eligibility of historical resources; and
- Evaluate the effects of the project on eligible historical resources.

Methodology

Efforts to identify cultural resources which could be affected by the project included review of the records search completed by the North Central Information Center, at California State University, Sacramento, and review of the cultural resource assessment report prepared by Peak and Associates (Peak and Associates, 2007). The cultural resource assessment included a field inspection of the project area. In addition, a sacred lands file search was completed by NAHC, and Native American representatives were mailed written correspondence by PMC staff, requesting information regarding cultural resources on July 18, 2008. In addition, a search of the University of California Museum of Paleontology (UCMP) collections database was completed. The potential impacts of the project on cultural resources were evaluated by considering both construction and operational impacts.

7.3.2 Project Level Impacts and Mitigation Measures

IMPACT 7-1: Potential Destruction or Damage to Known and Undiscovered Prehistoric and Historic Resources

The proposed project would not cause a substantial adverse change in the significance of a historical resource. The proposed project would not affect any historical buildings or sites, as the site is vacant and none have been identified nearby. No operational or

construction impacts are expected. Therefore, the project is considered to have **no impact** and no mitigation is required**.**

IMPACT 7.2: Potential Destruction or Damage to Known and Undiscovered Archaeological Resources

The levels of archaeological investigations conducted for the proposed project are adequate to identify known prehistoric and historic resources in the area. Since none of the project site has been covered by any previously recorded surveys, no evidence of prehistoric or historic archaeological sites has been identified for the project site. However, other surveys conducted in the project region have identified one potential site in the vicinity of the project site. Since there is a possibility of unanticipated and accidental archaeological discoveries (of human remains, bone, or fossils) during ground-disturbing construction-related activities, there is the potential for unanticipated and accidental archaeological discoveries made during project construction to have a **potentially significant** impact on significant archaeological resources.

Mitigation Measure 7-2 Mitigate for Potential Cultural Resources

It shall be required on the final improvement plans approved by the county, that if, during the course of construction cultural resources (i.e., prehistoric sites, historic sites, exotic rock (non-native), or unusual amounts of shell or bone, isolated artifacts, or other features) are discovered, work shall be halted immediately within 50 feet of the discovery, the Placer County Community Development Resource Agency shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology shall be retained to determine the significance of the discovery. Determination of impacts, significance, and mitigation shall be made by qualified archaeological (in consultation with recognized local Native American groups). The Placer County Planning Department and Department of Museums shall also be contacted for review of the archaeological find(s). Prior to the commencement of project excavations, all construction personnel shall be informed of the potential to inadvertently uncover cultural resources and human remains and the procedures to follow subsequent to an inadvertent discovery of cultural resources or human remains. In addition, should excavations for site testing or data recovery become necessary, the United Auburn Indian Community of the Auburn Rancheria shall be informed in order to provide on-site tribal monitors.

Implementation of mitigation measure **MM 7-2** would reduce this impact to **a less than significant** level.

IMPACT 7-3: Potential Destruction or Damage to a Unique Paleontological Resource or Geological Feature

A search of the University of California Museum of Paleontology paleontological database conducted by PMC did not identify any previously identified paleontological resources on the project site or in the immediately adjacent area. Previous cultural resource studies have concluded that the rocks which underlie the project site carry almost no potential to yield significant fossils. As such, the proposed project is expected to have no known significant impact on paleontological resources However, development of the project site during construction, particularly grading and excavation activities, has the potential to adversely impact undiscovered paleontologic resources on the project site

and on adjoining areas associated with project off-site improvements. This would be considered a **potentially significant** impact.

Mitigation Measure 7-3 Mitigate for Potential Paleontological Resources

If human remains are discovered, all work shall be halted immediately within 50 feet of the discovery, the Placer County Community Development Resource Agency shall be notified, and the County Coroner must be notified, according to Section 5097.98 of the State Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

It shall be required on the final improvement plans approved by the county, that if paleontological resources are discovered on-site, the applicant shall retain a qualified paleontologist to observe all grading and excavation activities throughout all phases of project construction, and salvage fossils as necessary. The paleontologist shall establish procedures for paleontological resource surveillance and shall establish, in cooperation with the project developer, procedures for temporarily halting or redirecting work to permit sampling, identification, and evaluation of fossils. If major paleontological resources are discovered, which require temporarily halting or redirecting of grading, the paleontologist shall report such findings to the project developer and to the Placer County Department of Museums and Planning Department. The paleontologist shall determine appropriate actions, in cooperation with the project developer, that ensure proper exploration and/or salvage. Excavated finds shall first be offered to a State-designated repository such as the Museum of Paleontology, University of California, Berkeley, or the California Academy of Sciences. Otherwise, the finds shall be offered to the Placer County Department of Museums for purposes of public education and interpretive displays. These actions, as well as final mitigation and disposition of the resources, shall be subject to approval by the Department of Museums. The paleontologist shall submit a follow-up report to the Department of Museums and Planning Department, which shall include the period of inspection, an analysis of the fossils found, and present repository of fossils.

Implementation of mitigation measure **MM 7-3**, however, would reduce this impact to **less than significant**.

8.0
VISUAL RESOURCES

8.0 VISUAL RESOURCES

This section of the Draft Environmental Impact Report ("Draft EIR;" "DEIR") describes the existing visual features and characteristics of the project site and surrounding area including significant visual resources such as scenic vistas, trees, rock outcroppings, and waterways; sources of nighttime lighting and daytime glare; and scenic highway corridors. This section also discusses the potential environmental impacts associated with implementing the proposed project. The analysis focuses on the anticipated alteration of the visual landscape and visual resources within the project site. Visual impacts were evaluated using a combination of site reconnaissance, aerial photos, visual simulations of the proposed project, and geographic information systems (GIS).

8.1 EXISTING SETTING

Regional Setting

The project site is located in southeastern Placer County at the juncture of the Sacramento Valley and the Sierra Nevada Mountain Range (**Figure 3-2**). South Placer County is characterized by rolling topography, oak woodlands, the north and middle forks of the American River and other waterways, agricultural land, scattered rural residential development and the urban centers of Rocklin and Roseville.

Local Setting

The project site is undeveloped and is located in Placer County (see Figure 4-1) on the south side of Sierra College Boulevard between Nightwatch Drive and Ridge Park Drive. The project site is comprised of two parcels, 5.9 acres and 69.1 acres, that abut the City of Rocklin along the northern property line and extend to Oak Hill Lane in Placer County to the south (APNs: 046-050-006 and 046-050-008).

The project site is naturally vegetated with the northwestern portion consisting of tall grasses and the southeastern portion sparsely to densely wooded, primarily with oaks. The site is relatively level in the northwestern portion but slopes generally downward toward the southeast with slopes reaching 35 percent (King Engineering, 2007). The northern portion of the site is primarily covered with annual grasslands and scattered vernal pools. Predominant trees on the site are Blue and Live Oaks. The large majority of the site has moderate to steep slopes, and there is an intermittent drainage that runs north-south through the site into a ±1 acre pond and continues to the southern portion of the project site where there are several small wetlands and annual grasslands. The pond has a total volume of about six acre-feet and is impounded by a dam measuring 17 feet high and 300 feet long with a grass lined earthen spillway. In addition, approximately 1 acre of the project site is the paved Sierra College Boulevard.

Scenic Resources and Viewsheds

The steep topography of the southern portion of the site provides long-range views of sparsely developed, naturally vegetated land below. Close-range views to the north and northwest include Sierra College Boulevard which, in the area of the project site, is currently transitioning from a two-lane rural highway to a six-lane limited access urban arterial street. Across Sierra College Boulevard, and clearly visible from the site, is a small office complex and extensive residential development located within the Rocklin City limits. Close-range views to the west include relatively flat, grassy land with a few, large estate-style residential developments located along

either side of Cavitt Ranch Place. Views to the east include more heavily wooded areas with steep slopes and scattered irrigation facilities and rural residential development. Recent photographs of views from surrounding properties toward the site are provided on **Figure 8-1**.

Scenic Highways

According to the California Scenic Highway Mapping System (Caltrans, 2009), there are no Officially Designated Scenic State or County Highways within Placer County and no Eligible State Scenic Highways within the project area. Furthermore, there are no National Scenic Byways or All American Roads within the County. However, the Granite Bay Community Plan does encourage increased setbacks and landscaping for all parcels fronting on Sierra College Boulevard in order to provide a scenic corridor (Placer County, 1989, Pg. 27).

Light and Glare

The nighttime sky in southern Placer County is affected by existing residential development, street lights, and lighted commercial and parking areas. In addition, Interstate 80 and Highway 65 are significant sources of light from traffic flows throughout the night. Due to the location of the project site in the more rural Granite Bay area, nighttime lighting is less pronounced than in other more urban areas of the County.

The project site itself is undeveloped and does not produce any light or glare. Uses north of the site within the City of Rocklin include an office park with a small number of parking lot lights, abundant residential development with street and exterior lighting, and an elementary school with additional parking lot and security lighting. Uses west of the site include few scattered rural estates with limited exterior lighting. Uses east and south of the site are limited consisting of a detention basin and scattered rural residential units with very limited exterior lighting.

8.2 REGULATORY FRAMEWORK

Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 8-1** lists the General Plan policies that relate to visual resource, light and glare and the proposed project and provides an analysis of the project's consistency with these policies.

TABLE 8-1
GENERAL PLAN CONSISTENCY ANALYSIS – VISUAL RESOURCES

General Plan Goals and Policies	Consistency Determination	Analysis
Section 1: Land Use		
Policy 1.K.1: The County shall require that new development in scenic areas (e.g., river canyons, lake watersheds, scenic highway corridors, ridgelines and steep slopes) is planned and designed in a manner which employs design, construction, and maintenance techniques that:	Consistent	The project site contains steep slopes; however, the proposed development would be clustered at the northern end of the site where the topography is relatively flat. The sloping portion of the site would remain largely unchanged. The site would be fully landscaped to enhance

a. Avoids locating structures along ridgelines and steep slopes; b. Incorporates design and screening measures to minimize the visibility of structures and graded areas; c. Maintains the character and visual quality of the area.		views and screen buildings and storage areas.
Policy 1.K.2: The County shall require that new development in scenic areas be designed to utilize natural landforms and vegetation for screening structures, access roads, building foundations, and cut and fill slopes.	Consistent	Grading of the site would be minimal with all natural drainage essentially remaining unchanged. Furthermore, the southern portion of the site would remain largely unchanged.
Policy 1.K.3: The County shall require that new development in rural areas incorporates landscaping that provides a transition between the vegetation in developed areas and adjacent open space or undeveloped areas.	Consistent	The proposed project includes extensive landscaping including landscaped buffers between the proposed building sites and the southern portion of the project site, the surrounding properties, and Sierra College Boulevard. The proposed landscaping plans are shown in Figures 3.0-6a, b, c, and d.
Policy 1.K.5: The County shall require that new roads, parking, and utilities be designed to minimize visual impacts. Unless limited by geological or engineering constraints, utilities should be installed underground and roadways and parking areas should be designed to fit the natural terrain.	Consistent	Views of the proposed parking areas would be minimized through the use of landscaping. All utilities would be installed underground per County standards.
Policy 1.O.1: The County shall require all new development to be designed in compliance with applicable provisions of the Placer County Design Guidelines Manual.	Consistent	The proposed project has been designed and would be constructed in compliance with the Placer County Design Guidelines Manual.
Policy 1.O.3: The County shall require that all new development be designed to be compatible with the scale and character of the area. Structures, especially those outside of village, urban, and commercial centers, should be designed and located so that: b. Roof lines and vertical architectural features blend with and do not detract from the natural background or ridge outline; c. They fit the natural terrain; and d. They utilize building materials, colors, and textures that blend with the natural landscape (e.g., avoid high contrasts).	Consistent	The proposed buildings have been designed in consideration of the character of the area including natural building colors and materials and the placement of the lower level below grade to minimize building height and scale.
Policy 1.O.4: The County shall require that new rural and suburban development be designed to preserve and maintain the rural character and quality of the County.	Consistent	The proposed project would be consistent with existing and planned development in the area and would include the preservation of a large portion of the project site in its current condition.
Policy 1.O.9: The County shall discourage the use of outdoor lighting that shines unnecessarily onto adjacent properties or into the night sky.	Consistent, with mitigation	The proposed project includes extensive indoor and outdoor lighting. Mitigation measure 4.12.4b below require all lighting to be minimized and directed downward to avoid spillage and light pollution.

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View from North (Sierra View Office Park)

View from Northeast (San Juan Water District Property)

View from West (Cavitt Ranch Place)

View from South

Figure 8-1

Existing Views of Site from Surrounding Properties

PMC®

T:_CS\Work\Placer, County of\Amzing Facts Ministry 28-0120\figures\ADEIR

East Elevation

North Elevation

West Elevation

South Elevation

Source: Myhre Group, 2008

Figure 8-2

Proposed Phase I Building Elevations

PMC®

Granite Bay Community Plan

The Granite Bay Community Plan (GBCP) was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). Table 4.12-2 lists the GBCP goals and policies that relate to the proposed project and visual resources and provides an analysis of the project's consistency with these policies.

TABLE 8-2
COMMUNITY PLAN CONSISTENCY ANALYSIS – VISUAL RESOURCES

General Plan Goals and Policies	Consistency Determination	Analysis
Land Use Element		
Policy 15: Buildings shall be of a size and scale conducive to maintaining the rural residential atmosphere of Granite Bay. The architectural scale of non-residential buildings, as differentiated from size, shall be more similar to that of residential buildings than that of monumental buildings.	Consistent	The size and scale of the proposed church would not be consistent with the adjoining rural residential uses to the south and east of the project site or the general rural atmosphere of the community. However, mitigation measure MM 4-2a in Section 4.0 requires the applicant to apply for and gain approval of an amendment to the Granite Bay Community Plan to allow for the development of houses of worship to the scale and size as proposed by the project.
Policy 4: Sites shall be landscaped attractively; trees and other plantings should be used to shield adjacent residential developments from activities on the properties; indigenous materials shall be used where practicable. In particular, parking areas shall be screened from view from roads and adjacent residential properties.	Consistent	The proposed project includes substantial landscaping throughout the development area including landscaping along Sierra College Boulevard, within the parking areas and surrounding buildings. The southern portion of the site would remain undeveloped and naturally vegetated providing a substantial buffer between the proposed development and the rural residential development south and west of the site.
Community Design Element		
Policy 5: Maintain the heavily vegetated corridors that exist along circulation corridors to preserve their rural nature.	Consistent	The portion of Sierra College Boulevard near the project site is not considered to be heavily vegetated. It generally consists of native and non-native grasses. The proposed project would include landscaping along all street frontages.
Policy 7: Require development/projects to comply with the Placer County Landscape Guidelines and the specific design standards herein.	Consistent	The proposed project would include extensive landscaping, all of which would be in compliance with the Placer County Landscape Guidelines. The entire project would be consistent with the design standards contained in the GBCP.
Policy 8: Where possible, preserve native trees and support the use of native, drought tolerant plant materials in all revegetation/landscaping projects.	Consistent	The portion of the project site proposed for development does not contain any trees. The remainder of the project site would not be developed and would generally remain unchanged. Should trees need to be removed to accommodate site

		improvements, the number of trees affected would be minimal.
Policy 10: Where appropriate, encourage the use of greater setbacks to provide a scenic corridor for all parcels fronting on Douglas Boulevard, Auburn-Folsom Road, future Rocklin Road, Eureka Road and Sierra College Boulevard.	Consistent	Due to the steep topography of the project site in its southern portion, it would not be feasible to provide greater setbacks. However, the project has been designed to blend with the surrounding natural setting including natural paint tones and extensive landscaping.
Policy 11: To the maximum extent possible, all structures, including residences, should complement and blend in with the natural setting of the planning area, and to this end the following principles shall be adhered to: a. The visual impact of the structure shall be mitigated either through reduction of building bulk, increased setbacks, or introduced screening such as landscaping. In general, hillside structures shall be designed to step down the natural hillside in order to achieve a low building profile and minimize grading. b. Structures may be located in existing tree covered areas to the extent possible and still be consistent with slope, geologic and related conditions, and the need to preserve natural terrain and locally unique or especially beautiful wooded areas. c. Largely bare slopes and sparsely wooded ridges visible from large portions of the planning area should be kept free of structures to the maximum extent possible. d. If development does take place on highly visible barren, slopes or ridges, it must be unobtrusive and designed to maintain the character of the natural setting.	Consistent	The bulk of the Phase I building would be reduced through placement of the lower level below ground and out of sight. Setbacks and landscaping have been incorporated into the project design. In addition, landscaping would be used to screen buildings. No development would occur on the steep slopes in the southern portion of the project site. The wooded area of the project site would remain undeveloped and preserved as much as possible in its current condition.
Policy 12: The use of natural materials (i.e. wood siding and field stone) is encouraged. Exterior colors shall blend with the surrounding natural landscape. The use of "earth tones" or natural finishes which blend with the natural background is encouraged.	Consistent	Exterior colors would be natural “earth tones” and landscaping would incorporate native species and natural stone.
Policy 13: Landscaping shall be used to reduce visual impact of all structures and fences. Natural vegetation should dominate where possible. The use of native plant materials is encouraged. Landscaping plans and raw materials provide an informal character and smooth transition between buildings, parking lots, adjacent roadways, and open areas.	Consistent	The project site would be fully landscaped to reduce visual impacts of the proposed improvements. The area proposed for development does not currently contain any trees or other large vegetation that could be preserved and incorporated into the landscaping plan. However, the southern portion of the site would remain largely unchanged.
Policy 14: Large, bulky and unscreened structures shall be discouraged, particularly if they are visible from the road.	Consistent	The size and height of the proposed Phase I building would be minimized by placing the lower level below grade. In addition, all proposed buildings have been designed to include varying architectural detail. Finally, the project would be fully landscaped to screen undesirable views and enhance the visual character of the

		site.
Policy 15: Utility lines shall be installed underground to ensure minimum disruption to the environment and as little disturbance as possible to vegetation, particularly in scenic corridors.	Consistent	All utility lines installed as part of the proposed project would be installed underground and in accordance with applicable County standards.

Placer County Design Guidelines

The Placer County Design Guidelines are a manual that contains discretionary guidelines and standards intended for use by developers, designers/architects, and the County itself to guide applicable development in the western portion of the county through the design review process in order to create a more positive community image which makes Placer County more cohesive and attractive to visitors and residents. The Guidelines also include specific design guidelines for special districts within the county including Granite Bay. These specific guidelines are intended to recognize the unique environmental and architectural nuances of each special district (Placer County, 2007). The proposed project would be subject to design review by the county and would require approval by the county's Design/Site Review Committee to ensure compliance with the Guidelines.

Placer County Zoning Ordinance

Chapter 17 of the Placer County Code contains the county's zoning ordinance. This ordinance provides specific development standards intended to regulate the layout and visual character of development project includes minimum setback requirements, height limitations, maximum densities, and lot coverage. The project site is zoned Farm with a Building Site combining district (F-B-X 20 acre minimum).

8.3 IMPACTS

8.3.1 Standards of Significance

Based on Appendix G of the State CEQA Guidelines, visual resource impacts are considered significant if they would result in any of the following:

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

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

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

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

Methodology

The following analysis is based on field observations, aerial photography, and review of the topographic conditions from GIS maps for the project site and surrounding area as well as the visual simulations prepared for the proposed project. It should be noted that any analysis of impacts to visual character is subjective by nature since the qualities that create an aesthetically

pleasing setting will vary from person to person. For the purposes of this analysis, site reconnaissance, aerial photos and topographic maps were used to analyze the existing visual character of the project site while the visual simulations and proposed site plans were used to determine how the project would alter the existing character. The analysis further considers whether the anticipated alterations to the visual character of the site would constitute a significant adverse effect to existing views and scenic resources.

8.3.2 PROJECT-LEVEL IMPACTS AND MITIGATION MEASURES

IMPACT 8-1: Damage Visual Resources within a Scenic Highway Corridor

The project site is not located in the vicinity of an officially designated scenic highway or any highway that is eligible for such designation. The project would comply with the County's desire to create a scenic corridor along Sierra College Boulevard (see Community Design Element Policy 10 in **Table 8-2**) by providing a significant setback with landscaping along the site's frontage. Buildings would be setback nearly 300 feet from the roadway. The proposed parking lot with landscaping would provide a buffer (see **Figure 3-3**). As such, this impact would be **less than significant**. No mitigation is required.

IMPACT 8-2: Adversely Affect a Scenic Vista

Although there are no officially designated scenic vistas in the area, the project site sits at the top of a hillside providing extensive views of rural and open space areas below the project site to the south and east. These views extend for many miles, generally include natural vegetation and scattered residential development, and are considered an important component of the area's visual character.

Approval and implementation of the proposed project would result in the phased construction of several large structures, with building heights ranging from 57 to 62 feet. **Figure 8-2** shows the proposed building elevations for Phase I of the project. As shown in these renderings, Phase I of the project would include a three-level, multi-use building consisting of 96,000 square feet. Only the ground and upper levels would be visible from the north, east and west. The lower level would be below grade and would only be visible from the south. Phase I would also include an 11,220 square foot, single-level building for storage. Phase II would include the construction of a 90,000 square foot building located between the Phase I buildings. Phase III of the proposed project would include construction of a 10,000 square foot, single-level building for support offices. Proposed building materials include metal and concrete panels, aluminum fronts/sunshades, and glass.

Land located east of the site is undeveloped, with the exception of the San Juan Water District basin, and would therefore not be affected by a change in views to the west. The proposed development would be out of view from those properties located south of the site due to its distance from these properties and the steep topography and dense vegetation of the southern portion of the site. However, all of the proposed buildings on the site would be clearly visible from the west and north, as well as from both west- and eastbound Sierra College Boulevard. In addition, the proposed project would include construction of ±1,000 off-street parking spaces, a southerly extension of Nightwatch Drive, landscaping along frontage areas, and an entry feature in the northwest corner of the project site. A series of retaining walls would be constructed to accommodate the lower-level parking areas. A sound wall is also proposed along the western property line. However, due to the proposed locations and heights of the buildings, construction of the project would partially block scenic views from the residential and office uses located

north and west of the project site as well as views from Sierra College Boulevard. This impact is considered **significant and unavoidable**.

IMPACT 8-3: Degrade Visual Character

As described previously in this section, the project site is undeveloped and located in an area that is transitioning from rural to suburban in nature. It is characterized by natural vegetation including grasses and oaks, varying topography and steep slopes, natural drainages, vernal pools and a man-made pond/drainage basin. The proposed project would involve the development of approximately 17 acres in the northern portion of the project site as a church complex including two large buildings and two smaller, accessory buildings, several large surface parking lots, and associated infrastructure including sidewalks, lighting, drainage facilities, and landscaping features. The rest of the project site would remain undeveloped and several areas would be preserved in order to protect vernal pools and/or other biological resources as well as cultural resource sites. The reader is referred to Sections 10.0 and 11.0, respectively, for further discussion of these resources.

The site would be fully landscaped including landscaped buffers along the Sierra College Boulevard frontage, along the proposed southerly Nightwatch Drive extension, and between the development site and the remainder of the project site to the south (see **Figure 3-6**). Furthermore, the proposed buildings would be designed and constructed to meet the standards contained in the Placer County Design Guidelines Manual as well as the design guidelines contained in the GBCP and would consist of natural colors intended to blend with the surrounding area.

The conversion of the northern portion of the site from undeveloped and naturally vegetated to a large church facility would be considered a substantial alteration to its visual character. However, similar development has already occurred north of the site and is presently occurring west of the site. Furthermore, the project site is designated and zoned for development indicating that such changes to its visual character were anticipated by the County and would be part of its ultimate vision for the area. Mitigation measure 4-2b as identified in Section 4.0 Land Use and Agriculture requires that the applicant agree to preserve the southern portion of the project site as undeveloped land in perpetuity. This would reduce impacts to the visual character of the site. Therefore, although the project would result in a substantial alteration to the visual character of the project site, this change would not be considered adverse and this impact is **less than significant**. No mitigation is required.

IMPACT 8-4: Construction Impacts

Construction of each phase of the proposed project would likely require grading, trenching and excavation, vegetation removal, use and storage of construction equipment and building materials, installation of temporary security fencing and erosion control measures, and other visual disturbances on the project site. Such disturbances would be typical of other construction sites within the county and would be temporary in nature. Construction activities would be carried out in compliance with the requirements of the building permit(s) issued by the county for the project and all applicable standards. This impact is **less than significant**. No mitigation is required.

IMPACT 8-5: Create New Source of Light or Glare

The lighting plan for the proposed project is shown in **Figure 3-5**. As shown in this figure, the proposed parking lots, which would be located primarily along the outer northwest corner of the

site, would include many pole-mounted lighting fixtures. In addition, the proposed buildings would include exterior building mounted lighting and extensive indoor lighting which could be visible through doors and windows. Such lighting could spill over to nearby residential uses and could contribute to regional nighttime light pollution. The light-poles themselves are proposed to be finished in silver and this could potentially add to the reflective glare on the project site. Furthermore, based on a review of the visual simulations prepared for the project, the proposed building would include numerous large windows and reflective building materials, such as glass and aluminum, which could reflect sunlight causing glare. Though this impact is considered **potentially significant**, implementation of mitigation measures **MM 8.5a** and **MM 8.5b** would reduce impacts associated with the creation of new sources of light and glare to a **less-than-significant** level.

Mitigation Measure 8.5a Minimize Project Site Lighting

All outdoor lighting installed as part of the proposed project shall be limited to the minimum amount needed for public safety, shall be designed to limit upward and sideways spillover of light, and shall include High Pressure Sodium fixtures. All lighting shall be consistent with the most recent update of the "Nonresidential Compliance Manual for California's 2005 Energy Efficiency Standards." Outdoor light fixtures for parking areas, buildings, pedestrian areas, and roadways shall be shielded, and directed down to preserve the night sky and away from residential areas to minimize light and glare effects on such areas. To reduce brightness, proposed lighting fixtures shall be mounted at a height not to exceed 14'. In addition, all light poles shall be finished in a color that will blend into the landscape and prevent glare (i.e., black, bronze, or dark bronze). These lighting requirements shall be included in lighting plans for the project prior to issuance of any building permits.

Mitigation Measure 8.5b Use Non-Reflective Building Materials

Non-reflective building materials shall be used for the exterior of all buildings. Building windows shall be coated with tinting materials to reduce glare and to minimize visibility of interior lighting.

9.0
TRAFFIC AND CIRCULATION

9.0 TRAFFIC AND CIRCULATION

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") provides a description of the traffic and circulation conditions in the area surrounding the project site and identifies potential environmental impacts of implementing the proposed project associated with traffic and circulation. The analysis provided in this section focuses on potential impacts to area intersections, roadway segments, and internal site circulation, as well as pedestrian and bicycle circulation, safety, and the provision of public transit. This section also evaluates the project's consistency with the Placer County General Plan and Granite Bay Community Plan as they relate to traffic and circulation. Where necessary, mitigation measures are identified to address significant impacts. The analysis in this section is based on the Traffic Impact Analysis (TIA) prepared for the proposed project by KDAnderson and Associates in November 2008. The TIA is included as **Appendix 9** of this Draft EIR.

9.1 ENVIRONMENTAL SETTING

9.1.1 Study Area Circulation System

9.1.1.1 Roadways

Regionally, the site is served primarily by Sierra College Boulevard, which links the City of Lincoln and the communities of Granite Bay and Loomis to Interstate 80 (I-80) and continues south through the City of Roseville and into Sacramento County where it becomes Hazel Avenue. I-80 also provides regional access to the site via the Rocklin Road and Sierra College Boulevard interchanges. Following are brief descriptions of each roadway within the Study Area that could be affected by the proposed project. See **Figure 9-1** for the location of each roadway (KD Anderson & Associates, 2008).

Interstate 80

I-80 is the primary east-west arterial across Placer County and Northern California. In the vicinity of the proposed project, I-80 is a six-lane controlled access freeway. Access for the project site to the interstate is available at the Rocklin Road and Sierra College Boulevard interchanges in Rocklin and to a lesser extent, the Douglas Boulevard interchange in Roseville.

The California Department of Transportation (Caltrans) provides annual reports of the volume of traffic on the state highway system. The most recent counts available from Caltrans report an Annual Average Daily Traffic (AADT) volume of 150,000 vehicles per day west of the State Route 65 (SR 65) junction, 117,000 ADDT between SR 65 and Rocklin Road, 97,000 AADT in the area of Sierra College Boulevard, and 92,000 AADT between the Sierra College Boulevard and Horseshoe Bar Road interchanges (KD Anderson & Associates, 2008).

Sierra College Boulevard

Sierra College Boulevard is a north-south arterial road that connects SR 193 north of Penryn with I-80 and continues southerly through Rocklin and Roseville before becoming Hazel Avenue in Sacramento County. Within that area the road passes through portions of unincorporated Placer County, the Town of Loomis, the City of Rocklin and the City of Roseville. Near the project site, the road itself is in the City of Rocklin, but the adjoining segment is in unincorporated Placer County. To the north of the project site, the east side of the road abuts the Town of Loomis.

In the area of the project site, Sierra College Boulevard is transitioning from a two-lane rural highway to a six-lane limited access urban arterial street. South of the project site the road is currently four-lanes immediately north of Douglas Boulevard and this four-lane section is being extended northerly along the uphill grade south of Secret Ravine Parkway. Development has already occurred at the top of Sierra College Boulevard in Rocklin and Roseville, and as a result the west side of the highway has been improved to its ultimate six-lane width from Secret Ravine Parkway north past the project site to Rocklin Road. East side improvements have lagged as development has been limited on that side of the road. As a result, a single northbound through lane is available in the area from Nightwatch Drive to the Rocklin Road intersection.

On-street parking is prohibited along Sierra College Boulevard in the area of the project site. Class II bicycle lanes are striped on the west side of Sierra College Boulevard in the locations where ultimate improvements have been made. Meandering sidewalks exist along the portions of Sierra College Boulevard that have been improved to their full width, including the area immediately west of the project site and opposite the project site.

As part of the TIA prepared for the proposed project, traffic counts were conducted in July 2007 on roadways in the vicinity of the project site. These traffic counts revealed that Sierra College Boulevard carried on a Friday a volume of 19,150 vehicles per day in the area of the project site, and on Saturday, carried a volume 14,340 vehicles per day. While the weekday volumes could be higher when Sierra College was in session, the Saturday volume is judged to be representative of "typical" conditions. Traffic counts conducted on a Saturday in November 2008 in Roseville indicated that Sierra College Blvd carried 15,250 vehicles per day between Douglas Blvd and Cavitt Stallman Road and 12,450 vehicles per day in the area between Olympus Drive and Secret Raving Pkwy (KD Anderson & Associates, 2008).

Rocklin Road

Rocklin Road is an east-west arterial street that links the eastern and western portions of the City of Rocklin that are otherwise separated by I-80. Rocklin Road also continues easterly beyond Sierra College Boulevard through Loomis and provides freeway access to the unincorporated portions of Placer County near Granite Bay. Presently, Rocklin Road is a four-lane arterial street between I-80 and Sierra College Boulevard. East of Sierra College Boulevard the south half of the roadway has been widened as development has occurred in Rocklin, but the road remains a two-lane rural road to its terminus at Barton Road.

Daily traffic volume counts on Rocklin Road were taken from available sources. The segment of Rocklin Road between I-80 and Sierra College Boulevard carries 13,100 vehicles per day on weekdays, while the volume between Sierra College Boulevard and Barton Road is 6,100 vehicles per day (KD Anderson & Associates, 2008).

Nightwatch Drive

Nightwatch Drive is a local collector street that provides access into the developed area of Rocklin across from the project site. Nightwatch Drive is a two-lane street with a center landscaped median. Sidewalks exist along both sides of Nightwatch Drive (KD Anderson & Associates, 2008).

El Don Drive, Southside Ranch Road, and Brookfield Circle

El Don Drive, Southside Ranch Road, and Brookfield Circle are City of Rocklin collector streets that intersect Sierra College Boulevard at signalized intersections north of the project site. Each is a two-lane street with sidewalks and on-street parking (KD Anderson & Associates, 2008).

Scarborough Drive

Scarborough Drive is a City of Rocklin collector street that intersects Sierra College Boulevard west of the project site. Scarborough Drive provides access to the residential area of Rocklin abutting the City of Roseville. Scarborough Drive also links Sierra College Boulevard with Secret Ravine Parkway, an arterial street that extends across northern Roseville to East Roseville Parkway. Scarborough Drive is a two-lane street with on-street parking (KD Anderson & Associates, 2008).

9.1.1.2 Intersections

The quality of traffic flow is often governed by the operation of key intersections. The following intersections have been identified for evaluation in the TIA in consultation with Placer County and the City of Rocklin (KD Anderson & Associates, 2008).

Sierra College Boulevard/Rocklin Road

The Sierra College Boulevard/Rocklin Road intersection is a signalized intersection located north of the project site. The geometric configuration of the intersection is currently in transition as ongoing infrastructure construction has eliminated some auxiliary lanes. The intersection features separate left turn lanes on each approach, and a right turn lane is available on the eastbound approach. There are two eastbound and two southbound through lanes, but only single through lanes are currently available on the northbound and westbound approaches. Prior to current construction, the northbound approach included a short auxiliary through lane. Crosswalks exist on all four legs of the intersection (KD Anderson & Associates, 2008).

Sierra College Boulevard/El Don Drive

The Sierra College Boulevard/El Don Drive intersection is controlled by a traffic signal. The geometric layout of the intersection includes left turn lanes on each approach, and the southbound approach is configured with three through lanes. The northbound approach includes a through lane and a short auxiliary through lane that terminates just north of the intersection at a creek crossing. Crosswalks exist on all four legs of the intersection (KD Anderson & Associates, 2008).

Sierra College Boulevard/South Side Ranch Road

The Sierra College Boulevard/South Side Ranch Road intersection is signalized. The west side of the intersection has been improved to its ultimate width and three southbound through lanes are available. However, while separate left turn lanes exist on the northbound and southbound approaches, only one northbound lane extends through the intersection. The east leg of the intersection is a private access to a rural residential area in Loomis. Crosswalks exist on all four legs of the intersection (KD Anderson & Associates, 2008).

Sierra College Boulevard/Nightwatch Drive

The Sierra College Boulevard/Nightwatch Drive intersection is signalized. The westbound Sierra College Boulevard approach has been widened to its ultimate width and includes three through lanes and a separate right turn lane. The southbound Nightwatch Drive approach is configured to include separate left turn and right turn lanes. While Sierra College Boulevard has been widened to the west of the intersection, the area is striped to provide only a left turn lane and single through lane. Crosswalks do not exist across Sierra College Boulevard at this intersection (KD Anderson & Associates, 2008).

Sierra College Boulevard/Scarborough Drive

The Sierra College Boulevard/Scarborough Drive intersection is controlled by a traffic signal. This intersection has been improved to its ultimate paced width, however, as with the Nightwatch Drive intersection, this intersection is currently striped to accommodate transition areas in advance of the narrower roadway sections adjoining the intersection. Today the westbound Sierra College Boulevard approach offers three through lanes and a separate right turn lane. The eastbound Sierra College Boulevard approach is also striped with separate left turn and right turn lanes, as well as two through lanes. The southbound Scarborough Drive approach is configured with dual left turn lanes and a separate right turn lane. Crosswalks exist on all four legs of the intersection (KD Anderson & Associates, 2008).

Sierra College Blvd/Secret Ravine Parkway

The Sierra College Blvd/Secret Ravine Parkway intersection is signalized. Both Sierra College Blvd approaches have two through lanes and separate left turn and right turn lanes. The eastbound Secret Ravine Parkway approach has three lanes that are configured as a separate left turn lane, a combined left turn and through lane and a right turn lane. Crosswalks exist across Sierra College Blvd at this intersection (KD Anderson & Associates, 2008).

Sierra College Blvd/Olympus Drive

The Sierra College Blvd/Olympus Drive intersection is signalized. Both Sierra College Blvd approaches have two through lanes and separate left turn and right turn lanes. The eastbound Secret Ravine Parkway approach has three lanes that are configured as a separate left turn lane, a combined left turn and through lane and a right turn lane. The westbound approach leaving Bayside Church has three lanes that are configured as a separate left turn lane, a combined left turn and through lane and a combined through and right turn lane. Crosswalks exist across Sierra College Blvd at this intersection (KD Anderson & Associates, 2008).

Sierra College Blvd/Douglas Blvd

The Sierra College Blvd/Douglas Blvd intersection is signalized. Both Sierra College Blvd approaches have three through lanes and dual left turn lanes, and there is a separate right turn lane on the northbound approach. Douglas Blvd has three through lanes in each direction plus separate left turn and right turn lanes. Crosswalks exist across all four legs of the intersection (KD Anderson & Associates, 2008).

9.1.2 Level of Service

Level of service (LOS) is a quantitative measure describing the operating condition of intersections and roadways. There are six levels of service, A through F, which represent driving conditions from best to worst, respectively. Each LOS is defined in **Table 9-1** below.

TABLE 9-1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway Segments
A	Uncongested operations, all queues clear in a single-signal cycle. V/C <0.60 Delay ≤ 10 sec/veh	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
B	Uncongested operations, all queues clear in a single-signal cycle. 0.60 ≤ V/C < 0.70 Delay > 10 sec/veh and ≤ 20 sec/veh	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
C	Light congestion, occasional backups on critical approaches. 0.70 ≤ V/C < 0.80 Delay > 20 sec/veh and < 35 sec/veh	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
D	Significant congestions of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. 0.80 ≤ V/C < 0.90 Delay > 35 sec/veh and < 55 sec/veh	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
E	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(s). 0.90 ≤ V/C < 1.00 Delay > 55 sec/veh and ≤ 80 sec/veh	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
F	Total breakdown, stop-and-go operation. V/C > 1.00 Delay > 80 sec/veh	Intersection often blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.

Note: V/C = Volume/Capacity
sec/veh = Seconds per Vehicles
Source: KDAnderson, 2008

9.1.3 Existing Traffic Conditions

Since the proposed project will have church services on Saturday, the TIA conducted for the proposed project addressed traffic conditions occurring during mid-day Saturday peak hours as this represents the worst-case period for traffic generated by the project. The limited number of employees associated with operation of the church during the week does not represent a significant increase in area traffic. Saturday counts were conducted within the limits of the City of Rocklin between the hours of 10:00 am and 1:00 pm in July 2007 and in Roseville in November 2008. The highest one-hour volumes observed during this time period were utilized in the TIA. The results of these traffic counts are presented in **Figure 9-2** (KD Anderson & Associates, 2008).

9.1.3.1 Study Area Intersections

Applicable Level of Service Standards

City of Rocklin

The LOS policies in the City of Rocklin General Plan are assumed to govern the significance of traffic impacts to study intersections within the Rocklin city limits. According to the Rocklin General Plan, the minimum LOS standard at signalized intersections is LOS C, except for locations within one half mile of access to an interstate freeway, where LOS D is accepted. Review of the study area indicates that all of the study intersections are more than one half mile from I-80. At unsignalized intersections LOS C is also the minimum, except at locations which already exceed LOS C. At those locations the satisfaction of peak hour traffic signal warrant is the measure of significance.

City of Roseville

City of Roseville standards govern minimum Level of Service at intersections within the Roseville City limits. The City of Roseville has a general minimum standard of LOS C, but has accepted LOS D conditions at designated intersections. The City's minimum Level of Service is LOS C at the Secret Ravine Parkway and Olympus Drive intersections on Sierra College Blvd and LOS D at the Douglas Blvd/Sierra College Blvd intersection.

Town of Loomis

The Town of Loomis strives to maintain LOS C at intersections under its jurisdiction.

Existing Intersection Levels of Service

To assess the quality of existing traffic conditions and provide a basis for analyzing project impacts, Levels of Service were calculated at study area intersections and project driveways. **Table 9-2** below presents current peak hour Levels of Service at the study area intersections. As shown, all study intersections currently operate with Levels of Service that meet the minimum requirements of each agency during the midday peak hour on Saturday (KD Anderson & Associates, 2008).

TABLE 9-2
EXISTING INTERSECTION LEVEL OF SERVICE

Intersection	Control	Applicable LOS Standard	Time Period		
			Saturday Peak Hour (10:00 a.m. to 1:00 p.m.)		
			LOS	Volume/ Capacity	Average Delay (sec/veh)
Intersections within Rocklin City Limits					
Sierra College Blvd / Rocklin Rd	Signal	C	B	0.62	-
Sierra College Blvd / El Don Dr	Signal	C	A	0.42	-
Sierra College Blvd / Southside Ranch Rd	Signal	C	A	0.40	-
Sierra College Blvd / Nightwatch Dr	Signal	C	A	0.38	-
Sierra College Blvd / Scarborough Dr	Signal	C	A	0.21	-
Intersections within Roseville City Limits					
Sierra College Blvd/Secret Ravine Pkwy	Signal	C	B	-	12.5 sec
Sierra College Blvd/Olympus Dr	Signal	C	B	-	12.6 sec
Sierra College Blvd/Douglas Blvd	Signal	D	D	-	41.6 sec

Source: KDAnderson, 2008

Study Area Roadway Segments

The quality of traffic flow on County roads and City streets can also be determined based on the daily traffic volumes and generalized Level of Service thresholds. General "planning level" daily volume thresholds presented in the Placer County General Plan EIR can be used to identify operating Levels of Service on streets and highways. These thresholds are shown in **Table 9-3**. However, the City of Rocklin makes use of the daily traffic volume thresholds shown in **Table 9-4**.

TABLE 9-3
EVALUATION CRITERIA FOR ROADWAY SEGMENT LEVEL OF SERVICE – PLACER COUNTY

Roadway Capacity Class	Maximum Daily Traffic Volume Per Lane Level of Services				
	A	B	C	D	E
1. Freeway – Level Terrain	6,300	10,620	13,680	17,740	18,000
2. Freeway – Rolling Terrain	5,290	8,920	11,650	14,070	15,120
3. Freeway – Mountainous Terrain	3,400	5,740	7,490	9,040	9,720
4. Arterial – High Access Control	6,000	7,000	8,000	9,000	10,000
5. Arterial – Moderate Access Control	5,400	6,300	7,200	8,100	9,000
6. Arterial – Low Access Control	4,500	5,250	6,000	6,870	7,500
7. Rural Two-Lane Highway – Level Terrain	1,500	2,950	4,800	7,750	12,500

Roadway Capacity Class	Maximum Daily Traffic Volume Per Lane Level of Services				
	A	B	C	D	E
8. Rural Two-Lane Highway – Rolling Terrain	800	2,100	3,800	5,700	10,500
9. Rural Two-Lane Highway – Mountainous Terrain	400	12,000	2,100	3,400	7,000

Source: KDAnderson, 2008

TABLE 9-4
EVALUATION CRITERIA FOR ROADWAY SEGMENT LEVEL OF SERVICE – CITY OF ROCKLIN

LOS	Roadway Segment Capacities: Two Way Average Daily Traffic Volumes						
	Two Lane Collector	Four Lane Undivided Arterial	Four Lane Divided Arterial	Four Lane Restricted Access Arterial	Six Lane Divided Arterial	Six Lane Restricted Access Arterial	Four Lane Freeway
A	9,000	18,000	20,250	21,600	30,315	30,315	37,600
B	10,700	21,300	23,625	25,200	36,000	36,000	52,800
C	12,000	24,000	27,000	28,800	40,500	40,500	68,000
D	13,500	27,000	30,375	32,400	45,560	45,560	76,000
E	15,000	30,000	33,750	36,000	50,525	50,525	80,000

Source: KDAnderson, 2008

In 2008, Sierra College Boulevard carried 19,150 weekday Average Daily Traffic (ADT) and 14,340 vehicles per day on Saturday in the vicinity of the proposed project. Because the number of lanes in each direction is unequal, standard LOS thresholds are not directly applicable. The two-lane thresholds could be applicable in the northbound direction. Under Placer County General Plan standards the current volume is indicative of weekday LOS E on a two-lane arterial with a high degree of access control, but LOS C on Saturday. While the City of Rocklin does not have a two-lane arterial LOS standard, the Saturday volume would be indicative of LOS C-D if one half of the threshold identified for a four-lane restricted access alternative was assumed (i.e., LOS C = 14,400 ADT).

The City of Roseville also identifies acceptable Levels of Service based on daily traffic volumes. The City assumes 9,000 vehicles per lane per day capacity on major arterials as a basis for roadway Level of Service and assumes a V/C of 0.81 for the LOS C threshold. For the 4-lane section north of Olympus, the resulting threshold is 29,160 ADT (9,000 X 4 X 0.81) for the LOS C threshold and for the 6-lane section north of Douglas, the threshold would be 43,740 ADT (9,000 X 6 X 0.81). The observed traffic volumes on this segment of Sierra College Blvd are far below the threshold and would be indicative of LOS A (KD Anderson & Associates, 2008).

Public Transit Facilities

Placer County Transit provides bus service in the Rocklin area. However, the nearest local service stops are on Rocklin Road and on Sierra College Boulevard north of Rocklin Road. Dial-a-Ride service is available to residents in the area of the project site. Roseville Transit provides fixed route service in the area south of the project site, but the closest route only runs on Sierra College Boulevard as far north as Olympus Parkway (KD Anderson & Associates, 2008).

9.2 REGULATORY FRAMEWORK

9.2.1 Federal

There are no Federal regulations or laws pertaining to traffic and circulation that are applicable to the proposed project.

9.2.2 State

There are no State regulations or laws pertaining to traffic and circulation that are applicable to the proposed project.

9.2.3 Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 9-5** lists the General Plan policies that relate to traffic and circulation and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 9-5
PLACER COUNTY GENERAL PLAN CONSISTENCY ANALYSIS – TRAFFIC AND CIRCULATION

General Plan Goals and Policies	Consistency Determination	Analysis
Transportation and Circulation Element		
Policy 3.A.2: Streets and roads shall be dedicated, widened, and constructed according to the roadway design and access standards generally defined in Section I of this Policy Document and, more specifically, in community plans and the County's Highway Deficiencies Report. Exceptions to these standards may be necessary but should be kept to a minimum and shall be permitted only upon determination by the Public Works Director that safe and adequate public access and circulation are preserved by such exceptions.	Consistent	Any roadway improvements required as part of the proposed project would be designed and constructed in conformance to all applicable standards and would be reviewed and approved by the County prior to implementation.
Policy 3.A.3: The County shall require that roadway rights-of way be wide enough to accommodate the travel lanes needed to carry long-range forecasted traffic volumes (beyond 2010), as well as any planned bikeways and required drainage, utilities, landscaping, and suitable separations. Minimum right-of-way criteria for each class of roadway in the County are specified in Part I of this Policy Document (see page 29).	Consistent	The proposed project includes dedication of adequate right-of-way for the widening of Sierra College Blvd including bike lane reconfiguration and improvements to the Sierra College Blvd/Nightwatch Drive intersection including signalization consistent with Part I of the GP Policy Document.
Policy 3.A.4: On arterial roadways and thoroughfares, intersection spacing should be maximized. Driveway encroachments along collector and arterial roadways shall be minimized. Access control restrictions for each class of roadway in the County are specified in Part I of this Policy Document (see page 29).	Consistent	According to the Circulation Plan Diagram contained in the General Plan, the portion of Sierra College Boulevard located along the project site is not an arterial roadway. Regardless, the County will review all plans for improvements to this roadway including the site access to ensure that all

		applicable design standards are met.
Policy 3.A.6: The County shall require all new development to provide off-street parking, either on-site or in consolidated lots or structures.	Consistent	The proposed project will provide all required parking on the project site.
Policy 3.A.7: The County shall develop and manage its roadway system to maintain the following minimum levels of service (LOS). • LOS "C" on rural roadways, except within one-half mile of state highways where the standard shall be LOS "D". • LOS "C" on urban/suburban roadways except within one-half mile of state highways where the standard shall be LOS "D". The County may allow exceptions to these level of service standards where it finds that the improvements or other measures required to achieve the LOS standards are unacceptable based on established criteria. In allowing any exception to the standards, the County shall consider the following factors: • The number of hours per day that the intersection or roadway segment would operate at conditions worse than the standard. • The ability of the required improvement to significantly reduce peak hour delay and improve traffic operations. • The right-of-way needs and the physical impacts on surrounding properties. • The visual aesthetics of the required improvement and its impact on community identity and character. • Environmental impacts including air quality and noise impacts. • Construction and right-of-way acquisition costs. • The impacts on general safety. • The impacts of the required construction phasing and traffic maintenance. • The impacts on quality of life as perceived by residents. • Consideration of other environmental, social, or economic factors on which the County may base findings to allow an exceedance of the standards. Exceptions to the standards will only be allowed after all feasible measures and options are explored, including alternative forms of transportation.	Consistent	The proposed project would result in unacceptable levels of service at multiple study area intersections under both short- and long-term conditions. However, mitigation contained within this section would require the appropriate roadway improvements to improve traffic conditions and achieve acceptable levels of service. See Impacts 9.1, 9.3, and 9.4 below.
Policy 3.A.12: The County shall require an analysis of the effects of traffic from all land development projects. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. Such improvements may include a fair share of improvements that provide benefits to others.	Consistent	The effects of traffic from the proposed development project were analyzed in a traffic study prepared by KD Anderson & Associates in 2008 (see Appendix 9) which is summarized throughout this section. Mitigation contained in this section would require all improvements necessary to mitigate the project's effects.
Policy 3.A14: The County shall assess fees on new development sufficient to cover the fair share portion of that development's impacts on the local and regional transportation system. Exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and	Consistent	The project proponent will pay all fees assessed by the County to fund the proposed project's fair share of impacts on the local and regional transportation system.

when alternative sources of funding can be identified to offset foregone revenues.		
Policy 3.B.3: The County shall consider the need for future transit right-of-way in reviewing and approving plans for development. Rights-of-way may either be exclusive or shared with other vehicles.	Consistent	MM 9.4a requires the project proponent to consult with Placer County Transit to determine if the dedication of right-of-way is necessary along the project site frontage for the development of a bus stop and/or turn out.
Policy 3.C.4: During the development review process, the County shall require that proposed projects meet adopted Trip Reduction Ordinance (TRO) requirements.	Consistent	The project will implement the applicable requirements of the County's TRO once in operation (see MM 9.1b)
Policy 3.D.5: The County shall continue to require developers to finance and install pedestrian walkways, equestrian trails, and multi-purpose paths in new development, as appropriate.	Consistent	The proposed project includes the reconfiguration of bike lanes along Sierra College Blvd and the construction of pedestrian paths and gathering areas onsite.
Policy 3.D.7: The County shall, where appropriate, require new development to provide sheltered public transit stops, with turnouts.	Consistent	The project proponent will consult with the local transit agency to determine if any sheltered public transit stops and/or turnouts are required on the project site (see MM 9.4).

Source: Placer County, 1994

Granite Bay Community Plan

The Granite Bay Community Plan (GBCP) was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). **Table 9-6** lists the Community Plan goals and policies that relate to Traffic and circulation and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 9-6
COMMUNITY PLAN CONSISTENCY ANALYSIS – TRAFFIC AND CIRCULATION

General Plan Goals and Policies	Consistency Determination	Analysis
Circulation Element		
Policy 1.2: The rights-of-way for roadways shall be wide enough to accommodate appropriate road paving, trails, paths and bikeways, drainage, public utility services, and substantial trees and shrubs.	Consistent	The proposed project includes dedication of adequate right-of-way for the widening of Sierra College Blvd including bike lane reconfiguration and improvements to the Sierra College Blvd/Nightwatch Drive intersection including signalization.
Policy 1.3: The level of service (LOS) on major roadways (i.e., arterial and collector routes) and intersections shall be at Level "C" or better during the A.M. and/or P.M. peak hour. The exceptions to this are intersections along Auburn-Folsom from Douglas Boulevard southerly, and along Douglas Boulevard from Auburn-Folsom Road westerly, where the level of service shall be LOS "E" or better during the A.M. and/or P.M. peak hour.	Consistent	The proposed project would result in unacceptable levels of service at multiple study area intersections under both short- and long-term conditions. However, mitigation contained within this section would require the appropriate roadway improvements to improve traffic conditions and achieve acceptable levels of service. See impacts 9.1, 9.3, and 9.4 below.
Policy 1.5: Land development projects shall be approved only if LOS C (or the exception cited	Consistent	With implementation of the mitigation measures contained in this section as well

earlier) can be achieved on roads and intersections after: a) traffic from approved projects has been added to the system, and b) improvements funded by the capital improvement program (CIP) have been constructed. (This will result in temporary slippage of the LOS below the adopted standards until adequate funding has been collected for the construction of CIP improvements.)		as all planned roadway improvements, the project would not result in unacceptable levels of service at any study area intersections.
Policy 1.13: Meandering paths, separated from the roadway, shall be used in lieu of sidewalks in all developments with a parcel size of 0.90 acres or more and shall be encouraged in developments with parcel sizes of 0.4 acres or more.	Consistent	The proposed project would include frontage improvements along Sierra College Blvd. Such improvements would be designed and constructed in accordance with all applicable standards and in consultation with Placer County.
Policy 1.21: Roads with two or more lanes in each direction shall have a raised landscaped median unless findings are made for not having the median on any given roadway.	Consistent	Sierra College Blvd will be widened and improved as part of the proposed project. These improvements would be designed and constructed in accordance with all applicable standards and in consultation with the County.
Policy 3.2: Bus stop turnouts shall be required at appropriate locations as conditions of approval of development.	Consistent	MM 9.4a requires the project proponent to consult with Placer County Transit to determine if the dedication of right-of-way is necessary along the project site frontage for the development of a bus stop and/or turn out.
Policy 3.7: During the development review process, the County shall require that land development projects meet adopted trip reduction ordinance requirements.	Consistent	The project will implement the applicable requirements of the County's TRO once in operation (see MM 9.1b)
Policy 4.4: On-site and "frontage" improvements of land development projects shall be required as conditions of approval for all land development projects.	Consistent	The proposed project includes frontage improvements along Sierra College Blvd including curb, gutter and landscaping.
Policy 4.5: Traffic mitigation fees to fund the CIP described in this Plan shall be required as a condition of approval for all land development projects within the Plan area.	Consistent	The project proponent will pay any traffic mitigation fees levied by the County for the proposed project.

Source: Placer County, 2005

9.3 IMPACT

9.3.1 Standards of Significance

Based on Appendix G of the CEQA Guidelines and Placer County's established significance criteria, the proposed project would result in a significant impact related to traffic and circulation if it would:

1) 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 intersection); or

2) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways; or

3) Result in a change in air traffic patterns, including either an increase in traffic levels of a change in location that results in substantial safety risks; or

4) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or

5) Result in inadequate emergency access; or

6) Result in inadequate parking capacity; or

7) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

In regard to criteria (c) above, the project site is not located within the vicinity of any airports and would have no effect on air traffic patterns. As such, this issue will not be addressed further in this section.

METHODOLOGY

Proposed Project Characteristics

The proposed project is a church that would hold its primary services on Saturdays and would have limited weekday activities. Ultimately, the church could seat 2,000 persons for services, with seating for 1,300 anticipated with the first phase.

The site has two points of access. Primary access is to be via the southerly extension of Nightwatch Drive from the Sierra College/Nightwatch Drive intersection. Secondary access is proposed via a right turn only access on Sierra College Boulevard roughly midway along the project's frontage. Development of the secondary access is planned with the first phase of the project, but could be delayed to the second phase depending on the extent of Sierra College Boulevard improvements required to accommodate this additional access.

Trip Generation

The amount of new traffic associated with development projects is typically forecast using information developed from recognized national sources. The Institute of Transportation Engineers (ITE) publication *Trip Generation, 7th Edition* is a source recognized by Placer County, and applicable trip generation rates for churches operating on Saturdays are presented in **Table 9-7**.

TABLE 9-7
TRIP GENERATION RATES/FORECASTS

Land Use	Unit/Quantity	Trip Generation						
		Saturday Daily	Sunday Peak Hour			Weekday P.M. Peak Hour		
			Inbound	Outbound	Total	Inbound	Outbound	Total
Church (ITE)	Seats	0.90	43%	57%	0.60	50%	50%	0.04
Phase 1	1,300	1,170	335	445	780	26	26	52
Phase 1+2	2,000	2,540	516	684	1,200	40	40	80

Source: KD Anderson and Associates, 2007

As shown in **Table 9-7**, the initial 1,300 seat phase of the proposed project could generate 780 trips during the Saturday peak hour. The initial phase of the project is only expected to generate 52 trips during the weekday p.m. peak hour. At full occupancy at the end of Phase 2, the site could generate 1,200 Saturday peak hour trips.

Trip Distribution

Having determined the number of trips that are expected to be generated by the project, it is necessary to identify the directional distribution of project-generated traffic. For churches, the location of church attendee residences is the primary indicator of the regional trip distribution.

A portion of the congregation now attending Sacramento Central Church near CSU-Sacramento is expected to move their membership to the proposed project. Based on review of the location of existing membership, it appears that approximately 50 families already attending Sacramento Central Church live in Placer County. Another 30 families reside in the Folsom-Citrus Heights-Orangevale area. While these church members would likely attend the proposed church, we are also told that a portion of the membership residing in Sacramento County along the Interstate 80 corridor could relocate their membership. All together, it is assumed that persons currently attending Sacramento Central Church will represent 10 percent of the total membership at the end of Phase 2.

Because most of the church membership will be new, the distribution of church traffic has been assumed to be in rough proportion to the regional population distribution of the western Placer County, north Sacramento County and western El Dorado County area within ten miles of the site. **Table 9-8** outlines the regional assumptions made for this study.

TABLE 9-8
REGIONAL TRIP DISTRIBUTION ASSUMPTIONS

Direction	Origin/Destination	Route	Percent of Total
North	Lincoln, Penryn, Yuba County	Sierra College Boulevard North	5
	East Rocklin	Nightwatch Drive, Southside Ranch Road, El Don Drive	3
	Auburn, Loomis	Interstate 80 east	3
East	Loomis, North Granite Bay	Rocklin Road east	2
	Granite Bay, Folsom, West El Dorado County	Rocklin Road east	5
	Granite Bay	Douglas Blvd east	5
South	Orangevale, Citrus Heights, Rancho Cordova, Granite Bay	Sierra College Boulevard south of Douglas Blvd	15
	East Roseville	Scarborough Drive west	2.5
		Secret Ravine Parkway west	10
West	Rocklin	Rocklin Road west of I-80	2
	Western Rocklin, Western Roseville, Western Lincoln	SR 65 to Interstate 80 to Rocklin Road	15
	North Sacramento County	Interstate 80 to Rocklin Road	15
		Interstate 80 to Douglas Blvd to Sierra College Blvd	15
		Interstate 80 to Douglas Blvd to Olympus Drive to Sierra College Blvd	2.5
Total			100

Source: KD Anderson & Associates, 2008

Project Trip Assignment

The assignment of project traffic to the local area street system will reflect the alternative routes available between the site and church member residences. The principal choice to be made involves use of the right turn only driveway on Sierra College Boulevard. This driveway will be an attractive route for persons using the eastern portion of the parking lot developed under Phase 2, but may also be used under Phase 1.

Using the regional trip distribution assumptions noted previously, project trips were assigned to the local street system assuming access as planned. **Figure 9-3** presents resulting "Project Only" traffic under Phase 1 with and without access via the Nightwatch Drive intersection, as well as under Phase 1+2 conditions with both access points available (KD Anderson & Associates, 2008).

Assumed Improvements

As noted in **Figure 9-3**, the project proponent expects to widen Sierra College Blvd along the project frontage. Thus two eastbound lanes will be provided on Sierra College Blvd through the Nightwatch Drive intersection. While project frontage improvements on Sierra College Blvd provide the space for a third through lane, this lane and the second eastbound lane would have to

be "dropped" before reaching the existing single eastbound lane beyond the project site. However, because the distance required for the lane drop exceeds the frontage length, this analysis first addresses conditions without a second through lane in order to evaluate the need for the additional improvements required to accommodate two eastbound lanes.

Improvements to the Sierra College Boulevard/Nightwatch Drive intersection have been assumed under these initial analysis conditions. Improvements will be made to Sierra College Blvd west of the intersection to create a right turn lane into the site at Nightwatch Drive. The median on Sierra College Blvd has been assumed to be reconstructed to create a single left turn lane into the project site. A two lane northbound Nightwatch Drive approach has been assumed, with these two lanes configured as a dedicated left turn lane and a combined left+thru+right turn lane. The existing southbound right turn lane on Nightwatch Drive has been assumed to be re-striped to permit through traffic. The project's frontage widening has been assumed to be striped to accommodate a separate right turn lane into the site at the new access on Sierra College Blvd (KD Anderson & Associates, 2008).

Saturday Peak Hour Level of Service Analysis

The proposed church would provide weekly services on Saturdays and would not include a traditional school or day care center that would add traffic during weekdays. As such, Saturday traffic volumes were judged to be representative of the anticipated typical project conditions. The project would however, include construction of offices, a media production facility and a resource center that would function like a warehouse, all of which would generate weekday traffic (estimated at about 40 inbound and 40 outbound vehicle-trips per hour). However, this volume (less than one vehicle per minute in each direction) is low enough that there is no significant possibility that analysis of weekday conditions would yield identification of additional impacts or mitigation measures. As such, the following impact analysis focuses only on Saturday peak hour conditions and the project's potential effects on such conditions (KD Anderson & Associates, 2007; LSC Transportation Consultants, 2009).

9.3.2 Project-Level Impacts and Mitigation Measures

IMPACT 9-1: Exceed Level of Service Standards at Study Intersections

Implementation of the proposed project would generate additional vehicle trips resulting in unacceptable levels of service at multiple study area intersections. **Figure 9-4** superimposes project trips onto the current background traffic volumes to create three "Existing plus Project" conditions: (1) existing plus Phase 1 of the project with one access point; (2) existing plus Phase 1 of the project with two access points; and (3) existing plus Phases 1 and 2 of the project with two access points. **Table 9-9** compares the "Existing" and each of the "Existing plus Project" conditions and provides the resulting Levels of Service at each study intersection. As shown, the addition of project traffic associated with Phase 1 of the proposed project would have a negligible effect on Levels of Service occurring during the Saturday peak hour at study intersections. Development of Phase 1 would result in conditions within adopted minimum standards at most of the study intersections in Roseville and Rocklin, but LOS D conditions are projected at the Sierra College Blvd/Rocklin Rd intersection. The addition of project traffic would result in the need for additional improvements beyond those that exist. Dual northbound left turn lanes would be needed to achieve LOS C or better conditions. This improvement is a condition of approval for the Sierra College Center project near the Rocklin Road/Sierra College Boulevard intersection. The Sierra College Boulevard/Nightwatch Drive intersection is forecast to operate at LOS C under Phase 1 conditions with or without the proposed second access onto Sierra College

Boulevard. This conclusion assumes that only one eastbound lane is provided through the intersection. The LOS would be LOS A (V/C = 0.52) if the second eastbound lane is provided as proposed by the project proponent.

The development of the full project under "Existing plus Phase 1+2" conditions would result in three instances where the minimum LOS C standard would not be met in Rocklin. Minimum Level of Service standards would continue to be satisfied at the study intersections in Roseville. First, at the Sierra College Boulevard/Rocklin Road intersection the addition of project traffic would result in LOS E if the current geometric configuration remained. However, as noted earlier, improvements are expected when the pending Sierra College Center project proceeds. These improvements include dual left turn lanes on northbound Sierra College Blvd, and with that improvement, the intersection would operate at LOS C. Second, the Sierra College Boulevard/Nightwatch Drive intersection is projected to operate at LOS D if there is only one northbound through lane on Sierra College Blvd. To achieve the minimum LOS C goal, it would be necessary to develop a second through lane on Sierra College Boulevard through this intersection. With this additional through lane the intersection would operate at LOS B (V/C = 0.61). Finally, the project's Sierra College Boulevard Access is projected to operate at LOS D if there is only one northbound lane available on Sierra College Blvd. Adding a second through lane would allow the access to operate at LOS B. As described previously, the project proponent proposes to construct this second through lane on Sierra College Blvd.

TABLE 9-9
EXISTING PLUS PROJECT SATURDAY PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Existing		Existing Plus Project					
				Phase 1				Phase 1+2	
				1 Access		2 Access		2 Access	
		LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity
Sierra College Blvd/ Rocklin Rd	Signal	B	0.62	**D**	0.84	**D**	0.84	**E**	0.96
	Mitigated[1]	A	0.51	A	0.68	B	0.68	C	0.77
Sierra College Blvd/ El Don Dr	Signal	A	0.42	A	0.58	A	0.58	B	0.66
Sierra College Blvd/ Southside Ranch Road	Signal	A	0.40	A	0.56	A	0.56	B	0.64
Sierra College Blvd/ Access	NB Stop	-	-	-	-	C	17.8 sec	**D**	26.3 sec
	Mitigated[2]							B	13.6 sec
Sierra College Blvd/ Nightwatch Drive	Signal	A	0.38	C	0.70	B	0.65	**D**	0.81
	Mitigated[2]							B	0.61
Sierra College Blvd/ Scarborough Dr	Signal	A	0.21	A	0.27	A	0.27	A	0.31
Sierra College Blvd/Secret Ravine Pkwy	Signal	B	12.5 sec	B	12.2 sec	B	12.2 sec	B	12.1 sec
Sierra College	Signal	B	12.6 sec	B	12.2 sec	B	12.2 sec	B	12.0 sec

Intersection	Control	Existing		Existing Plus Project					
				Phase 1				Phase 1+2	
				1 Access		2 Access		2 Access	
		LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity
Blvd/Olympus Drive									
Sierra College Blvd/Douglas Blvd	Signal	D	41.6 sec	D	48.2 sec	D	48.2 sec	D	53.5 sec

Notes:

1 – Install northbound dual left turn lanes

2 – Add second northbound through lane on Sierra College Blvd

Source: KD Anderson & Associates, 2007

As shown in **Table 9-9** and described above, implementation of the proposed project would result in unacceptable Levels of Service at three study area intersections. However, the project would also result in the addition of a second northbound through lane on Sierra College Blvd thereby mitigating its effects on the Sierra College Blvd/Access intersection and the Sierra College Blvd/Nightwatch Drive intersection. **Figure 3-9** illustrates the proposed preliminary lane configuration for Sierra College Blvd. The project would still result in an unacceptable Level of Service at the Sierra College Blvd/Rocklin Road intersection prior to mitigation; therefore, this impact is **potentially significant**.

Mitigation Measure 9-1 Intersection LOS Mitigation

MM 9-1a The proposed project shall contribute its fair share of the cost of widening the Sierra College Blvd/Rocklin Rd intersection to provide a second northbound left turn lane. This improvement is a condition of approval of a development project previously approved by the City of Rocklin. Therefore, City of Rocklin staff has indicated that payment of SPRTA fees will adequately mitigate the project's impact at this intersection. Should this improvement not be constructed as part of this previously approved project, the proposed project shall be limited to a capacity of 1,050 people in order to achieve a Level of Service C at this intersection.

MM 9-1b The proposed project shall comply with Placer County's Trip Reduction Program Level 1 requirements as specified in Section 10.20.060 of the County Code. These requirements include posting of transit schedules and bicycle routes to the project site in order to encourage employees and visitors to the site to utilize alternative modes of transportation thereby reducing vehicle trips.

Implementation of mitigation measure **MM 9-1a** would ensure an acceptable Level of Service at the Sierra College Blvd/Rocklin Road intersection. Implementation of **MM 9-1b** would help reduce vehicle trips associated with the proposed project by encouraging the use of alternative modes of transportation. With mitigation, this impact is **less than significant**.

IMPACT 9-2: Site Access and Safety

The proposed site plan and roadway improvements could result in traffic congestion at site access points potentially resulting in unsafe conditions. Site access and design safety were evaluated as part of the traffic impact analysis prepared for the proposed project (**Appendix 9**). Key issues

evaluated were sight distance at project access points, driveway throat depth, lane configurations at project access points, and certain specific design issues.

Sight Distance at Project Access

The available sight distance at the proposed project access was determined through a field review and compared to applicable Placer County and Caltrans standards. While current topography makes it impossible to field measure the sight distance that will be available at the site access, the sight distance looking west on Sierra College Blvd from the new site access appears to be clear through the Nightwatch Drive intersection (i.e., 450 feet to the west), and approaching vehicles should be visible to exiting motorists at a point 200 feet beyond the intersection. The available sight distance should exceed the Caltrans corner sight distance requirements (i.e., 600 feet at 55 mph). This impact is **less than significant**.

Driveway Throat Depth

The site plan proposes two connections to the Nightwatch Drive extension and one connection to Sierra College Blvd. In each case, the driveway throat needs to be long enough to store waiting vehicles without blocking the path of entering traffic. Review of the project site plan indicates that the throat on the new Sierra College Blvd access will be approximately 110 feet long. This dimension allows room for 4 to 5 exiting vehicles before entering traffic may be blocked. Review of the level of service calculations made for this location indicates that a 95th percentile queue of seven vehicles could occur under EPAP plus Phase 1+2 conditions, while a 95th percentile queue of three vehicles is forecast under 2025 plus Phase 1+2 conditions when Sierra College Blvd is widened to provide three northbound lanes. To accommodate the EPAP plus Phase 1+2 queue, it would be necessary to lengthen the throat. This impact is **potentially significant**.

Access Point Lane Configurations

The site plan offers the opportunity for entering traffic to turn left into the site from the Nightwatch Drive extension. It is possible that left turning traffic could occasionally be delayed by exiting northbound traffic. In addition, the Nightwatch Drive extension is planned with two lanes in each direction approaching Sierra College Blvd but is reduce to one lane in each direction further south. This could result in peak period congestion. Finally, prior to Sierra College Blvd being fully improved to a six lane road, separate right turn lanes along the project site's frontage would not be provided. This impact is **potentially significant**.

Design Issues

While the length of the project's frontage is appreciable (i.e., 800 feet), based on information contained in Figure 3B-12 of the California Manual of Uniform Traffic Control Devices (MUTCD), a distance of 1,075 feet is required to accommodate the required "lane end" arrows in the area of a lane drop and to transition back to a single lane. Thus, in order to carry two northbound lanes through the Nightwatch Drive intersection and safely transition to a single northbound lane, it will be necessary to widen a portion of Sierra College Blvd in the area immediately north of the project site.

A left turn lane into the project site will be needed on Sierra College Blvd approaching the Nightwatch Drive intersection. The lane will need to be long enough to accommodate the peak arrival characteristics of a church and should make some provision for deceleration.

The length of queues in the left turn lane is dependent on the schedule of church activities. Based on the previous analysis, the longest queues would be expected under "EPAP plus Phase 1+2" conditions. Assuming that the traffic arriving at the church was concentrated into a twenty minute period, the queue could be expected to contain 20 vehicles and could be 500 feet long. Alternatively, under Year 2025 conditions when Sierra College Blvd has been widened to six lanes, the peak period queue would be reduced to 16 vehicles and would be 400 feet long. This impact is **potentially significant**.

Mitigation Measure 9-2 Site Access and Safety Mitigation Measures

MM 9-2a Although adequate site distance is anticipated to be provided at the project site access points given the proposed site plan, the final grading and landscaping plans shall be reviewed by the County Engineering and Surveying Department to ensure that all applicable driver sight distance standards are attained at each site access point prior to issuance of building permits.

MM 9-2b The site layout shall be modified to eliminate the initial access points to vehicles entering the site at the Sierra College Blvd Access in order to provide sufficient driveway throat depth to accommodate vehicle storage under EPAP plus Phase 1+2 conditions. The site layout modifications shall be reviewed and approved by the County Engineering and Surveying Department prior to issuance of building permits.

MM 9-2c The following access point lane configuration modifications shall be applied to the site layout for the proposed project prior to issuance of building permits:

- A formal left turn lane is not required for vehicles entering the site via the more northerly access intersection on the Nightwatch Drive extension. However, to avoid congestion at this location, the Nightwatch Drive extension shall be constructed wide enough to provide the opportunity for southbound through traffic to continue past any left turning vehicles waiting at this intersection.

- To avoid peak period congestion, the Nightwatch Drive extension shall be constructed with two lanes in each direction from Sierra College Blvd south to the northern site access point.

- The area along the project's frontage shall be striped to provide separated right turn lanes into the site in accordance with County and Caltrans standards. These turn lanes shall be placed at locations that will perpetuate separate right turn lanes when the road is striped for three northbound through lanes.

MM 9-2d A left turn lane into the project site shall be provided on Sierra College Blvd approaching the Nightwatch Drive intersection. Caltrans Highway Design Manual (HDM) standards for left turn lanes suggest providing 275 feet of deceleration length prior to a stop at 35 mph, 375 feet to stop at 45 mph and 485 feet to come to a stop from 55 mph, although these design guidelines recognize that lesser distance is needed on sustained uphill grades. Under Caltrans standards these requirements are satisfied by a combination of left turn lane and its bay taper. Because the need for a long left turn lane would exist infrequently,

a compromise between storage and deceleration shall be provided. As such, a 400 foot queue shall be accommodated along with deceleration to a stop from 35 mph. This would imply a turn lane and bay taper that together are 675 feet long.

However, implementation of mitigation measures **MM 9.2a** through **9.2d** would ensure that adequate and safe site access would be provided and the impact would be **less than significant**.

IMPACT 4.9.3: Provide Adequate Off-Site Parking

The proposed project includes the provision of adequate parking to meet local standards. According to Section 17.54.060 of the Placer County Code, houses of worship are required to provide at a minimum one parking space per four fixed seats and one parking space per office or classroom. Also, according to Section 17.54.050 of the County Code, two percent of all off-site parking provided is required to meet the standards for disabled accessible parking.

The project currently proposes to provide 624 off-site parking spaces with Phase I of the project and would provide an additional 272 parking spaces with Phase II. The proposed parking appears to be adequate and meet County standards. This impact is **less than significant**.

IMPACT 9-4: Alternative Transportation

Implementation of the proposed project would increase demand for public transit and pedestrian and bicycle facilities. In addition, the proposed project would need to accommodate the use of such alternative modes of transportation on the project site. This impact is **potentially significant**.

Placer County Transit provides public transit services in the project area; however, there are no local service stops in close proximity to the project site. Placer County Transit would have the capacity to serve additional customers generated by the proposed project but customers would be dropped near the Sierra College Blvd/Rocklin intersection nearly one mile from the project site. It is unknown if the transit department would be interested in extended its existing route south from Rocklin Road along Sierra College Blvd near the site. If so, additional service stop facilities may be required within the right of way of the project site. The County's dial-a-ride service would be available to elderly and disabled persons seeking public transportation to the site.

According to County Code Section 17.54.050, the project would be required to provide a bicycle rack for every 20 parking stalls provided on site. Phase 1 of the project would provide 624 parking spaces and would therefore require about 32 bicycle racks on site. Phase 2 of the project would provide an additional 272 parking stall and would therefore require the addition of 14 bicycle racks for a total of 46 bicycle racks. The provision of 46 bicycle racks would be more than adequate to serve bicyclists visiting the project site.

The project proposes to constructed frontage improvements along Sierra College Blvd in accordance with County standards. These improvements would include curb, gutter, sidewalks and landscaping. On the project site, adequate pedestrian walkways would be provided.

Mitigation Measure 9-4 Alternative Transportation Mitigation Measures MM 9-4a

The project proponent shall consult with Placer County Transit and shall dedicate right-of-way on the project site for the construction of a bus stop and turn out, if deemed necessary, to the satisfaction of Placer County Transit.

MM 9-4b The proposed site layout shall be modified to include the location of a minimum of 32 bicycle racks with construction of Phase I of the project and an additional 14 bicycle racks with construction of Phase II. The bicycle racks shall meet all applicable County standards. The site layout modifications shall be reviewed and approved by the County Department of Engineering and Surveying prior to issuance of building permits.

Furthermore, implementation of mitigation measures **MM 9.4a** and **9.4b** require the project to dedicate right-of-way on the project site for the construction of a bus stop and turn out if necessary and to provide adequate bicycle racks. These measures would reduce this impact to a level that is **less than significant**.

IMPACT 9.5: Construction Impacts

Implementation of the proposed project would require short-term construction activities at the project site and at multiple points along Sierra College Blvd where roadway improvements are proposed. These activities have the potential to temporarily affect traffic in the study area. During construction of the proposed project and associated roadway improvements, there would be a temporary increase in construction-related traffic from equipment and construction workers traveling to and from the project site. The increases in traffic would be temporary and would be spread out over periods of several months for each project phase. Because intersections along Sierra College Blvd in the study area currently operate within applicable LOS standards adopted by the Cities of Rocklin and Roseville, this increase in traffic would constitute a very small increase in traffic and would not be substantial in relation to existing traffic load and capacity of Sierra College Blvd. In addition, this increase in traffic would be only temporary and would ultimately result in improved traffic conditions in the study area. Therefore, this impact is **less than significant**.

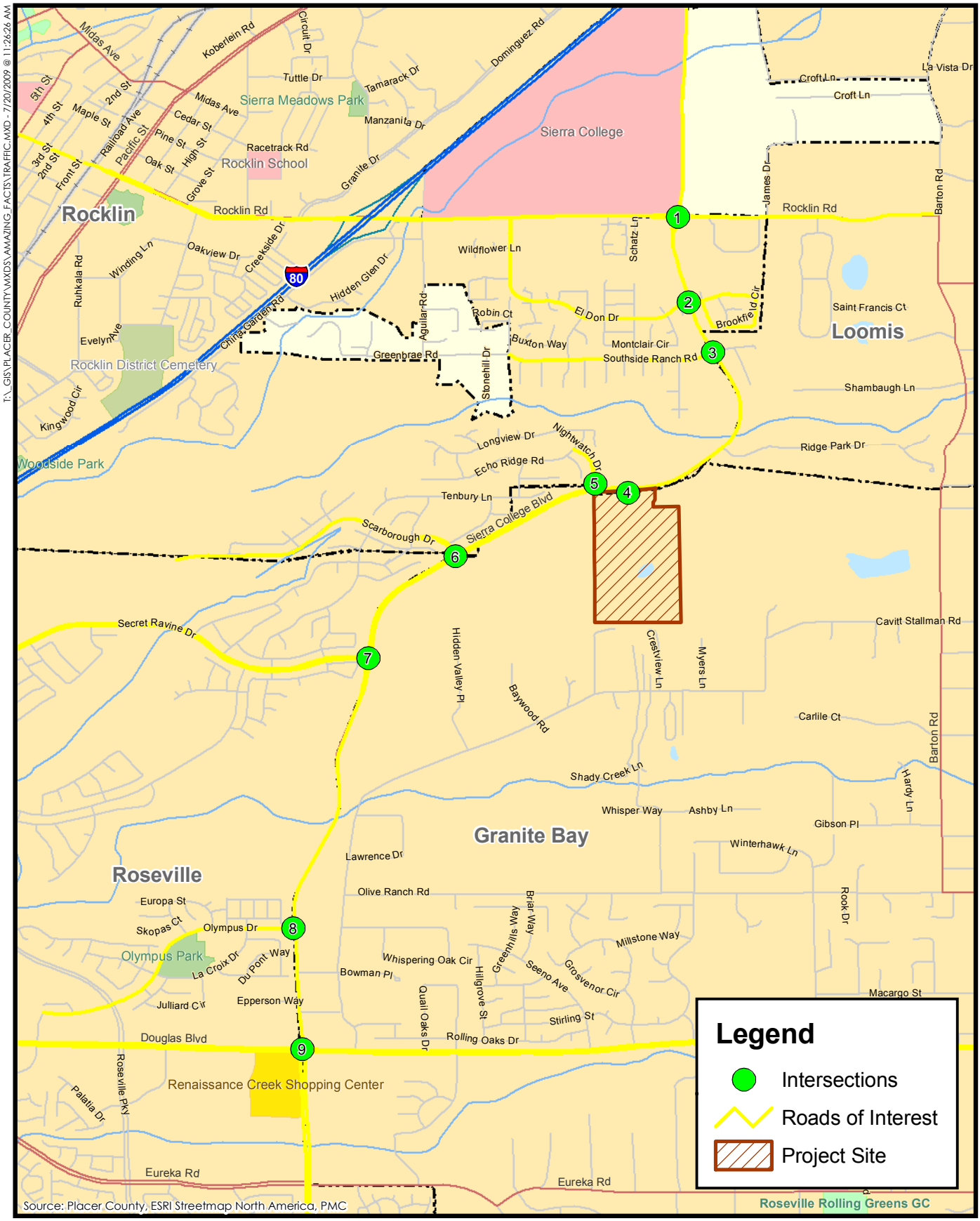

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Figure 9-1
Study Area Circulation System

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10.0
AIR QUALITY

10.0 AIR QUALITY

This section of the Draft EIR ("Draft EIR"; "DEIR") describes relevant characteristics of the air basin that affect pollutant dispersion in the project region and discusses types of air pollutants, health effects, and existing air quality levels. This section also examines air quality in the Granite Bay Community Plan area and its environs, includes a summary of applicable air quality regulations, and analyzes potential impacts associated with the proposed project. Mitigation measures are recommended, as necessary, to reduce significant air quality impacts.

10.1 EXISTING SETTING

10.1.1 Air Basin Characteristics

The California Air Resources Board (CARB) divides the state into air basins that share similar meteorological and topographical features. The project site is located within the Placer County Air Pollution Control District (PCAPCD) which is part of the eleven-county Sacramento Valley Air Basin (SVAB) The SVAB includes all of Sacramento, Yolo, Yuba, Sutter, Colusa, Butte, Glenn, Tehama, and Shasta counties and eastern Solano and western Placer counties. Central Placer County is located in the Mountain Counties Air Basin while eastern Placer County is located the Lake Tahoe Air Basin.

The area's modified Mediterranean climate is characterized by hot, dry summers and mild, rainy winters. During the year, the temperature may range from 20 to 115 degrees Fahrenheit, with summer highs usually in the 90s and winter lows occasionally below freezing (32°F). Prevailing winds are moderate in strength and vary from dry land flows from the north to moist ocean breezes from the south. The mountains surrounding the Sacramento Valley create a barrier to airflow which, under the right meteorological conditions, can trap pollutants in the valley (Raney Planning & Management, 2006, pg. 4.8-1).

10.1.2 Air Pollutants of Concern and Health Effects

Ambient air quality in the Placer County is similar to that of the larger Sacramento Valley Air Basin. Because of the unique geography and meteorology, Placer County has air pollution issues for several pollutants that the federal government regulates. In particular, there are six pollutants with health-based standards that identify pollutant levels of air quality for that are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. These six "criteria pollutants" include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 10 microns in size and smaller (PM_{10}), and lead.

Ozone

Ground level ozone, commonly referred to as smog, is greatest on warm, windless, sunny days. Ozone is not emitted directly into the air from point sources (e.g., mobile or stationary); rather, they are formed through a complex series of chemical reactions between reactive organic gases (ROG) and nitrogen oxides (NO_x). These reactions occur over time in the presence of sunlight.

Ozone is a public health concern because it is a respiratory irritant that increases susceptibility to respiratory infections and diseases, and because it can harm lung tissue at high concentrations. In addition, ozone can cause substantial damage to leaf tissues of crops and natural vegetation, and can damage many natural and manmade materials by acting as a chemical oxidizing agent.

The principal sources of the ozone precursors (ROG and NO_x) are the combustion of fuels and the evaporation of solvents, paints, and fuels.

Particulate Matter (PM)

Airborne particulate matter (PM) consists of many different substances suspended in air in the form of particles (solids or liquid droplets) that vary widely in size. The particle mix in most U.S. cities is dominated by fine particles (less than 2.5 micrometers in diameter) generated by combustion sources, with smaller amounts of coarse dust (between 2.5 and 10 micrometers in diameter). Particles less than 10 micrometers in diameter include both fine and coarse dust particles. These particles pose the greatest health concern because they can pass through the nose and throat and get into the lungs. Research has demonstrated a correlation between high PM concentrations and increased mortality rates. Elevated PM concentrations can also aggravate chronic respiratory illnesses such as bronchitis and asthma.

Particles larger than 10 micrometers in diameter that are suspended in the air are referred to as total suspended particulates (TSP). These larger particles can cause irritation to the eyes, nose and throat in some people, but they are not likely to cause more serious problems since they do not get down into the lungs.

Carbon Monoxide (CO)

Carbon monoxide (CO) is an odorless, colorless gas that is formed by the incomplete combustion of fuels. Motor vehicle emissions are the dominant source of CO in the Ione area. At high concentrations, CO reduces the oxygen-carrying capacity of the blood and can cause dizziness, headaches, unconsciousness, and even death. CO can also aggravate cardiovascular disease. Relatively low concentrations of CO can significantly affect the amount of oxygen in the bloodstream because CO binds to hemoglobin 220–245 times more strongly than oxygen.

CO emissions and ambient concentrations have decreased significantly in recent years. These improvements are due largely to the introduction of cleaner burning motor vehicles and motor vehicle fuels.

Nitrogen Oxides

Nitrogen oxides (NO_x) refer to a family of nitrogen-based compounds, including nitric oxide, nitrogen dioxide (NO_2), and other oxides of nitrogen. NO oxides are produced from burning fuels, including gasoline, diesel, and coal. Nitrogen oxides react with volatile organic compounds to form ozone. Nitrogen oxides are also major components of acid rain.

Sulfur Oxides

Sulfur oxides (SO_x) are composed mainly of sulfur dioxide (SO_2) and sulfates. Sulfur oxides are pungent, colorless gases (sulfates are solids) formed primarily by combustion of sulfur-containing fossil fuels, especially coal and oil. Some industrial processes, such as production of paper and smelting of metals, produce sulfur dioxide. Sulfur dioxide is closely related to sulfuric acid and plays an important role in the production of acid rain.

In addition to the criteria pollutants discussed above, there are other pollutants for which there are no explicit criteria that are often air pollution issues of concern for communities. These include

toxic air contaminants, odors, and wood smoke, which can produce localized health risks or nuisances for sensitive nearby land uses, also known as “sensitive receptors.”

Sensitive receptors include facilities that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. The proximity of sensitive receptors to existing or potential sources of localized air pollution can result in land use conflicts that expose people to unhealthful air quality.

Lead (Pb)

Lead is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used until the mid 1970’s to increase the octane rating in auto fuel. Since gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels and the use of leaded fuel has been mostly phased out, the ambient concentrations of lead have dropped dramatically.

Toxic Air Contaminants (TACs)

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. Unlike criteria pollutants, no safe levels of exposure to TACs have been established. Instead, TAC impacts are evaluated by calculating the health risks associated with a given exposure. Two types of risk are usually assessed: chronic non-cancer risk and acute non-cancer risk. There are many different types of TACs, with varying degrees of toxicity.

Sources of TACs include industrial processes such as petroleum refining and chrome plating operations, commercial operations, such as gasoline stations and dry cleaners, and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as accidental releases of hazardous materials during upset conditions. The health effects of TACs include cancer, birth defects, neurological damage and death.

It is important to understand that TACs are not considered criteria air pollutants and thus are not specifically addressed through the setting of ambient air quality standards. Instead, EPA and ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology (MACT and BACT) to limit emissions.

Based on data from the Air Toxics "Hot Spots" Information and Assessment Act, there are five stationary sources within five miles of the proposed project site that have the potential to emit TACs, as illustrated in **Table 10-1**.

TABLE 10-1
FACILITY EMISSIONS AND TOXIC PLUS RISK DATA

Facility ID	Facility Name	ROG (tons/year)	CO (tons/year)	NOx (tons/year)	SOx (tons/year)	Total PM (tons/year)	PM_{10} (tons/year)	Approx. Distance from Project (miles)
64	Capital Drum Inc.	34.3	0.3	1.9	0.2	5.6	5.6	3.2
43	Lausmann Lumber & Moulding Co.	0	0	0.1	0	4.6	1.8	4.8
70	Pacific Mdf Products Inc.	14.6	0.2	1.1	0	2.8	1.2	2.1
34	SFPP, LP.	5	0	0	0	0	0	2.1
28	Sierrapine, Ltd.	8.3	49.5	118.2	0.9	19.4	12.3	2.0

Source: Air Resources Board, 2009.
http://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php?dd=y

Diesel exhaust is a TAC of growing concern in California. In 1998, ARB identified diesel engine particulate matter as a TAC. The exhaust from diesel engines contains hundreds of different gaseous and particulate components, many of which are toxic, but are not considered to have acute non-cancer risks.

Mobile sources, such as trucks, buses, automobiles, trains, ships and farm equipment are by far the largest source of diesel emissions. Studies show that diesel particulate matter concentrations are much higher near heavily traveled highways and intersections. Land uses where individuals could be exposed to high levels of diesel exhaust include:

- Warehouses
- Schools with high volume of bus traffic
- High volume highways
- High volume arterials and local roadways with high level of diesel traffic.

The state has begun a program of identifying and reducing risks associated with particulate matter emissions from diesel-fueled vehicles. In September 2000, the Air Resources Board approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled engines and vehicles. The goal of the Plan is to reduce diesel PM emissions and the associated health risk by 75 percent in 2010 and 85 percent by 2020. The Plan consists of new regulatory standards for all new on road, off-road and stationary diesel-fueled engines and vehicles, new retrofit requirements for existing on-road, off-road and stationary diesel-fueled engines and vehicles, and new diesel fuel regulations to reduce the sulfur content of diesel fuel as required by advanced diesel emission control systems.

Odors

Odors are typically regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation,

anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another. It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Pesticides

Most pesticides are designed to harm or kill pests, and because some pests have systems similar to the human system, some pesticides also can harm or kill humans (EPA, 2009). The hazards associated with pesticides depend on the toxicity of the pesticide and the exposure a human will receive in any situation.

The effects, or symptoms, of pesticide poisoning can be defined as either topical or systemic. Topical effects generally develop at the site of pesticide contact and are a result of either the pesticide's irritant properties or an allergic response by the victim. Dermatitis, or inflammation of the skin, is the most commonly reported topical effect associated with pesticide exposure. Symptoms of dermatitis range from reddening of the skin to rashes and/or blisters. Other symptoms include coughing, wheezing and sneezing when exposed to pesticide sprays (Penn State, 2007).

Systemic effects often occur away from the original point of contact as a result of the pesticide being absorbed into and distributed throughout the body. Systemic effects often include nausea, vomiting, fatigue, headache, and intestinal disorders. In advanced poisoning cases, the individual may experience changes in heart rate, difficulty breathing, convulsions, and coma, which could lead to death (Penn State, 2007).

Common locations for pesticide use are agricultural land uses, where they are often used to prevent insect damage to crops. Because of this, the proximity of sensitive receptors to agricultural land uses could expose people to the hazards listed above.

Wood Smoke

Wood smoke has long been identified as a significant source of pollutants in urban and suburban areas. Wood smoke contributes to particulate matter and carbon monoxide concentrations, reduces visibility and contains numerous toxic air contaminants. Present controls on this source include the adoption of emission standards for wood stoves and fireplace inserts. Interest in wood smoke is likely to increase with the recent adoption of a $PM_{2.5}$ (particulate matter less than 2.5 microns in diameter) national standard.

Sensitive Receptors

Sensitive receptors are facilities where sensitive receptor population groups (children, the elderly, the acutely ill, and the chronically ill) are likely to be located. These land uses include schools, retirement homes, convalescent homes, hospitals, medical clinics, and churches. The major existing sensitive receptors in the project area are the residences surrounding the site, as well as Sierra College, 0.9 miles north of the proposed project.

10.1.3 AMBIENT AIR QUALITY STANDARDS

Both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) have established ambient air quality standards for common pollutants. The national ambient air quality standards ("NAAQS", or "federal standards") and California ambient air quality standards ("CAAQS", or "state standards") for important pollutants are summarized in **Table 10-2**. These ambient air quality standards are levels of contaminants that represent levels that protect public health and welfare, and avoid specific adverse health effects associated with each pollutant. The ambient air quality standards cover what are called "criteria" pollutants because the health and other effects of each pollutant are described in criteria documents. EPA and ARB have focused on the following air pollutants as indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM), and lead. The federal and state ambient standards were developed independently with differing purposes and methods, although both processes attempted to avoid health related effects. As a result, the federal and state standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone and PM_{10}.

The federal standard for ozone ground-level ozone is 0.075 ppm, measured over an 8-hour averaging period. This standard replaces the previous 1-hour ozone standard that U.S. EPA had enforced for decades. National standards for fine particulate matter (diameter 2.5 microns or less) have also been established for 24-hour and annual averaging periods. The current PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised. Implementation of the new ozone and particulate matter standards was delayed by a lawsuit. On February 27, 2001 the U.S. Supreme Court unanimously ruled in favor of the U.S. EPA, clearing the way for implementation of the new standards.

TABLE 10-2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [a, c]	National Standards [b, c]	
			Primary [d]	Secondary [e]
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	- -	Same as Primary
	8-hour	0.070 ppm (137 µg/m^3)	0.075 ppm[g]	
Particulate Matter (PM_{10})	AAM	20 µg/m^3	(Revoked)[f]	
	24-hour	50 µg/m^3	150 µg/m^3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m^3	15 µg/m^3	
	24-hour	No Separate Standard	35 µg/m^3 [f]	
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	None
	8-hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	
	8-hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	
Nitrogen Dioxide (NO_2)	AAM	–	0.053 ppm (100 µg/m^3)	Same as Primary
	1-hour	0.25 ppm (470 µg/m^3)	–	
Sulfur Dioxide (SO_2)	AAM	–	0.03 ppm (80 µg/m^3)	–
	24-hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	–
	3-hour	–	–	0.5 ppm (1,300 µg/m^3)
	1-hour	0.25 ppm (655 µg/m^3)	–	–
Lead	Rolling 3-Month Average	–	0.15 µg/m^3	Same as Primary
	30-day Average	1.5 µg/m^3	–	–
	Quarterly Average	–	1.5 µg/m^3	Same as Primary
Sulfates	24-hour	25 µg/m^3	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)		
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient of 0.23 per kilometer —visibility of 10 miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.		

a *California standards for O3, CO (except Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, PM (PM_{10} and $PM_{2.5}$), and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.*

b *National standards (other than O3, PM, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The O3 standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m3 is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of daily concentrations, average over three years, are equal to or less than the standard.*

c *Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25EC and a reference pressure of 760 torr.*
d *The levels of air quality necessary to protect the public health.*
e *The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.*
f *Based on revised particulate standards adopted by the US EPA on September 21, 2006. Due to lack of evidence linking health problems to long-term exposure to coarse particulate pollution, the US EPA has revoked the annual PM_{10}.*
g *The federal primary ozone standard, as averaged over an 8-hour period, was revised in 2008 to 0.075 ppm.*
AAM = Annual Arithmetic Mean
Source: ARB 2008; US EPA 2008

10.4.1 AMBIENT AIR QUALITY

The ARB maintains several air quality monitoring sites in and around Ione. The three years of data provided in Table 10-3 show the number of days standards were exceeded for each year, as well as the concentration of pollutants in the given area. The nearest air quality monitoring site in relation to the project for Ozone, Nitrogen Dioxide, Inhalable Particulates (PM10), and Ultra-Fine Particulates (PM2.5) is the Roseville Sunrise monitoring station approximately 6 miles southwest of the project site. The North Highlands Blackfoot Way monitoring station is the nearest for Carbon Monoxide, and Sulfur Dioxide, which is approximately 13 miles southwest of the project site.

TABLE 10-3
AIR MONITORING STATION ANNUAL SUMMARY

Pollutant/Standard	*2006*	*2007*	*2008*
O_3 (8-hour) [1]			
Maximum Concentration (ppm)	0.098	0.101	0.107
Days > CAAQS (0.070 ppm)	38	20	38
Days > NAAQS (0.08 ppm)	25	8	22
O_3 (1-hour) [1]			
Maximum Concentration (ppm)	0.121	0.109	0.134
Days > CAAQS (0.070 ppm)	16	4	20
Days > NAAQS (0.08 ppm)	0	0	2
$PM_{2.5}$ (24-hour) [1]			
Maximum Concentration (µg/m^3)	54.7	48.7	149.7
Days > NAAQS (65 µg/m^3)	11.5	0	6.5
PM_{10} (24-hour) [1]			
Maximum Concentration (µg/m^3)	55	45	74.2
Days > CAAQS (50 µµg/m^3)	5.8	0	6.1
Days > NAAQS (150 µg/m^3)	0	0	0
CO (8-hour) [2]			
Maximum Concentration (ppm)	2.70	1.73	1.90
Days > CAAQS (9.0 ppm)	0	0	0
Days > NAAQS (9.0 ppm)	0	0	0
SO_2 (24-hour) [2]			

Maximum Concentration (ppm)	0.003	0.004	0.002
Days > CAAQS (0.04 ppm)	N/A	N/A	N/A
Days > NAAQS (0.14 ppm)	N/A	N/A	N/A
NO_2 (1-hour) [1]			
Maximum Concentration (ppm)	0.063	0.058	0.067
Days > CAAQS (0.25 ppm)	0	0	0

Source: California Air Resources Board website, http://www.arb.ca.gov/adam/cgi-bin/db2www/adamtop4b.d2w/Branch. Accessed May 22, 2009.

[1] Data provided by the Roseville Sunrise air monitoring station.

[2] Data provided by the North Highlands-Blackfoot Way air monitoring station.

As shown in **Table 10-3**, the following criteria pollutants have exceeded state or federal standards between the years 2006-2008: PM_{10}, $PM_{2.5}$, and O_3.

A geographical area identified to have air quality as good as, or better than, the national or California ambient air quality standard is referred to as being in attainment of these standards. An area may be an attainment area for one pollutant and a nonattainment area for others.

Based on these monitoring data, **Table 10-4** shows the Federal and State attainment status for the Sacramento Valley Air Basin. The region is non-attainment for federal ozone and $PM_{2.5}$ standards.

TABLE 10-4
FEDERAL AND STATE ATTAINMENT STATUS FOR PLACER COUNTY

Pollutants	*Federal Classification*	*State Classification*
Ozone	Nonattainment	Nonattainment
$PM_{2.5}$	Unclassified	Unclassified
PM_{10}	Unclassified	Nonattainment
CO	Unclassified/Attainment	Unclassified
NO_2	Unclassified/Attainment	Attainment
SO_2	Unclassified	Attainment

Source: California Air Resources Board, http://www.arb.ca.gov/desig/adm/adm.htm, accessed April 21, 2009.
CO = carbon monoxide; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; $PM_{2.5}$ = particulate matter less than 2.5 micrograms in diameter PM_{10} = particulate matter less than 10 micrograms in diameter.

10.2 REGULATORY FRAMEWORK

Air quality in the Sacramento Valley Air Basin is regulated through the efforts of federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies primarily responsible for improving the air quality in Ione are discussed below, along with their individual responsibilities.

10.2.1 FEDERAL

United States Environmental Protection Agency

The U.S. Environmental Protection Agency is responsible for enforcing the 1990 amendments to the Federal Clean Air Act (CAA) and the national ambient air quality standards (federal standards) that it establishes. These standards identify levels of air quality for six criteria pollutants, which are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants are ozone, CO, nitrogen dioxide (NO_2 – a form of NO_X), sulfur dioxide (SO_2 – a form of SO_X), particulate matter 10 microns in size and smaller (PM_{10}), and lead.

The CAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA has responsibility to review all SIPs to determine conformation to the mandates of the CAA, and the amendments thereof, and determine if implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Western Placer County is included in the Greater Sacramento ozone nonattainment area as delineated by the U.S. Environmental Protection Agency. The CAAA set deadlines for attaining the ozone standard. In 1994, the California Air Resources Board, in cooperation with the air districts of the Sacramento nonattainment area, which includes the Placer County Air Pollution Control District, prepared the 1994 Sacramento Area Regional Ozone Attainment Plan. The plan identified a detailed comprehensive strategy for reducing emissions to the level needed for attainment and showed how the region would make expeditious progress toward meeting this goal.

On April 15, 2004, EPA designated the Sacramento region as a “serious” nonattainment area for the federal 8-hour ozone standard. The 8-hour ozone standard, 0.075 parts per million, averaged over eight hours, replaces the 1-hour standard that has been in place since 1979. The region had been given an attainment date of June 2013.

However, since the Sacramento region needs to rely on the longer-term emission reduction strategies from state and federal mobile source control programs, the 2013 attainment date cannot be met. Consequently, on February 14, 2008, CARB, on behalf of the air districts in the Sacramento region, submitted a letter to EPA requesting a voluntary reclassification (bump-up) of the Sacramento Federal Nonattainment Area from a “serious” to a “severe” 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019. The air districts of the Sacramento nonattainment area have since prepared the 2009 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan to help meet this deadline.

Federal Hazardous Air Pollutant Program

Title III of the CAA requires EPA to promulgate national emissions standards for HAPs (NESHAP). The NESHAP may differ for major sources than for area sources of HAPs (major sources are defined as stationary sources with potential to emit more than 10 tons per year [TPY] of any HAP or more than 25 TPY of any combination of HAPs; all other sources are considered area sources). The emissions standards are to be promulgated in two phases. In the first phase (1992–2000), EPA developed technology-based emission standards designed to produce the maximum emission reduction achievable. These standards are generally referred to as requiring MACT. For area sources, the standards may be different, based on generally available control technology. In the second phase (2001–2008), EPA was required to promulgate health risk–based emissions standards where deemed necessary to address risks remaining after implementation of the technology based NESHAP standards.

The CAAA required EPA to promulgate vehicle or fuel standards containing reasonable requirements that control toxic emissions, at a minimum to benzene and formaldehyde. Performance criteria were established to limit mobile-source emissions of toxics, including benzene, formaldehyde, and 1, 3-butadiene. In addition, Section 219 required the use of reformulated gasoline in selected U.S. cities (those with the most severe ozone nonattainment conditions) to further reduce mobile-source emissions.

10.2.2 STATE

CO Protocol

The *Transportation Project-Level Carbon Monoxide Protocol (CO Protocol)* (University of California Davis, December 1997) deals with project-level air quality analysis needed for federal conformity determinations, NEPA, and CEQA. In 1997, EPA approved the CO Protocol for use as an alternative hot spot analysis method in California. The CO Protocol provides a screening procedure for determining when a project may be of concern for CO violations, and a standardized method of using the CALINE4 dispersion model for detailed analysis if necessary. The CO Protocol is the standard method for project-level CO analysis by Caltrans, replacing the *Air Quality Technical Analysis Notes* (CalTrans, 2009).

California Air Resources Board

The California Air Resources Board, a department of the California Environmental Protection Agency (Cal EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the State. ARB has established emission standards for vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the State (state standards) and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same six criteria pollutants as the Federal CAA, and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are more stringent than the federal standards and, in the case of PM_{10} and SO_2, far more stringent.

Tanner Air Toxics Act

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB can designate a substance as a TAC. To date, ARB has identified more than 21 TACs and has adopted EPA's list of HAPs as TACs. Most recently, diesel PM was added to the ARB list of TACs.

Once a TAC is identified, ARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate BACT to minimize emissions.

The AB 2588 requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures. ARB has adopted diesel exhaust control measures and more stringent emission standards for various on-road mobile sources of emissions, including transit buses and off-road diesel equipment (e.g., tractors, generators). In February 2000, ARB adopted a new public-transit bus-fleet rule and emission standards for new urban buses. These rules and standards provide for (1) more stringent emission standards for some new urban bus engines, beginning with 2002 model year engines; (2) zero-emission bus demonstration and purchase requirements applicable to transit agencies; and (3) reporting requirements under which transit agencies must demonstrate compliance with the urban transit bus fleet rule. Current and upcoming milestones include the low-sulfur diesel-fuel requirement, and tighter emission standards for heavy-duty diesel trucks and off-road diesel equipment (2011) nationwide.

Air Quality and Land Use Handbook

As part of its Community Health Program, ARB has developed an Air Quality and Land Use Handbook, which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. ARB is also developing related information and technical evaluation tools for addressing cumulative air pollution impacts in a community. Any recommendations or considerations contained in the Handbook are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts.

The primary goal in developing this document was to provide information that will help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution. Recent air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California.

ARB community health risk assessments and regulatory programs have produced important air quality information about certain types of facilities that should be considered when siting new residences, schools, day care centers, playgrounds, and medical facilities (i.e., sensitive land uses). Sensitive land uses deserve special attention because children, pregnant women, the elderly, and those with existing health problems are especially vulnerable to the non-cancer

effects of air pollution. There is also substantial evidence that children are more sensitive to cancer-causing chemicals.

The Handbook identifies ARB's recommendations regarding the siting of new sensitive land uses near freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities. This list consists of the air pollution sources that have been evaluated from the standpoint of the proximity issue. It is based on available information and reflects ARB's primary areas of jurisdiction – mobile sources and toxic air contaminants.

10.2.3 Local

Placer County Air Pollution Control District

At the county level, air quality is managed through land use and development planning practices which are implemented by Placer County and through permitted source controls which are implemented by the Placer County Air Pollution Control District. PCAPCD is also the agency responsible for enforcing many federal and state air quality requirements and for establishing air quality rules and regulations. PCAPCD attains and maintains air quality conditions in Placer County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of PCAPCD includes the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, and issuance of permits for stationary sources of air pollution. PCAPCD also inspects stationary sources of air pollution and responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the federal Clean Air Act, Clean Air Act Amendments of 1990, and the California Clean Air Act.

Air Quality Plans

The CCAA requires nonattainment areas to develop plans aimed at achieving state ambient standards. PCAPCD, in coordination with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties, prepared and submitted the 1991 Air Quality Attainment Plan (AQAP) in compliance with the requirements set forth in the CCAA, which specifically addressed the nonattainment status for ozone and to a lesser extent PM_{10}. The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plan must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections. The requirement of the CCAA for a first triennial progress report and revision of the 1991 AQAP was fulfilled with the preparation and adoption of the 1994 Ozone Attainment Plan. Additional triennial reports were also prepared in 1997, 2000, and 2003 in compliance with the CCAA that act as incremental updates.

The AQAP has since become part of the SIP described above within the federal regulatory framework discussion, in accordance with the requirements of the CAAA. As discussed above, federal clean air laws require areas with unhealthy levels of ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, and inhalable particulate matter to develop plans describing how they will attain national ambient air quality standards. SIPs are not single documents but rather a compilation of new and previously submitted plans, programs (such as monitoring, modeling, permitting, etc.), district rules, state regulations, and federal controls.

The most updated SIP affecting Placer County, which includes the Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan as well as the 1991 Air Quality Attainment Plan and subsequent progress reports, contains the information and analyses to fulfill the federal Clean Air Act requirements for demonstrating reasonable further progress and attainment of the 1997 8-hour ozone NAAQS for the Sacramento region. In addition, this plan establishes an updated emissions inventory, provides photochemical modeling results, proposes the implementation of reasonably available control measures, and sets new motor vehicle emission budgets for transportation conformity purposes.

All projects are subject to rules and regulations adopted by PCAPCD in effect at the time of construction. Specific rules applicable to future construction resulting from the implementation of the proposed General Plan Update may include, but are not limited to:

- ***Rule 202–Visible Emissions.*** A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.

- **Rule 207–Particulate Matter**. For the Sacramento Valley Air Basin and the Mountain Counties Air Basin portions of the Placer County Air Pollution Control District a person shall not release or discharge into the atmosphere from any source or single processing unit, exclusive of sources emitting combustion contaminants only, particulate matter emissions in excess of: 0.1 grains per cubic foot of gas at District standard conditions.

- ***Rule 205–Nuisances.*** A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause to have a natural tendency to cause injury or damage to business or property.

- ***Rule 217–Cutback and Emulsified Asphalt Paving Materials.*** A person shall not manufacture for sale nor use for paving, road construction, or road maintenance any rapid cure cutback asphalt; slow cure cutback asphalt containing organic compounds which evaporate at 500°F or lower as determined by current American Society for Testing and Materials (ASTM) Method D402; medium cure cutback asphalt except as provided in Section 1.2.; or emulsified asphalt containing organic compounds which evaporate at 500°F or lower as determined by current ASTM Method D244, in excess of 3 percent by volume.

- ***Rule 218–Application of Architectural Coatings.*** No person shall manufacture, blend, or repackage for sale within PCAPCD; supply, sell, or offer for sale within PCAPCD; or solicit for application or apply within the PCAPCD, any architectural coating with a volatile organic carbon (VOC) content in excess of the corresponding specified manufacturer's maximum recommendation.

- ***Rule 228–Fugitive Dust***

  - *Visible Emissions Not Allowed Beyond the Boundary Line*: A person shall not cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area (including disturbance as a result of the raising and/or keeping of animals or by vehicle use), such that the presence of such dust remains visible in the atmosphere beyond the boundary line of the emission source.

- *Visible Emissions from Active Operations:* In addition to the requirements of Rule 202, Visible Emissions, a person shall not cause or allow fugitive dust generated by active operations, an open storage pile, or a disturbed surface area, such that the fugitive dust is of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke as dark or darker in shade as that designated as number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines.

- *Concentration Limit:* A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter (µg/m3) (24-hour average) when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other EPA approved equivalent method for PM_{10} monitoring.

- *Track-Out onto Paved Public Roadways:* Visible roadway dust as a result of active operations, spillage from transport trucks, and the track-out of bulk material onto public paved roadways shall be minimized and removed.

  - The track-out of bulk material onto public paved roadways as a result of operations, or erosion, shall be minimized by the use of track-out and erosion control, minimization, and preventative measures, and removed within one hour from adjacent streets such material anytime track-out extends for a cumulative distance of greater than 50 feet onto any paved public road during active operations.

  - All visible roadway dust tracked out upon public paved roadways as a result of active operations shall be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. Wet sweeping or a High Efficiency Particulate Air (HEPA) filter-equipped vacuum device shall be used for roadway dust removal.

  - Any material tracked out, or carried by erosion, and cleanup water shall be prevented from entering waterways or stormwater inlets as required to comply with water quality control requirements.

- *Minimum Dust Control Requirements:* The following dust mitigation measures are to be initiated at the start and maintained throughout the duration of any construction or grading activity, including any construction or grading for road construction or maintenance.

  - Unpaved areas subject to vehicle traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered.

  - The speed of any vehicles and equipment traveling across unpaved areas must be no more than 15 miles per hour unless the road surface and surrounding area is sufficiently stabilized to prevent vehicles and equipment traveling more than 15 miles per hour from emitting dust exceeding Ringelmann 2 or visible emissions from crossing the project boundary line.

  - Storage piles and disturbed areas not subject to vehicular traffic must be stabilized by being kept wet, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.

  - Prior to any ground disturbance, including grading, excavating, and land clearing, sufficient water must be applied to the area to be disturbed to prevent emitting dust exceeding Ringelmann 2 and to minimize visible emissions from crossing the boundary line.

- Construction vehicles leaving the site shall be cleaned to prevent dust, silt, mud, and dirt, from being released or tracked offsite.

- When wind speeds are high enough to result in dust emissions crossing the boundary line, despite the application of dust mitigation measures, grading and earthmoving operations shall be suspended.

- No trucks are allowed to transport excavated material off-site unless the trucks are maintained such that no spillage can occur from holes or other openings in cargo compartments, and loads are either covered with tarps; or wetted and loaded such that the material does not touch the front, back, or sides of the cargo compartment at any point less than six inches from the top and that no point of the load extends above the top of the cargo compartment.

– *Wind-Driven Fugitive Dust Control:* A person shall take action(s), such as surface stabilization, establishment of a vegetative cover, or paving, to minimize wind-driven dust from inactive disturbed surface areas.

- ***Rule 501–General Permit Requirements.*** Any person operating an article, machine, equipment, or other contrivance, the use of which may cause, eliminate, reduce, or control the issuance of air contaminants, shall first obtain a written permit from the Air Pollution Control Officer (APCO). Stationary sources subject to the requirements of Rule 507, Federal Operating Permit Program, must also obtain a Title V permit pursuant to the requirements and procedures of that rule.

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 10.5** lists the General Plan policies that relate to air quality and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 10-5
PLACER COUNTY GENERAL PLAN AIR QUALITY ELEMENT CONSISTENCY ANALYSIS

General Plan Goals and Policies	Consistency Determination	Analysis
Policy 6.F.5. The County shall encourage project proponents to consult early in the planning process with the County regarding the applicability of Countywide indirect and areawide source programs and transportation control measures (TCM) programs. Project review shall also address energy efficient building and site designs and proper storage, use, and disposal of hazardous materials.	Consistent	The applicant will collaborate with the County to ensure that all areawide source programs and transportation control measures (TCM) programs are met. See Section 15-Hazards and Hazardous Materials of this EIR for a discussion of storage, use, and disposal of hazardous materials.
Policy 6.F.6. The County shall require project-level environmental review to include identification of potential air quality impacts and designation of design and other appropriate mitigation measures or offset fees to reduce impacts. The County shall dedicate staff to work with project proponents and other agencies in identifying, ensuring the implementation of, and monitoring the success of mitigation measures.	Consistent	Potential air quality impacts and appropriate mitigation measures are discussed below in the impact analysis. The project will comply with all required fees to reduce air quality impacts.
Policy 6.F.7. The County shall encourage development to be located and designed to minimize direct and indirect air pollutants.	Consistent, with Mitigation	With the incorporation of MM 10.1 to lessen dust impacts, all non-cumulative air quality impacts are considered less than significant.
Policy 6.F.10. The County may require new development projects to submit an air quality analysis for review and approval. Based on this analysis, the County shall require appropriate mitigation measures consistent with the PCAPCD's 1991 Air Quality Attainment Plan (or updated edition).	Consistent	This EIR provides the air quality analyses required by the County, and the project applicant will be required to implement all mitigation measures.
Policy 6.G.7. The County shall require stationary-source projects that generate significant amounts of air pollutants to incorporate air quality mitigation in their design.	Consistent	The proposed project incorporates MM 10.1to control dust pollution. No other aspects of the project were found to require further air quality mitigation.

Granite Bay Community Plan

The Granite Bay Community Plan (GBCP) was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). **Table 10.6** lists the Community Plan goals and policies that relate to air quality and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 10.6
GRANITE BAY COMMUNITY PLAN CONSERVATION ELEMENT CONSISTENCY ANALYSIS

General Plan Goals and Policies	Consistency Determination	Analysis
Policy 29. Developers shall be required to comply with additional mitigation measures that may be required by the Air Quality Plan Update.	Consistent	The proposed project will comply with all required mitigation measures required by the Air Quality Plan Update.
Policy 30. Developers shall be required to submit a CALINE4 CO hotspot computer analysis for all new projects and provide additional mitigation, if required by the Air Pollution Control District.	Consistent	As discussed below, the level of service (LOS) for intersections and roadway segments are not expected to exceed a LOS E after mitigation is applied. As such, substantial traffic volumes and/or congestion that are needed to create the density of CO emissions associated with hotspots are not expected. In addition, engine certification standards over time will result in lower CO emissions from motor vehicles. Therefore, the conditions for producing a CO hotspot are not expected to occur as a result of the project.

10.3 IMPACTS

10.3.1 Standards of Significance

The Air Quality Section of Appendix G of the CEQA Guidelines contains a list of effects that may be deemed potentially significant. These are:

1) Conflict with or obstruct implementation of the applicable air quality plan;

2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project is non-attainment under applicable federal or state ambient air quality standards;

4) Expose sensitive receptors to substantial pollutant concentrations; or

5) Create objectionable odors affecting a substantial number of people.

The PCAPCD adopted its own emissions thresholds for evaluating the construction and operational impacts of proposed projects in Placer County (PCAPCD, 2009):

- 82 lbs/day of ROG
- 82 lbs/day of NOx
- 82 lbs/day of PM10
- 550 lbs/day of CO

Methodology

The URBEMIS 2007 computer model (version 9.2.4) was used to estimate short-term emissions related to the grading and construction phases of the proposed project. The URBEMIS 2007 model were used to estimate long-term emissions associated with project operations, including emissions from motor vehicles that access the project site. For the motor vehicle emission analysis, traffic count information provided by the traffic study for the project was used. Stationary area source emissions associated with energy use were also calculated using the URBEMIS model.

10.3.2 Project Level Impacts and Mitigation Measures

The project will be built in three phases, each of which will have a different scope of air quality impacts for both short-term construction and long-term operations impacts.

IMPACT 10-1: Increases in Short-term Construction Emissions

The proposed project would be constructed in three phases. Each phase of construction would not be occurring simultaneously and therefore a totaling of the construction emissions would not be the true indication of short-term emissions. However, construction during Phase I of the proposed project would generate up to 86 pounds per day of PM_{10} emissions that would exceed the PCAPCD's recommended daily thresholds of 82 pounds per day. Construction activities for the proposed project would result in short-term increases in air pollutant emissions. These emissions would be generated in the form of fugitive dust emissions (PM_{10}) and exhaust emissions (NO_x, SO_x, CO, ROG, and PM_{10}) from construction equipment and vehicles. Air pollutant emissions to be generated during project construction phases were estimated using the URBEMIS 2007 model. URBEMIS estimates maximum daily emissions in pounds per day for summer and winter seasons, and annual emissions in tons per year. This impact is therefore considered **potentially significant**.

Tables 10-7 through **10-9** present the project's unmitigated short-term emissions. Short-term unmitigated emissions associated with the construction of the proposed project would be less than the PCAPCD significance threshold level for each criteria pollutant, with the exception of PM_{10} during grading of the first phase of the project.

TABLE 10-7
PHASE 1 SHORT-TERM UNMITIGATED PROJECT EMISSIONS

Emission Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	25	13	0	86	19	2,350
Paving	4	20	13	0	2	2	1,947
Construction	4	18	19	0	1	1	2,527
Coating	74	0	1	0	0	0	89
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	**Yes**	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

The first phase of the project includes site preparation of 17 acres, along with the construction of a church facility and ministry offices. This phase was assumed to occur between April 2010, and March 2011. As shown in **Table 10-7**, PM_{10} would exceed the PCAPCD threshold during the grading period. This impact is considered **potentially significant.**

TABLE 10-8
PHASE 2 SHORT-TERM UNMITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	23	13	0	21	5	2,350
Paving	3	16	11	0	1	1	1,586
Construction	4	17	16	0	1	1	2,338
Coating	78[1]	0	1	0	0	0	94
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No

Note: [1] For short-term emission modeling, approximately one and one-half month was assumed for the coating process in Phase 1 while only one month was assumed for Phase 2. The compressed schedule results in a higher daily emission rate than for Phase 2.
Source: URBEMIS 2007 v. 9.2.4 Outputs

The second phase of the project includes construction of an additional church building. This phase was assumed to occur between April 2011 and February 2012. Phase 2 is currently not planned for construction and only upon building a congregation to exceed Phase I would Phase 2 be considered. Phase 2 of the project will be constructed to accommodate and support the increased congregation size. As shown in **Table 10-8**, no criteria pollutants exceed the PCAPCD threshold during construction. This impact is considered **less than significant**.

TABLE 10- 9
PHASE 3 SHORT-TERM UNMITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	22	12	0	3	1	2,350
Construction	1	8	5	0	0	0	975
Coating	12	0	0	0	0	0	14
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

The third phase of the project includes construction of ministry support offices. This phase was assumed to occur between February 2012 and August 2012. This phase is currently not planned for construction and only upon exceeding capacity for Phase 1 will this phase be considered. As shown in **Table 10-9**, no criteria pollutants would exceed the PCAPCD threshold during this period. This impact is considered **less than significant**.

Mitigation Mesure 10-1a Mitigate for On-site Active Dust Control

The proposed project shall comply with PCAPCD Rule 228, which addresses fugitive dust emissions. Rule 228 provides standards for dust control, as well as recommends mitigation for vehicle track out. Below are on-site active fugitive dust mitigation measures which are required to ensure that the project will not violate Rule 228. In addition, mitigation which would lower ROG emissions is provided below.

- The applicant shall submit to the District and receive approval of a Construction Emission/Dust Control Plan prior to groundbreaking. This plan must address the minimum Administrative Requirements found in section 300 and 400 of District Rule 228, Fugitive Dust www.placer.ca.gov/airpollution/airpolut.htm
- Replace vegetation in disturbed areas as quickly as possible.
- There shall be no open burning of removed vegetation during infrastructure improvements
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut & fill, and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.
- Suspend excavation and grading activity when winds (instantaneous gusts) exceed 25 mph.
- Construction equipment exhaust emissions shall not exceed District Rule 202 Visible Emission limitations
- Operators of vehicles and equipment found to exceed opacity limits are to be immediately notified and the equipment must be repaired within 72 hours
- Minimize idling time to five minutes for all diesel power equipment.
- Use low sulfur fuel for stationary construction equipment
- Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary diesel power generators

Mitigation Measure 10-1b Mitigate for On-site Inactive Dust Control

As mentioned above, the proposed project shall comply with PCAPCD Rule 228, which addresses fugitive dust emissions. Provided below are on-site inactive fugitive dust mitigation measures which would lower ROG emissions and which are required to ensure that the project will not violate Rule 228:

- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, covered with a tarp or other suitable cover or vegetative ground cover.

- Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/suppressant.
- Limit traffic speeds on unpaved roads to 15 mph.
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- Sweep daily (with water sweepers) all paved access roads, parking areas and staging areas at construction sites.

TABLE 10-10
PHASE 1 SHORT-TERM MITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	25	13	0	38	9	2,350
Paving	4	20	13	0	2	2	1,947
Construction	4	18	19	0	1	1	2,527
Coating	74	0	1	0	0	0	89
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded After Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

TABLE 10-11
PHASE 2 SHORT-TERM MITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	23	13	0	9	3	2,350
Paving	3	16	11	0	1	1	1,586
Construction	4	17	16	0	1	1	2,338
Coating	78	0	1	0	0	0	94
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded After Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

TABLE 10-12
PHASE 3 SHORT-TERM MITIGATED PROJECT EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Fine Grading	3	22	12	0	2	1	2,350
Construction	1	8	5	0	0	0	975
Coating	12	0	0	0	0	0	14

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded After Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

After implementation of mitigation measures **MM 10-1a** and **MM 10-1b,** as indicated in **Tables 10-10** through **10-12,** PM_{10} would be below PCAPCD thresholds and therefore short-term emissions for the proposed project would be reduced below PCAPCD thresholds, and are considered **less than significant** and no further mitigation is required.

IMPACT 10-2: Contribute substantially to an Existing Air Quality Violation

Long-term operation of the proposed project would increase emissions of both attainment pollutants (i.e., carbon monoxide) and non-attainment pollutants (i.e., PM_{10}, ozone precursors ROG and NO_x) in the region from motor vehicles, stationary sources, and atypical off-road sources. Long-term emissions from the project would come from three sources: on-road mobile sources (i.e., motor vehicles), stationary sources (i.e., heating, cooling), and atypical sources (e.g., burn tower, motorsports facility). This could contribute to new exceedances of attainment pollutants or continued exceedances of ozone and PM_{10} standards.

Tables 10-13-10-15 summarize estimated operational emissions associated with the project.

Stationary Sources

The facility would include stationary sources, such as heaters, boilers, and other equipment needed to power, cool, and heat on-site buildings and facilities. There are other minor area source emissions that can be quantified based on projected floor area for the proposed project. These emissions are summarized in **Table 10-13**.

TABLE 10-13
TOTAL LONG-TERM AREA SOURCE UNMITIGATED EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Summer Emissions							
Phase 1	1	1	4	0	0	0	1,293
Phase 2	1	1	2	0	0	0	1,021
Phase 3	0	0	2	0	0	0	83
Total Emissions	2	2	8	0	0	0	2,397
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No
Winter Emissions							
Phase 1	1	1	1	0	0	0	1,288
Phase 2	1	1	1	0	0	0	1,018
Phase 3	0	0	0	0	0	0	80

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Total Emissions	2	2	2	0	0	0	2,386
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No

Source: URBEMIS 2007 v. 9.2.4 Outputs

Mobile Sources

The majority of project-related emissions would be generated by on-road mobile sources, such as light-duty passenger cars. Traffic information used to generate the vehicle emissions was gathered from the Traffic Impact Analysis (TIA) for the project. According to the traffic study, the busiest day of the week for Amazing Facts activity will be Saturday. The project is estimated to generate 1,170 average daily trips (ADT) during an average Saturday after Phase 1 and 2,540 ADT after Phase 2 (KD Anderson & Associates, 2007). In addition, Phase 3 of the project is expected to accommodate the existing ministry, and generate no additional trips.

TABLE 10-14
TOTAL LONG-TERM VEHICLE UNMITIGATED EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Saturday Summer Emissions							
Phase 1	10	17	112	0	15	3	7,641
Phase 1 + Phase 2	22	36	244	0	32	6	16,589
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No
Saturday Winter Emissions							
Phase 1	9	14	94	0	15	3	7,634
Phase 1 + Phase 2	19	30	205	0	32	6	16,572
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No

Source: California Air Resources Board; Emfac 2007 Outputs; URBEMIS, version 9.2.4

As shown in **Tables 10-14** and **10-15**, long-term operations of the facility after all phases of the project have been completed would not result in ROG, NO_x, CO, or PM_{10} emissions that exceed PCAPCD thresholds.

TABLE 10-15
TOTAL LONG-TERM UNMITIGATED EMISSIONS

Emissions Source	Pollutant (pounds/day)						
	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Saturday Summer Emissions							
Area Source	2	2	8	0	0	0	2,397
Vehicle Emissions	22	36	244	0	32	6	16,589
Total Operational Emissions	24	38	252	0	32	6	18,986
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No
Saturday Winter Emissions							
Area Source	2	2	2	0	0	0	2,386
Vehicle Emissions	19	30	205	0	32	6	16,572
Total Operational Emissions	21	32	207	0	32	6	18,958
PCAPCD Threshold (lbs/day)	82	82	550	N/A	82	N/A	N/A
Threshold Exceeded Before Mitigation?	No	No	No	No	No	No	No

Long-term emissions associated with the proposed project would be less than the PCAPCD thresholds for NO_x, ROG, CO, and $PM_{10.}$ This impact would is **less than significant** and no further mitigation is required.

IMPACT 10-3: Violate Any Air Quality Standard or Contribute Substantially to a Projected Air Quality Violation

Long-term operation of the proposed project would result in indirect emissions of carbon monoxide (CO) from motor vehicles that could increase CO concentrations near local roadway.

Local mobile-source carbon monoxide emissions near roadway intersections are a function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels. These concentrations are also impacted by vehicle delay associated with roadways or intersections. As vehicles speeds slow to LOS E or F, or worsen from an existing LOS F, CO concentrations are increased, creating a scenario in which localized CO could possibly cause a hotspot.

According to the traffic study, there are three intersections which may operate at a deficient LOS (KD Anderson & Associates, 2007) with the addition of project traffic but before mitigation:

- Sierra College Boulevard at Rocklin Road
- Sierra College Boulevard at Nightwatch Drive
- Sierra College Boulevard Access

However, only the intersection of Sierra College Boulevard and Rocklin Road would operate at a level of service before mitigation (LOS E in this case) that may result in a hotspot. The other listed intersections would operated at LOS D or better (before mitigation), which would not result in a CO hotspot.

In accordance with the Caltrans CO Protocol (Caltrans, 1997), CO hotspots are evaluated when:

- the level of service (LOS) of an intersection or roadway decreases to a LOS E or worse;
- signalization and/or channelization is added to an intersection; and
- sensitive receptors such as residences, commercial developments, schools, hospitals, etc., are located in the vicinity of the affected intersection or roadway segment.

After mitigation identified in Section 9.0, the LOS at the intersection of Sierra College Boulevard and Rocklin Road is expected to improve to LOS C. As such, substantial traffic volumes and/or congestion that are needed to create the density of CO emissions associated with hotspots are not expected. In addition, engine certification standards over time will result in lower CO emissions from motor vehicles. Therefore, the conditions for producing a CO hotspot are not expected to occur as a result of the project. This impact is **less than significant** and no further mitigation is required.

IMPACT 10-4: Expose Sensitive Receptors to Toxic Air Contaminants

The proposed project would introduce diesel PM emissions from off-road equipment during construction and from diesel-fueled trucks and motor vehicles accessing the site during long-term operations, and could potentially expose nearby existing residential land uses to sources of temporary TACs. The residents and future workers at the project site could be exposed to unhealthful levels of TACs resulting from the uses mentioned above. On-site sources of TACs would be diesel trucks accessing the project. Implementation of the proposed project would increase mobile source emissions of TACs from motor vehicles, diesel-fueled equipment during both construction and long-term operations. This would increase TAC concentrations at nearby sensitive receptors. However, CARB has prepared guidance documents addressing the compatibility of sensitive land uses to the siting of major sources of diesel PM emissions such as ports, rail yards, and distribution centers. Based on CARB guidance documents, the proposed project does not meet the definition of a major source of diesel PM and would not be subject to the siting criteria. Regardless, the proposed project would result in indirect emissions of diesel particulates that would negligibly increase TAC concentrations along local roadways.

As shown in **Table 10-1,** there are five toxic facilities within five miles of the project site. However, CARB has passed a number of ATCMs to reduce the public's exposure to emissions of diesel PM, including measures to limit idling of diesel-powered delivery trucks.

However, given the limited number of diesel-powered trucks trips to the project site during operation of the proposed project (seven trucks per day, six carrier delivery/pickup type trucks, and one or two semi trucks per week) and ATCMs to reduce public exposure to diesel PM emission, sensitive receptors exposure from diesel TACs would be limited. Given the construction schedule, the proposed project would not result in a long-term (i.e., 70 years) substantial source of TAC emissions and would, therefore be considered a **less than significant impact** and no further mitigation is required.

IMPACT 10-5 : Conflict With or Obstruct Implementation the Air Quality Attainment Plan

The proposed project will not directly add any additional residents to Placer County. Instead, the church will accommodate a growing congregation which is already based in Placer County, with Amazing Facts current location being in the City of Rocklin, approximately 6.4 miles from the proposed project.

As such, the project will not exceed future population forecasts for future ozone attainment plans. This impact would be considered **less than significant** and no further mitigation is required.

IMPACT 10-6: Create Objectionable Odors

The proposed project would locate residential and commercial land uses to an area that is currently undeveloped. Short-term construction and long-term operations of the project are expected to produce minimal levels of reactive organic gases or other emissions that could create objectionable odors for existing or future sensitive receptors.

Two circumstances have the potential to cause odor impacts:

- A source of odors is proposed to be located near existing or planned sensitive receptors, or
- A sensitive receptor land use is proposed near an existing or planned source of odor.

Potential sources that emit odors during construction activities that may some individuals may consider offensive include the use of architectural coatings, exhaust odors from diesel emission, and emission associated with asphalt paving. Construction-related odors associated with diesel fumes and road paving would be temporary and would disperse rapidly with distance from the source and would not result in the frequent exposure of receptors to objectionable odor emissions.

The proposed project is not expected to produce long-term odor issues for two key reasons. First, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed project does not include any such uses. Second, the PCAPCD has a Nuisance Rule (Rule 205) that governs the discharge from any source, such quantities of air contaminants, which causes a nuisance or annoyance to any considerable number of persons or to the public. As a result, this impact is considered **less than significant** and no further mitigation is required.

11.0
NOISE

11.0 NOISE

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") includes a description of ambient noise conditions, a summary of applicable regulations, and an analysis of potential noise impacts associated with the proposed project. Mitigation measures are recommended, as necessary, to reduce significant noise impacts. This section is based on an environmental noise assessment prepared by J. C. Brennan & Associates, Inc. (Brennan) on August 31, 2007, included as **Appendix 11** in this DEIR.

11.1 ENVIRONMENTAL SETTING

11.1.1 Characteristics of Environmental Noise

Acoustic Fundamentals

Noise is generally defined as sound that is loud, disagreeable, or unexpected. Sound, as described in more detail below, is mechanical energy transmitted in the form of a wave because of a disturbance or vibration.

Amplitude

Amplitude is the difference between ambient air pressure and the peak pressure of the sound wave. Amplitude is measured in decibels (dB) on a logarithmic scale. For example, a 65 dB source of sound, such as a truck, when joined by another 65 dB source results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). Amplitude is interpreted by the ear as corresponding to different degrees of loudness. Laboratory measurements correlate a 10 dB increase in amplitude with a perceived doubling of loudness and establish a 3 dB change in amplitude as the minimum audible difference perceptible to the average person (USEPA 1971).

Frequency

Frequency is the number of fluctuations of the pressure wave per second. The unit of frequency is the Hertz (Hz). One Hz equals one cycle per second. The human ear is not equally sensitive to sound of different frequencies. Sound waves below 16 Hz or above 20,000 Hz cannot be heard at all, and the ear is more sensitive to sound in the higher portion of this range than in the lower. To approximate this sensitivity, environmental sound is usually measured in A-weighted decibels (dBA). On this scale, the normal range of human hearing extends from about 10 dBA to about 140 dBA (USEPA 1971).

Characteristics of Sound Propagation and Attenuation

Noise can be generated by a number of sources, including mobile sources, such as automobiles, trucks and airplanes, and stationary sources, such as construction sites, machinery, and industrial operations. Noise generated by mobile sources typically attenuates at a rate between 3.0 and 4.5 dBA per doubling of distance. The rate depends on the ground surface and the number or type of objects between the noise source and the receiver. Mobile transportation sources, such as highways or hard and flat surfaces, such as concrete or asphalt, have an attenuation rate of 3.0 dBA per doubling of distance. Soft surfaces, such as uneven or vegetated terrain, have an attenuation rate of about 4.5 dBA per doubling of distance from the source. Noise generated by

stationary sources typically attenuates at a rate of approximately 6.0 to 7.5 dBA per doubling of distance from the source (USEPA 1971).

Sound levels can be reduced by placing barriers between the noise source and the receiver. In general, barriers contribute to decreasing noise levels only when the structure breaks the "line of sight" between the source and the receiver. Buildings, concrete walls, and berms can all act as effective noise barriers. Wooden fences or broad areas of dense foliage can also reduce noise but are less effective than solid barriers.

Noise Descriptors

The selection of a proper noise descriptor for a specific source is dependent upon the spatial and temporal distribution, duration, and fluctuation of the noise. The noise descriptors most often encountered when dealing with traffic, community, and environmental noise are defined below (Lipscomb and Taylor 1978).

Maximum Noise Level (L_{max}): The maximum instantaneous noise level during a specific period of time.

Minimum Noise Level (L_{min}): The minimum instantaneous noise level during a specific period of time.

Energy Equivalent Noise Level (L_{eq}): The energy mean (average) noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value (in dBA) is calculated.

Day-Night Noise Level (L_{dn}): The 24-hour L_{eq} with a 10 dBA "penalty" for noise events that occur during the noise-sensitive hours between 10:00 p.m. and 7:00 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours to account for increases sensitivity to noise during these hours.

Community Noise Equivalent Level (CNEL): The CNEL is similar to the L_{dn} described above, but with an additional 5 dBA "penalty" added to noise events that occur between the hours of 7:00 p.m. and 10:00 p.m. The calculated CNEL is typically approximately 0.5 dBA higher than the calculated L_{dn}.

Single Event Noise Level (SEL): The SEL describes a receiver's cumulative noise exposure from a single noise event, which is defined as an acoustical event of short duration and involves a change in sound pressure above a reference value.

Human Response to Noise

The human response to environmental noise is subjective and varies considerably from individual to individual. Noise in the community has often been cited as a health problem, not in terms of actual physiological damage, such as hearing impairment, but in terms of inhibiting general well-being and contributing to undue stress and annoyance. The health effects of noise in the community arise from interference with human activities, including sleep, speech, recreation, and tasks that demand concentration or coordination. Hearing loss can occur at the highest noise intensity levels. When community noise interferes with human activities or contributes to stress, public annoyance with the noise source increases. The acceptability of noise and the threat to

public well-being are the basis for land use planning policies preventing exposure to excessive community noise levels. Typical community noise levels are depicted in **Figure 11-1**.

FIGURE 11-1
TYPICAL COMMUNITY NOISE LEVELS

INDOORS	A-Weighted Decibels		Perceived Loudness Relative To 60 Dba	OUTDOORS
	140	Threshold of Pain	x256	
		Deafening		Military Jet Takeoff with Afterburner (at 50 feet)
	130		x128	
	120		x64	Jet Takeoff at 200 Feet
Rock Band	110	Uncomfortably Loud	x32	
				747-100 Takeoff (4 Miles From Start of Roll)
Inside Subway Train, New York	100		x16	Power Lawnmower (at 50 Feet) Ambulance Siren (at 100 Feet)
Noisy Cocktail Bar	90	Very Loud	x8	727-200 Takeoff (4 Miles From Start of Roll)
				Diesel Truck, 40 mph (at 50 Feet)
Jet Aircraft Cabin, at Cruise Shouting (at 3 Feet)	80		x4	Automobile, 65 mph (at 50 Feet)
Noisy Restaurant		Moderately Loud		Busy Street (at 50 Feet)
Vacuum Cleaner at 3 Feet	70		x2	757-200 Takeoff (4 Miles From Start of Roll)
Large Business Office				Automobile, 30 mph (at 50 Feet)
Normal Conversation (at 3 Feet)	60		x1	Cessna 172 Landing (3,300 Feet From Rwy End)
Quiet Office		Moderately Quite		
	50		x1/2	
	40		x1/4	Quiet Urban Area, Nighttime
Quiet Library		Very Quiet		Quiet Suburban Area, Nighttime
	30		x1/8	Quiet Rural Area, Nighttime
Concert Hall, Background				
	20		x1/16	
Recording Studio		Barely Audible		Leaves Rustling
	10		x1/32	
	0	Threshold of Hearing	x1/64	

Sources: Caltrans 2002; Egan 1972; and HUD 2004

Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted: the so-called "ambient" environment. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged. Regarding increases in A-weighted noise levels, knowledge of the following relationships will be helpful in understanding this analysis:

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived by humans.
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected. An increase of 5 dB is typically considered substantial.
- A 10 dB change is subjectively heard as an approximate doubling in loudness and would almost certainly cause an adverse change in community response.

When evaluating noise impacts, increases in ambient noise levels need to also take into account the existing noise environment. Consequently, increases in cumulative noise exposure (in CNEL/L_{dn}) of 5 dBA are generally considered significant in areas where the ambient noise environment is less than 60 dBA. In areas where the ambient noise environment is between 60 and 65 dBA, increases of 3.0 dBA, or greater, would be considered significant. In areas where the ambient noise environment exceeds 65 dBA, a predicted increase of 1.5 dBA, or greater, would be considered significant. These thresholds were initially recommended by the Federal Interagency Committee on Noise (FICON) in 1972, based on noise levels at which people typically become increasingly annoyed (FAA 2000). These recommendations have since been recognized by various federal, state, and local agencies for the analysis of transportation noise impacts.

11.1.2 Local Setting

11.1.2.1 Noise-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses which would result in noise exposure that could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential dwellings, including senior housing, are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

Major noise sources in south Placer County are primarily transportation-related. traffic from local roadways and railroads contribute significantly to noise environments in their immediate vicinity.

11.1.2.2 Ambient Noise Environment

The proposed Amazing Facts Ministries project site is located at the southeast intersection of Nightwatch Drive and Sierra College Boulevard in Placer County, California. **Figure 3.0-3** shows the project site plan. The existing noise environment at the project site is defined primarily by traffic on Sierra College Boulevard. No major non-transportation noise sources were noted in the immediate vicinity of the proposed project site.

This analysis specifically focuses on noise generated by delivery truck passages, loading dock activity, parking lot circulation, and traffic on Sierra College Boulevard. Where noise levels are predicted to exceed the Placer County General Plan Noise Element or Noise Ordinance standards, noise mitigation measures are evaluated. Additionally, traffic noise from Sierra College Boulevard may generate exterior and interior noise levels exceeding the applicable Placer County noise level standards. The purpose of this noise analysis is to evaluate noise impacts to the project - a church, which is a noise-sensitive land use, and the noise impacts of the proposed project to the surrounding land uses. The project site is bordered by residential uses to the north and west. Noise-sensitive residential uses are also located approximately 900 and 1,600 feet east and south of the proposed project, respectively. This analysis focuses on noise-sensitive uses in close proximity to the project site, which includes the residential uses located adjacent to the site on the north and west.

11.1.2.3 Ambient Noise Survey

To generally quantify existing ambient noise levels at the project site, J.C. Brennan & Associates staff conducted short-term and continuous noise level measurements on the project site on July 23 and July 28, 2007.

The noise level measurements were conducted to determine typical average and maximum noise levels in the immediate project vicinity. **Table 11-1** shows a summary of the results of the ambient noise level measurements. **Figure 11-2** shows the noise measurement locations. **Figure 11-3** shows the location of the continuous noise measurement site.

TABLE 11-1
SUMMARY OF AMBIENT NOISE MEASUREMENT RESULTS

	Location	L_{dn}	Daytime (7 am – 10 pm)		Nighttime (10 pm – 7 am)		Noise Sources
			Average (L_{eq})	Maximum (L_{max})	Average (L_{eq})	Maximum (L_{max})	
1	SW Edge of Proposed Parking Lot	NA	39 dB	47 dB	NA	NA	Traffic, planes, birds, construction
2	NW Comer of Nightwatch & Sierra College Blvd.	NA	73 dB	87 dB	NA	NA	Traffic
3	NE of Project Site, Across Sierra College Blvd. Near Residential	NA	73 dB	86 dB	NA	NA	Traffic
A	West Boundary	51 dB	44-51 dB	55-68 dB	39-46 dB	53-70 dB	Traffic

Source: Brennan 2007

Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters were used for the noise level measurement survey. The meters were calibrated before and after use with an

LDL Model CAL2OO acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Based upon the results of the noise survey, ambient noise levels in the Sierra College Boulevard corridor are typical of a busy traffic corridor. However, measurements of noise levels along the western boundary of the project site showed that noise levels drop off rapidly with increasing distance from Sierra College Boulevard.

11.2 REGULATORY FRAMEWORK

11.2.1 Federal

There are no federal noise standards or regulations applicable to the project site.

11.2.2 State

State of California General Plan Guidelines

The State of California regulates vehicular and freeway noise affecting classrooms, sets standards for sound transmission and occupational noise control, and identifies noise insulation standards and airport noise/land-use compatibility criteria. The *State of California General Plan Guidelines* (State of California 1998), published by the Governor's Office of Planning and Research (OPR), also provide guidance for the acceptability of projects within specific CNEL/L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution. **Table 11-2** summarizes the guidelines for acceptable and unacceptable community noise exposure limits for various land use categories, as currently defined by the State of California.

TABLE 11-2
STATE OF CALIFORNIA
LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Use	Noise Levels (dBA CNEL/L_{dn})			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential Uses – Low-Density Single-Family, Duplex, Mobile Homes	< 60	55 to 70	70 to 75	> 75
Residential – Multi-Family	< 65	60 to 70	70 to 75	> 75
Transient Lodging, Hotels, Motels	< 65	60 to 70	70 to 80	> 80
Schools, Libraries, Churches, Hospitals, Nursing Homes	< 70	60 to 70	70 to 80	> 80
Auditoriums, Concert Halls, Amphitheaters		< 70		>65
Sports Arena, Outdoor Spectator Sports		< 75		>70
Playgrounds, Neighborhood Parks	< 70		67.5 to 75	> 72.5
Golf Courses, Riding Stables, Water Recreation, Cemeteries	< 75		70 to 80	> 80
Office Buildings, Business, Commercial, Professional	< 70	67.5 to 77.5	> 75	
Industrial, Manufacturing, Utilities, Agricultural	< 75	70 to 80	> 75	

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

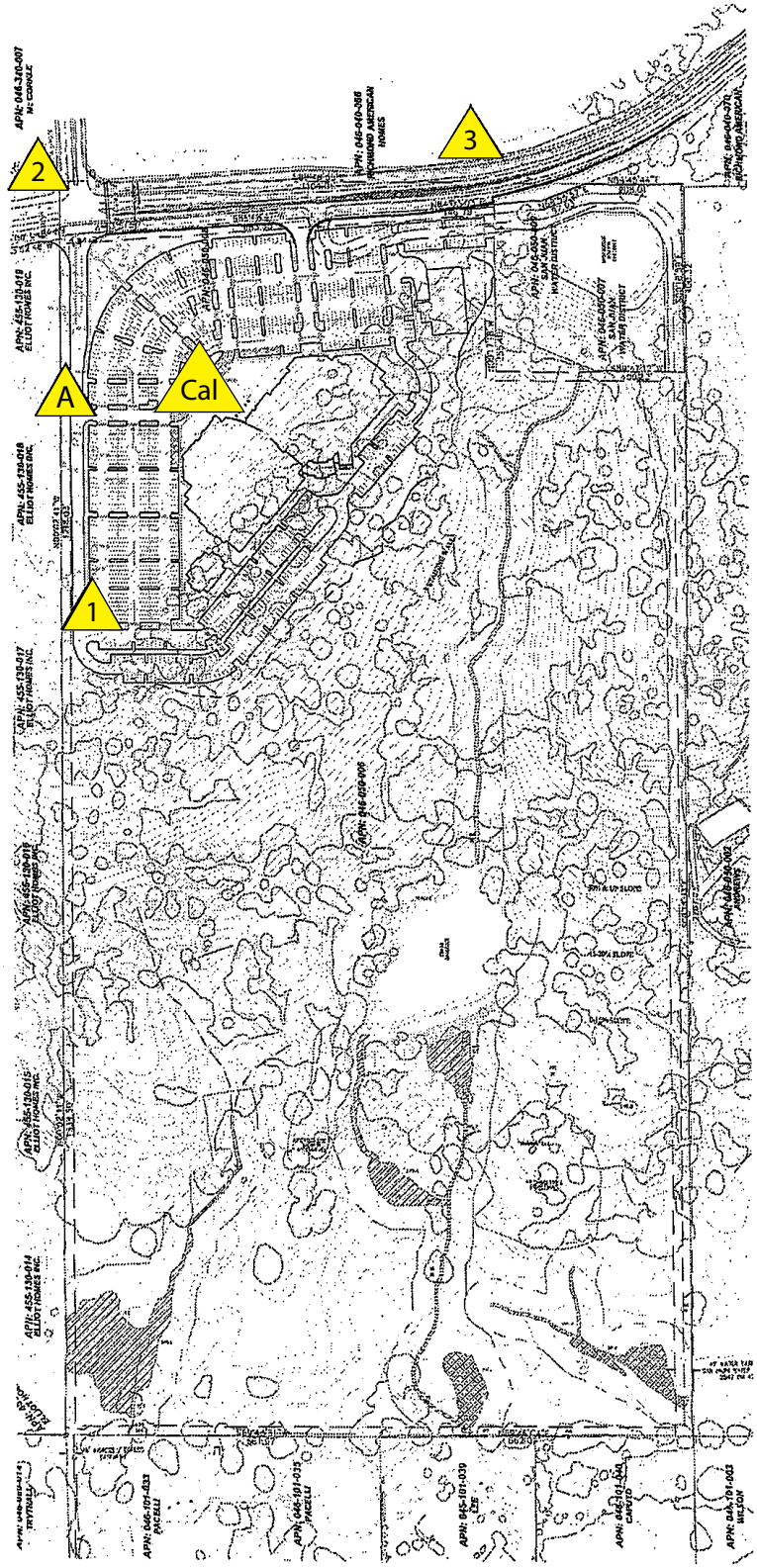
Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.

Normally Unacceptable: New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable: New construction or development should generally not be undertaken.

Source: State of California 2003

T:_CS\Work\Placer County of\Amazing Facts Ministry 28-0120\figures\ADEIR



: Noise Measurement Site Locations

Source: JC Brennan & Associates, 2007

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Figure 11-2

Tentative Map and Noise Measurement Site Locations

PMC®

11.2.3 Local

Placer County General Plan

The Noise Element of the Placer County General Plan provides goals, objectives, and policies designed to ensure that county residents are not subjected to noise beyond acceptable levels. The General Plan includes noise criteria for the evaluation of proposed land uses with regard to land use compatibility, in accordance with those recommended by the State of California (**Table 11-2**). General Plan noise policies applicable to the proposed project are summarized in **Table 11-3**. While this DEIR analyzes the project's consistency with the Placer County General Plan pursuant to CEQA Section 15125(d), the Placer County Board of Supervisors will ultimately make the determination of the project's consistency with the General Plan.

TABLE 11-3
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

General Plan Policies	Consistent with General Plan?	Analysis
Policy 9.A.1: The County shall not allow development of new noise-sensitive uses where the noise level due to non-transportation noise sources will exceed the noise level standards of Table 9-1 as measured immediately within the property line of the new development, unless effective noise mitigation measures have been incorporated into the development design to achieve the standards specified in Table 9-1.	Consistent	The proposed project is surrounded primarily by residential uses with some commercial/professional uses to the north in the City of Rocklin. These land uses are not considered to be noise-producing uses and would not be expected to expose the project site to non-transportation noise levels exceeding County standards.
Policy 9.A.2: The County shall require that noise created by new non-transportation noise sources be mitigated so as not to exceed the noise level standards of Table 9-1 as measured immediately within the property line of lands designated for noise-sensitive uses.	Consistent	As discussed under the impact analysis below, the proposed project would not result in non-transportation noise sources that would exceed County noise level standards.
Policy 9.A.4: Impulsive noise produced by blasting should not be subject to the criteria listed in Table 9-1. Single event impulsive noise levels produced by gunshots or blasting shall not exceed a peak linear overpressure of 122 db, or a C weighted Sound Exposure Level (SEL) of 98 dBC. The cumulative noise level from impulsive sounds such as gunshots and blasting shall not exceed 60 dB LCdn or CNELC on any given day. These standards shall be applied at the property line of a receiving land use.	Consistent	The proposed project consists of a church and is not expected to result in any impulsive noise levels produced by gunshots or blasting that exceed a peak linear overpressure of 122 db.
Policy 9.A.5: Where proposed non-residential land uses are likely to produce noise levels exceeding the performance standards of Table 9-1 at existing or planned noise-sensitive uses, the County shall require submission of an acoustical analysis as part of the environmental review process so that	Consistent with Mitigation	The applicant has submitted an acoustical analysis that was used in preparation of the analysis for this EIR. Mitigation measures recommended by the acoustical analysis have been included within this EIR. Furthermore, mitigation measure MM 11-1b requires that a post-project assessment program be submitted consistent with requirements identified in

General Plan Policies	Consistent with General Plan?	Analysis
noise mitigation may be included in the project design. The requirements for the content of an acoustical analysis are listed in Table 9-2.		Table 9-2 of the Placer County General Plan.
Policy 9.A.6: The feasibility of proposed projects with respect to existing and future transportation noise levels shall be evaluated by comparison to Table 9-1.	Consistent	The noise level standards of Table 9-1 of the Placer County General Plan were used to evaluate existing and future transportation noise levels in the vicinity of the project site.
Policy 9.A.8: New development of noise-sensitive land uses shall not be permitted in areas exposed to existing or projected levels of noise from transportation noise sources, including airports, which exceed the levels specified in Table 9-3, unless the project design includes effective mitigation measures to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table 9-3.	Consistent	As discussed under Impact 11-2 below, the predicted exterior traffic noise level at the proposed outdoor plaza area would comply with the County's 603 dB Ldn exterior noise level standard for church uses and interior noise levels are also predicted to comply with the County's 40 dB Leq interior noise levels standard applied to interior spaces of church uses. Therefore, the proposed project would not be exposed to transportation noise sources exceeding the levels specified in Table 9-3.
Policy 9.A.10: Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 9-3 or the performance standards of Table 9-1, the County shall require submission of an acoustical analysis as part of the environmental review process so that noise mitigation may be included in the project design. At the discretion of the County, the requirement for an acoustical analysis may be waived provided that all of the following conditions are satisfied: a. The development is for less than five single-family dwellings or less than 10,000 square feet of total gross floor area for office buildings, churches, or meeting halls; b. The noise source in question consists of a single roadway or railroad for which up-to-date noise exposure information is available. An acoustical analysis will be required when the noise source in question is a stationary noise source or airport, or when the noise source consists of multiple transportation noise sources; c. The existing or projected future noise exposure at the exterior of buildings which will contain noise-sensitive uses or within proposed outdoor activity areas (other than outdoor sports and recreation areas) does not exceed 65 dB Ldn (or CNEL) prior to mitigation. For outdoor sports and recreation areas, the existing or projected future noise exposure may not exceed 75 dB Ldn (or CNEL) prior to mitigation; d. The topography in the project area is	Consistent, with mitigation	As discussed above, the applicant has submitted an acoustical analysis that was used in preparation of the analysis for this EIR.

General Plan Policies	Consistent with General Plan?	Analysis
essentially flat; that is, noise source and receiving land use are at the same grade; and e. Effective noise mitigation, as determined by the County, is incorporated into the project design to reduce noise exposure to the levels specified in Table 9-1 or 9-3. Such measures may include the use of building setbacks, building orientation, noise barriers, and the standard noise mitigations contained in the Placer County Acoustical Design Manual. If closed windows are required for compliance with interior noise level standards, air conditioning or a mechanical ventilation system will be required.		
Policy 9.A.11: The County shall implement one or more of the following mitigation measures where existing noise levels significantly impact existing noise-sensitive land uses, or where the cumulative increase in noise levels resulting from new development significantly impacts noise-sensitive land uses: a. Rerouting traffic onto streets that have available traffic capacity and that do not adjoin noise sensitive land uses; b. Lowering speed limits, if feasible and practical; c. Programs to pay for noise mitigation such as low cost loans to owners of noise-impacted property or establishment of developer fees; d. Acoustical treatment of buildings; or e. Construction of noise barriers.	Consistent, with mitigation	Mitigation measure MM 11-1 requires that a sound wall be built along the western property line of the proposed project consistent with part e. of this policy.
Policy 9.A.12: Where noise mitigation measures are required to achieve the standards of Tables 9-1 and 9-3, the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.	Consistent	A noise barrier is required by mitigation measure MM 11-1. Redesigning the site plan to include design-related noise mitigation measures was considered impractical due to development constraints on the site, including steep slopes. Therefore, the proposed project is consistent with this policy.

The Placer County General Plan Noise Element specifies allowable L_{dn} noise levels within specified zone districts for new projects (**Table 11-4**), requirements for an acoustical analysis (**Table 11-5**), and maximum allowable noise exposure for transportation noise sources (**Table 11-6**).

TABLE 11-4
ALLOWABLE LDN NOISE LEVELS WITHIN SPECIFIED ZONE DISTRICTS APPLICABLE TO NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Zone District of Receptor	Property Line of Receiving Use (L_{dn})	Interior Spaces[1] (L_{dn})
Residential Adjacent to Industrial[2]	60	45
Other Residential[3]	50	45
Office/Professional	70	45
Transient Lodging	65	45
Neighborhood Commercial	70	45
General Commercial	70	45
Heavy Commercial	75	45
Limited Industrial	75	45
Highway Service	75	45
Farm	(see footnote 4)	---
Agriculture Exclusive	(see footnote 4)	---

1 Interior spaces are defined as any locations where some degree of noise-sensitivity exists. Examples include all habitable rooms of residences and areas where communication and speech intelligibility are essential, such as classrooms and offices.

2 Noise from industrial operations may be difficult to mitigate in a cost-effective manner. In recognition of this fact, the exterior noise standards for residential zone districts immediately adjacent to industrial, limited industrial, industrial park, and industrial reserve zone districts have been increased by 10 dB as compared to residential districts adjacent to other land uses.

For purposes of the Noise Element, residential zone districts are defined to include the following zoning classifications: AR, R-1, R-2, R-3, FR, RP, TR-1, TR-2, TR-3, and TR-4.

3 Where a residential zone district is located within an -SP combining district, the exterior noise level standards are applied at the outer boundary of the -SP district. If an existing industrial operation within an -SP district is expanded or modified, the noise level standards at the outer boundary of the -SP district may be increased as described above in these standards.

Where a new residential use is proposed in an -SP zone, an Administrative Review Permit is required, which may require mitigation measures at the residence for noise levels existing and/or allowed by use permit as described above, in these standards.

4 Normally, agricultural uses are noise insensitive and will be treated in this way. However, conflicts with agricultural noise emissions can occur where single-family residences exist within agricultural zone districts. Therefore, where effects of agricultural noise upon residences located in these agricultural zones is a concern, an Ldn of 70 dBA will be considered acceptable outdoor exposure at a residence.

Source: Placer County 1994

TABLE 11-5
PLACER COUNTY REQUIREMENTS FOR AN ACOUSTICAL ANALYSIS

An acoustical analysis prepared pursuant to Policy 9.A.5 shall:	
1.	Be the financial responsibility of the applicant.
2.	Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
3.	Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
4.	Estimate existing and projected cumulative (20 years) noise levels in terms of L_{dn} or CNEL and/or the standards of Table 9-1, and compare those levels to the policies in this section. Noise prediction methodology must be consistent with the Placer County Acoustical Design Manual.
5.	Recommend appropriate mitigation to achieve compliance with the policies and standards of this section, giving preference to proper site planning and design over mitigation measures which require the construction of noise barriers or structural modifications to buildings which contain noise-sensitive land uses. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
6.	Estimate noise exposure after the prescribed mitigation measures have been implemented.
7.	Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Source: Placer County 1994

TABLE 11-6
PLACER COUNTY MAXIMUM ALLOWABLE NOISE EXPOSURE, TRANSPORTATION NOISE SOURCES

Land Use	Outdoor Activity Areas[1]	Interior Spaces	
	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq}, dB[2]
Residential	60[3]	45	--
Transient Lodging	60[3]	45	--
Hospitals, Nursing Homes	60[3]	45	--
Theaters, Auditoriums, Music Halls	--	--	35
Churches, Meeting Halls	60[3]	--	40
Office Buildings	--	--	45
Schools, Libraries, Museums	--	--	45
Playgrounds, Neighborhood Parks	70	--	--

1 Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

2 As determined for a typical worst-case hour during periods of use.

3 Where it is not possible to reduce noise in outdoor activity areas to 60 dB Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Placer County 1994

Granite Bay Community Plan

The Granite Bay Community Plan Noise Element establishes specific goals and policies which are intended to provide a means to achieve noise-compatible land uses in the vicinity of existing or planned noise-producing sources. **Table 11-7** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to noise. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Community Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this DEIR.

TABLE 11-7
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistent with Community Plan?	Analysis
Noise Policy 1: Locate noise-sensitive land uses within areas of acceptable community noise equivalent levels.	Consistent, with mitigation	As discussed under Impact 11-2 below, the proposed project would not be exposed to interior or exterior noise sources exceeding the County's standards.
Noise Policy 2: Encourage the use of greenbelts or natural areas along roadways as a design feature of any development in order to mitigate noise impacts.	Consistent, with mitigation	Structures included in the proposed project will be setback from the roadway (approximately 295 feet from Sierra College Boulevard) with a parking lot and landscaping area serving as a buffer. Therefore, although the proposed project does not include the encouraged greenbelt or natural area, the landscaped area and setback distance would mitigate noise impacts consistent with the Placer County General Plan and the Granite Bay Community Plan.
Noise Policy 4: Avoid the interface of noise-producing and noise-sensitive land uses.	Consistent, with mitigation	Neither the proposed project (a church) nor the surrounding residential land uses are considered to be noise-producing uses. Therefore, the proposed project would not result in the interface of noise-producing and noise-sensitive land uses.
Noise Policy 5: Require implementation of noise abatement techniques within new projects where warranted.	Consistent, with mitigation	Mitigation measure MM 11-1 requires that a sound wall be built along the western property line of the proposed project. Mitigation measure MM 11-2 requires construction hours to be limited and mitigation measure MM 11-3 requires truck delivery hours to be limited. Mitigation measure MM 11-4 requires a construction noise abatement program to be developed and implemented. These measures would be considered noise abatement techniques consistent with this policy.
Noise Policy 7: Require project specific noise studies for most commercial, office, public, institutional and residential projects.	Consistent	As discussed above, the applicant has submitted an acoustical analysis that was used in preparation of the analysis for this EIR.
Noise Policy 8: Limit construction activities to daytime hours (7 a.m., to 7p.m., Monday through Friday).	Consistent, with mitigation	Mitigation measure MM 11-2 requires construction activities to be limited to the hours of 7 a.m. to 7 p.m., Monday through Friday consistent with this policy.

Table 11-8 and **Table 11-9** (which are Tables 5 and 6 from the Granite Bay Community Plan) explain acceptable noise exposure levels based upon the standards adopted in the countywide Noise Element.

TABLE 11-8
ALLOWABLE LDN NOISE LEVELS WITHIN SPECIFIED ZONE DISTRICTS APPLICABLE TO NEW PROJECTS AFFECTED BY OR INCLUDING NON-TRANSPORTATION NOISE SOURCES

Zone District of Receptor	Property Line of Receiving Use	Interior Space[1]
Residential adjacent to industrial	60 dBA	45 dBA
Other Residential	50 dBA	45 dBA
Office/Professional	70dBA	45 dBA
Neighborhood Commercial	70dBA	45dBA

[1] Interior spaces are defined as any locations where some degree of noise sensitivity exists. Examples include all habitable rooms of residences and areas where communication and speech intelligibility are essential, such as classrooms and offices.

Source: Placer County 1989

TABLE 11-9
MAXIMUM ALLOWABLE NOISE EXPOSURE (LDN) TRANSPORTATION NOISE SOURCES

	Outdoor Activity Areas [1]	Interior Spaces	
Land Use	L_{dn}/CNEL, dB	L_{dn}/CNEL, dB	L_{eq}, dB [2]
Residential	60 [3]	45	
Transient Lodging	60 [3]	45	--
Hospitals, Nursing Homes	60 [3]	45	--
Theaters, Auditoriums	--	--	--
Churches, Meeting Halls	60 [3]	--	35
Office Buildings	--	--	40
Schools, Libraries, Museums	--	--	45

[1] Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

[2] As determined for a typical worst-case hour during periods of use.

[3] Where it is not possible to reduce noise in outdoor activity areas to 60 Ldn/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 65 dB Ldn/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Source: Placer County 1989

Placer County Noise Ordinance

The Placer County Noise Ordinance also establishes criteria for noise-sensitive receptors, outlined below in **Table 11-10**. According to the Noise Ordinance, development of the Amazing Facts Ministries project would result in significant noise impacts if it:

1) Causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by 5 dBA; or

2) Exceeds the sound level standards as set forth in Table 3 [Table 11-7 in this document], whichever is greater.

According to the Noise Ordinance, each of the sound level standards specified in **Table 11-10** shall be reduced by 5 dB for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus 5 dB.

It should be noted that the Noise Ordinance standards shown in **Table 11-10** are based upon hourly average (L_{eq}) and maximum (L_{max}) criteria and are therefore more restrictive than the day/night average (L_{dn}) standards shown above. Therefore, application of the **Table 11-10** criteria to noise generated from on-site activities is the more conservative approach and would result in compliance with both the Placer County General Plan Noise Element and the Noise Ordinance standards.

TABLE 11-10
PLACER COUNTY NOISE ORDINANCE CRITERIA FOR NOISE-SENSITIVE RECEPTORS

Sound Level Descriptor	Daytime (7 am – 10 pm)	Nighttime (10 pm – 7 am)
Hourly L_{eq}	55 dB	45 dB
Hourly L_{max}	70 dB	65 dB

Source: Brennan, 2007

11.3 IMPACTS

This section identifies and discusses the environmental noise impacts resulting from the proposed project and suggests mitigation measures to reduce the level of impact. A detailed discussion of mitigation measures is included in Section 11.4.

11.3.1 Significance Criteria

State of California

Following Appendix G of the State CEQA Guidelines, noise impacts are considered to be significant if implementation of the project considered would result in any of the following:

1) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or of applicable standards of other agencies.

2) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

3) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.

4) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.

5) For a project located within an airport land use plan area or, where such a plan has not been adopted, within two miles of a public airport or a public use airport, exposure of people residing or working in the project area to excessive noise levels.

6) For a project within the vicinity of a private airstrip, exposure of people residing or working in the project area to excessive noise levels.

Methodology

J.C. Brennan employed the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) for the prediction of traffic noise levels (Brennan 2007).

The model is based upon the CALVENO noise emission factors for automobiles, medium trucks and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site.

On July 23, 2007, j.c. Brennan conducted on-site noise level measurements and concurrent traffic counts of Sierra College Boulevard traffic noise on the project site. The purpose of the short-term traffic noise level measurements was to determine the accuracy of the FHWA model in describing the existing noise environment on the project site, accounting for shielding from local topography, actual travel speeds, and roadway grade. Noise measurement results were compared to the FHWA model results by entering the observed traffic volume, speed, and distance as inputs to the FHWA model. See **Figure 11-2** for the traffic noise calibration site labeled "Cal."

Instrumentation used for the measurements were Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters which were calibrated in the field before use with an LDL CAL200 acoustical calibrator. Based upon the calibration results, the FHWA model was found to over-predict traffic noise levels by approximately 12 dB at the proposed location of the outdoor plaza. However, this over-prediction was due to shielding from topography and atmospheric conditions which may not exist when the project is constructed. Therefore, a conservative offset of -3 dB was applied to the FHWA traffic noise model to account for the fact that Sierra College Boulevard will remain depressed relative to the project site. This offset was not applied to the Resource Center due to its proximity to Sierra College Boulevard. A complete listing of the FHWA calibration inputs and results is provided in Appendix 11.0.

Table 11-11 is based upon recommendations made in August 1992 by the Federal Interagency Committee on Noise (FICON) to provide guidance in the assessment of changes in ambient noise levels resulting from aircraft operations. The recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by the noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these criteria have been applied to other sources of noise similarly described in terms of cumulative noise exposure metrics such as the L_{dn}. This metric is generally applied to transportation noise sources and defines noise exposure in terms of average noise exposure during a 24-hour period with a penalty added to noise that occurs during the nighttime. According to **Table 11-11**, an increase in the traffic noise level of 1.5 dB or more would be significant where the ambient noise level exceeds 65 dB L_{dn}.

TABLE 11-11
SIGNIFICANCE OF CHANGES IN CUMULATIVE NOISE EXPOSURE

Ambient Noise Level Without Project, L_{dn}	Significant Impact
<60 dB	+5.0 dB or more
60-65 dB	+3.0 dB or more
>65 dB	+1.5 dB or more

Source: FICON 1992

Truck Circulation Noise Methodology

Based on Brennan's data for heavy truck passages, the sound exposure level (SEL) at a reference distance of 50 feet is approximately 88 dB and a maximum (L_{max}) noise level of 75 dB. Typical medium truck arrivals and departures are approximately 84 dB SEL and 72 dB L_{max} at 50 feet. Based upon the data described above, the following formula can be utilized to determine the hourly noise level due to the truck traffic passbys:

$$L_{eq} = 88 + 10 * (\log Neq) - 35.6, \text{ dB where:}$$

88 is the mean sound exposure level (SEL) for a heavy truck arrival and departure (84 for medium trucks), and 10 * (log Neq) is 10 times the logarithm of the number of truck arrivals and departures during an hour, and 35.6 is 10 times the logarithm of the number seconds in an hour.

Parking Lot Noise Methodology

Ingress/Egress along West Property Line

As a means of determining the noise levels of vehicles traveling along the west project boundary, Brennan utilized noise level data collected for passenger vehicles in parking lots. A typical SEL due to an automobile passby was found to be 68 dB SEL and 63 dB L_{max}, at a distance of 50 feet. Based upon the peak hour trips provided by the project traffic study and the reference SEL measurements, the vehicle circulation L_{eq} noise level can be determined using the following formula:

$$\text{Peak Hour } L_{eq} = 68 + 10 * \log (572) - 35.6, \text{ dB where:}$$

68 is the mean sound exposure level (SEL) for a vehicle passby, and 10 * (log Neq) is 10 times the logarithm of the number of vehicle passbys during an hour, and 35.6 is 10 times the logarithm of the number seconds in an hour.

Parking Lot Area

As a means of determining the noise levels due to parking lot activities, Brennan utilized noise level data collected for parking lots. A typical SEL due to automobile arrivals and departures, including car doors slamming and people conversing, is approximately 71 dB, with a maximum level of 63 dB L_{max}, at a distance of 50 feet. Based upon the peak hour trips provided by the project traffic study and the reference SEL measurements, the parking lot L_{eq} noise level can be determined using the following formula:

$$\text{Peak Hour } L_{eq} = 71 + 10 * \log (572) - 35.6, \text{ dB where:}$$

71 is the mean sound exposure levels (SEL) for an automobile arrival and departure, and 10 * log (572) is 10 times the logarithm of the number of automobile or motorcycle arrivals and departures per hour, and 35.6 is 10 times the logarithm of the number seconds in an hour.

Mechanical Equipment Noise Methodology

Based on discussions with the project applicant, the project heating, ventilating, and air conditioning (HVAC) will be provided by packaged roof-top HVAC units. At the time of the noise analysis, mechanical plans were not available. In order to provide a preliminary assessment of potential HVAC mechanical noise levels, Brennan performed an assessment of HVAC noise levels based upon the following methodology.

For the purpose of the analysis it was assumed that cooling capacity would be based upon approximately one ton of cooling per 500 square feet (s.f.) of finished floor space. Once the raw cooling capacity tonnage was calculated for each of the proposed buildings, Brennan selected actual mechanical units which can supply the required nominal tonnage requirements. The sound level data for these units were input along with the project site plan data into the Environmental Noise Model (ENM) to generate HVAC noise contours for the proposed project.

The following HVAC assumptions were used in the noise study:

- Phase 1: Main Building: 60,000 s.f. = 120 tons = 6 units @ 20 tons each
- Resource Center: 11,000 s.f. = 22 tons = 2 units @ 10 tons each
- Phase 2: Main Building: 85,500 s.f. = 171 tons = 9 units @ 20 tons each
- Phase 3: Addition Building: 20,000 s.f. = 40 tons = 4 units @ 10 tons each

The resulting 21 packaged roof-top units were assumed to be Lennox L Series Units, model numbers LGC120S2 and LGC240S2. The 10-ton unit had an Air-Conditioning and Refrigeration Institute (ARI) sound rating number of 88 and the 20-ton unit had a rating of 92.

However, it should be noted that the noise analysis, conducted by Brennan, was undertaken in 2007. At the time of distribution of the Notice of Preparation (NOP), the building sizes had been slightly modified for each of the three proposed phases. Based on the revised estimates, it is now assumed that the following number of HVAC units would be required for the project:

- Phase 1: Main Building: 96,000 s.f. = 192 tons = 10 units @ 20 tons each
- Resource Center: 11,220 s.f. = 22 tons = 2 units @ 10 tons each
- Phase 2: Main Building: 90,000 s.f. = 180 tons = 9 units @ 20 tons each
- Phase 3: Addition Building: 10,000 s.f. = 20 tons = 2 units @ 10 tons each

The resulting 23 packaged roof-top units would also be Lennox L Series Units, model numbers LGC120S2 and LGC240S2. The 10-ton unit had an ARI sound rating number of 88 and the 20-ton unit had a rating of 92.

It was also assumed that the HVAC units would be evenly distributed across the rooftops of the buildings and that building parapets would completely shield the units from view to the nearest residential areas.

11.3.2 Project-Level Impacts and Mitigation Measures

IMPACT 11-1: Traffic Noise Impacts to Surrounding Land Uses

Development of the proposed project could result in significant traffic noise impacts as follows:

Truck Circulation Noise

The proposed project would include approximately seven trucks per day, six carrier delivery/pickup type trucks, and one or two semi trucks per week. It is anticipated that peak hour deliveries could include up to four delivery/pickup trucks and one semi truck. Based on the formula described under the Methodology sub-section above, the hourly L_{eq} generated during the hour of truck activity with one heavy truck arrival/departure and four medium truck arrival/departures would be approximately 56 dB L_{eq} and 75 dB L_{max} at a distance of 50 feet. **Table 11-11** below provides a complete summary of the predicted project-related noise levels at the nearest residential property lines and a comparison to the Placer County exterior noise standards.

Loading Dock Operations

Loading dock operations typically generate noise levels of approximately 60 dB L_{eq} and 83 dB L_{max} at a distance of 50 feet from the loading dock. The primary noise source associated with loading dock areas is typically heavy trucks stopping (air brakes), backing into the loading areas as necessary, and pulling out of the loading docks (revving engines) and forklifts. **Table 11-11** below provides a complete summary of the predicted project-related noise levels at the nearest residential property lines and a comparison to the Placer County exterior noise standards.

Parking Lot Noise Generation

Ingress/Egress along West Property Line

The project traffic study predicts 572 peak hour trips utilizing the west project access at Nightwatch Drive. Based on the formula described under the Methodology sub-section above, the hourly L_{eq} generated during the peak hour of vehicle circulation, would be approximately 60 dB L_{eq} and 63 dB L_{max} at a distance of 50 feet (see **Table 11-11** below).

West Parking Lot Area

The project traffic study predicts that the project would generate 572 peak hour trips through the Nightwatch project access. This analysis assumes that all of these vehicles could park within approximately 150 feet of the nearest property lines (see **Figure 3-3**, Preliminary Site Plan). Based on the formula described under the Methodology sub-section above, the parking lot would result in a daytime peak hour L_{eq} of approximately 63 dB L_{eq} at a distance of 50 feet (see **Table 11-11** below).

North Parking Area

The project traffic study predicts that the project would generate 323 peak hour trips through the east project access. This analysis assumes that all of these trips could park within approximately 280 feet of the nearest property lines. Based on the formula described under the Methodology sub-section above, the parking lot would result in a daytime peak hour L_{eq} of approximately 61 dB L_{eq} at a distance of 50 feet (see **Table 11-12** below).

TABLE 11-12
PREDICTED TRANSPORTATION NOISE LEVELS AT NEAREST RESIDENTIAL PROPERTY LINES

Noise Source	Direction of Nearest Residential Property Line	Distance	Predicted Peak Hour Noise Levels1		Placer County Noise Standards	
			L_{eq}	L_{max}	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Truck Circulation	West (RA-B-X Zoning)	35’	56 dB	75 dB – Heavy Truck 72 dB – Med Truck	55 dB L_{eq}/ 70 dB L_{max}	45 dB L_{eq}/ 65 dB L_{max}
Loading Dock Operations		765’	36 dB	59 dB		
Parking Lot Ingress/Egress		35’	60 dB	63 dB		
Parking Lot Activity		150’	54 dB	61 dB		
Truck Circulation	North (Existing Single-Family Residential – City of Rocklin) [1]	150’	43 dB	65 dB		
Loading Dock Operations		285’	39 dB	62 dB		
Parking Lot Activity		280’	40 dB	47 dB		

[1] *Predicted noise levels at this location include a -6 dB offset to account for existing sound wall.*

Source: Brennan, 2007.

Based upon the **Table 11-12** data, truck circulation and parking lot ingress/egress along the western boundary of the project site is predicted to generate noise levels to the surrounding single family residences exceeding the Placer County Noise Ordinance criteria. Therefore, consideration of noise reduction measures is appropriate.

In order to achieve compliance with the County’s exterior noise level standards, a barrier noise reduction analysis was performed. **Table 11-13** shows the results of this analysis. Appendix 11.0 provides the complete inputs and results for each barrier calculation.

TABLE 11-13
PREDICTED PROJECT-RELATED NOISE LEVELS WITH VARYING NOISE BARRIER HEIGHTS

Noise Source	Direction of Nearest Residential Property Line	Predicted Peak Hour Noise Levels		Stockton Noise Standards	
		Unmitigated Noise Level	Wall Height – Noise Level	Daytime 7 a.m. to 10 p.m.	Nighttime 10 p.m. to 7 a.m.
Truck Circulation	West (RA-B-X Zoning)	56 dB L_{eq}	6' -51 dB L_{eq} 7' -51 dB L_{eq}	55 dB L_{eq} / 75 dB L_{max}	45 dB L_{eq}/ 65 dB L_{max}
Truck Circulation		75 dB L_{max}	6' -71 dB L_{max} 7' -70 dB L_{max}		
Parking Lot Ingress/Egress		60 dB L_{eq}	6' -55 dB 7' -54 dB		

[1] *Barrier calculations are based upon existing site grading and should be re-evaluated when a site grading plan is available.*

Source: Brennan, 2007.

Based upon the data presented in **Table 11-13**, construction of a 7-foot-tall sound wall along the western property line of the proposed project is predicted to achieve compliance with the Placer County Noise Ordinance 55 dB L_{eq} and 70 dB L_{max} daytime exterior noise level standards at the nearest residential property lines. However, peak hours of parking lot activity would still exceed the Placer County nighttime noise ordinance 45 dB L_{eq} noise level standard at the west property line.

Therefore this impact is considered **potentially significant**.

Mitigation Measure 11-1a Construct sound wall of 7 feet elevation along the eastern property line

As part of project construction, a sound wall shall be built along the western property line of the proposed project. Noise barriers shall be constructed of concrete masonry units, solid concrete panels, earthen berms, or any combination of these materials. Wood is not recommended due to eventual warping and degradation of acoustical performance. Other types of materials shall be reviewed by an acoustical consultant prior to use.

Mitigation Measure 11-1b Submit a Post-Project Assessment Program

The applicant shall submit a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures pertaining to noise impacts, consistent with the Placer County General Plan.

Mitigation Measure 11-1c Parking Lots shall be closed at 10 p.m.

Special events shall be scheduled to end so that parking lots shall be empty no later than 10:00 p.m.

Mitigation Measure 11-1d Limit hours of Truck deliveries

Truck deliveries and loading/unloading activities shall be restricted to the hours of 6 a.m. to 8 p.m. Monday through Friday and 8 a.m. to 8 p.m. on Saturdays and Sundays.

Mitigation Measure 11-1e Develop and Implement a Construction Noise Abatement Program

Construction activities shall adhere to the following noise control measures as required by the Placer County General Plan Noise Element and Granite Bay Community Plan Noise Element:

- Traffic shall be rerouted onto streets that have available traffic capacity and that do not adjoin noise-sensitive land uses;
- In coordination with the Placer County Department of Public Works, truck traffic shall be required to lower speed limits to 25 miles per hour on and in the vicinity of the project site;
- Construction activities shall be limited to daytime hours 6 a.m. to 8 p.m. Monday through Friday and 8 a.m. to 8 p.m. on Saturdays and Sundays.
- Implement mitigation measure **MM 11-1d.**

However, with implementation of mitigation measures **MM 11-1a** through **MM 11-1e**, the project's noise would be reduced to levels that comply with the Placer County General Plan Noise Element and Noise Ordinance noise standards. Therefore, this impact would be reduced to **less than significant** after mitigation is implemented.

IMPACT 11-2: Traffic Noise Impacts to the Proposed Project

To determine the future traffic noise levels on the project site, Brennan utilized traffic data obtained from KD Anderson Transportation Engineers. **Table 11-14** shows the predicted future traffic noise levels at the project site. Appendix 11.0 provides the inputs to the FHWA Traffic Noise Prediction Model.

TABLE 11-14
PREDICTED FUTURE TRAFFIC NOISE LEVELS

Roadway	Location	Distance	Offset	Exterior Noise Level, (L_{dn})	Exterior Traffic Noise Level (L_{eq})	Interior Traffic Noise Level (L_{eq})[1]
Sierra College Blvd.	Outdoor Plaza	330'	-3 dB	58 dB	NA	NA
	Resource Center	165'	0 dB	NA	65 dB	40 dB
	Main Building	330'	-3 dB	NA	61 dB	33 dB

[1] *Assumes a 25 dB exterior-to-interior minimum noise level reduction (NLR) typically provided by modern construction practices.*

Note: A complete listing of FHWA Model inputs and results is provided in Appendix 11.0.

Based upon the results shown in **Table 11- 14**, the predicted exterior traffic noise level at the proposed outdoor plaza area would comply with the County's 60 dB L_{dn} exterior noise level standard for church uses. Additionally, interior noise levels are also predicted to comply with the County's 40 dB L_{eq} interior noise levels standard applied to interior spaces of church uses.

Therefore this impact is considered **less than significant** and no further mitigation is required**.**

IMPACT 11-3: Construction-Related Noise Impacts

Activities associated with construction will result in elevated noise levels within the immediate area. Because construction activities could result in periods of elevated noise levels at existing residences, this impact is considered **potentially significant**.

During the construction phases of the project, noise from construction activities would add to the noise environment in the immediate project vicinity. Activities involved in construction would generate maximum noise levels, as indicated in **Table 11-15**, ranging from 85 to 90 dB at a distance of 50 feet. Construction activities would be temporary in nature and normally occur during normal daytime working hours.

Noise would also be generated during the construction phase by increased construction-related traffic on local roadways. The intensity of this traffic will depend on construction at any given time. A potentially significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours.

TABLE 11-15
CONSTRUCTION EQUIPMENT NOISE

Type of Equipment	Maximum Level, dB at 50 feet
Bulldozers	87
Heavy Trucks	88
Backhoe	85
Pneumatic Tools	85

Source: Cunniff 1977

With implementation of mitigation measure **MM 11-3a**, construction activities would be limited to the daytime hours, prohibited on Sundays and holidays, and would be consistent with the Placer County General Plan and Granite Bay Community Plan Noise Elements. Truck speeds would be slowed in the vicinity of the project site, and deliveries would be limited to the daytime hours and prohibited on Sundays and holidays. Implementation of the proposed mitigation measure would reduce construction-generated noise levels. With mitigation, construction noise would not be anticipated to result in substantial increases in sleep disruption and levels of annoyance to occupants of nearby residential dwellings. Since construction activities would be short-term, this impact would be considered **less than significant** after mitigation and no further mitigation is required.

IMPACT 11-4: Impacts of On-Site Noise Sources on Nearby Residential Uses

The project site is anticipated to accommodate 21 to 23 HVAC units on the building rooftops. Based on the HVAC noise modeling process discussed under the Methodology sub-section above and shown in **Figure 11-4**, the project's 45 dB HVAC noise contour is predicted to be confined to the project site and no additional noise reduction measures would be required. It should be noted that mitigation measure MM 8-2 in Section 8.0, Visual Resources, requires all rooftop HVAC mechanical equipment to be shielded from view by solid barriers and/or building parapets, which would ensure implementation of the noise analysis assumptions to control HVAC noise.

Since the project's 45 dB HVAC noise contour is predicted to be confined to the project site, this impact is considered to be **less than significant** and no additional noise reduction measures are likely to be required for the HVAC units.

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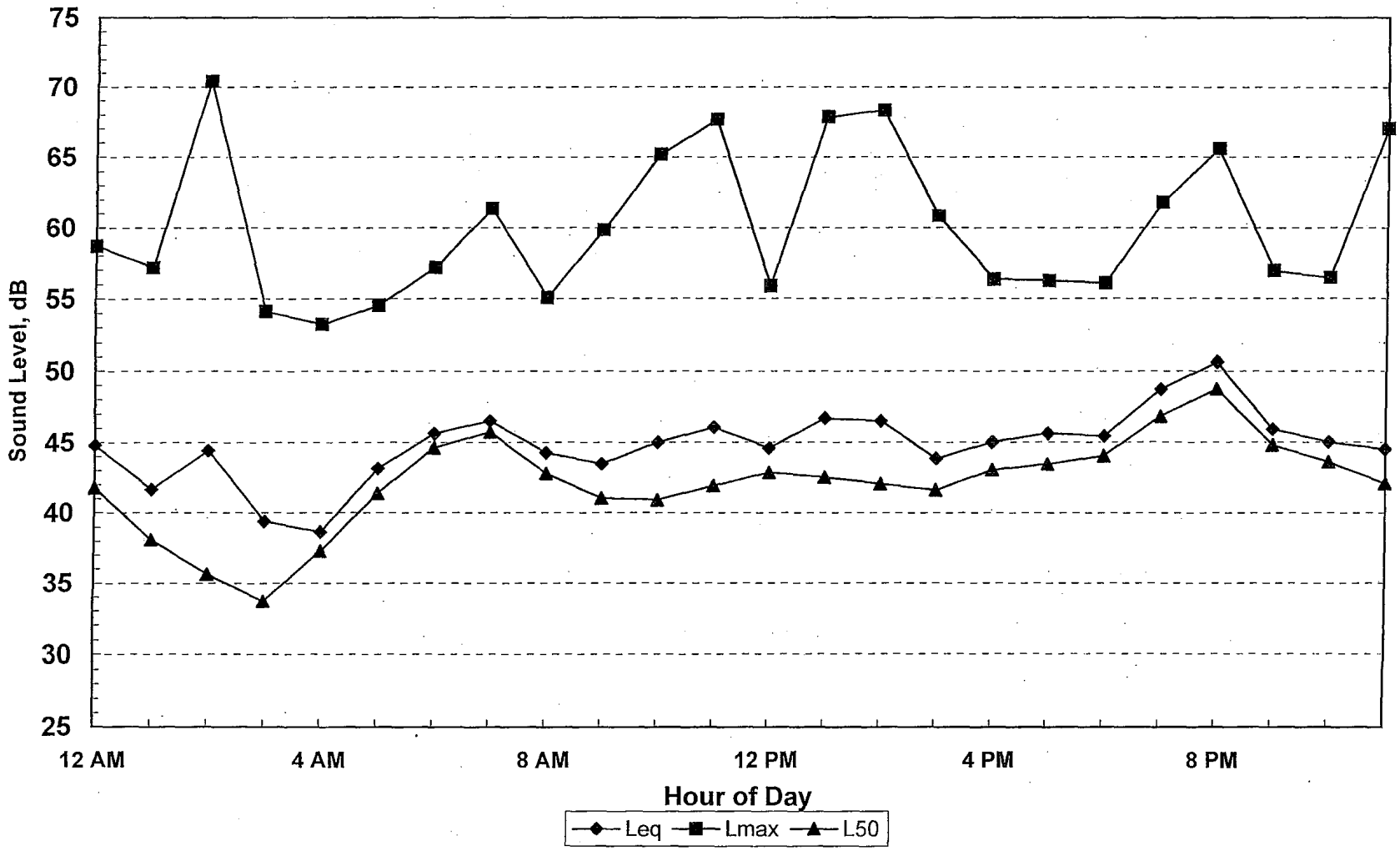

Ldn = 50.5 dB

Source: JC Brennan & Associates, 2007

Figure 11-3

24-Hour Continuous Monitoring - Site A

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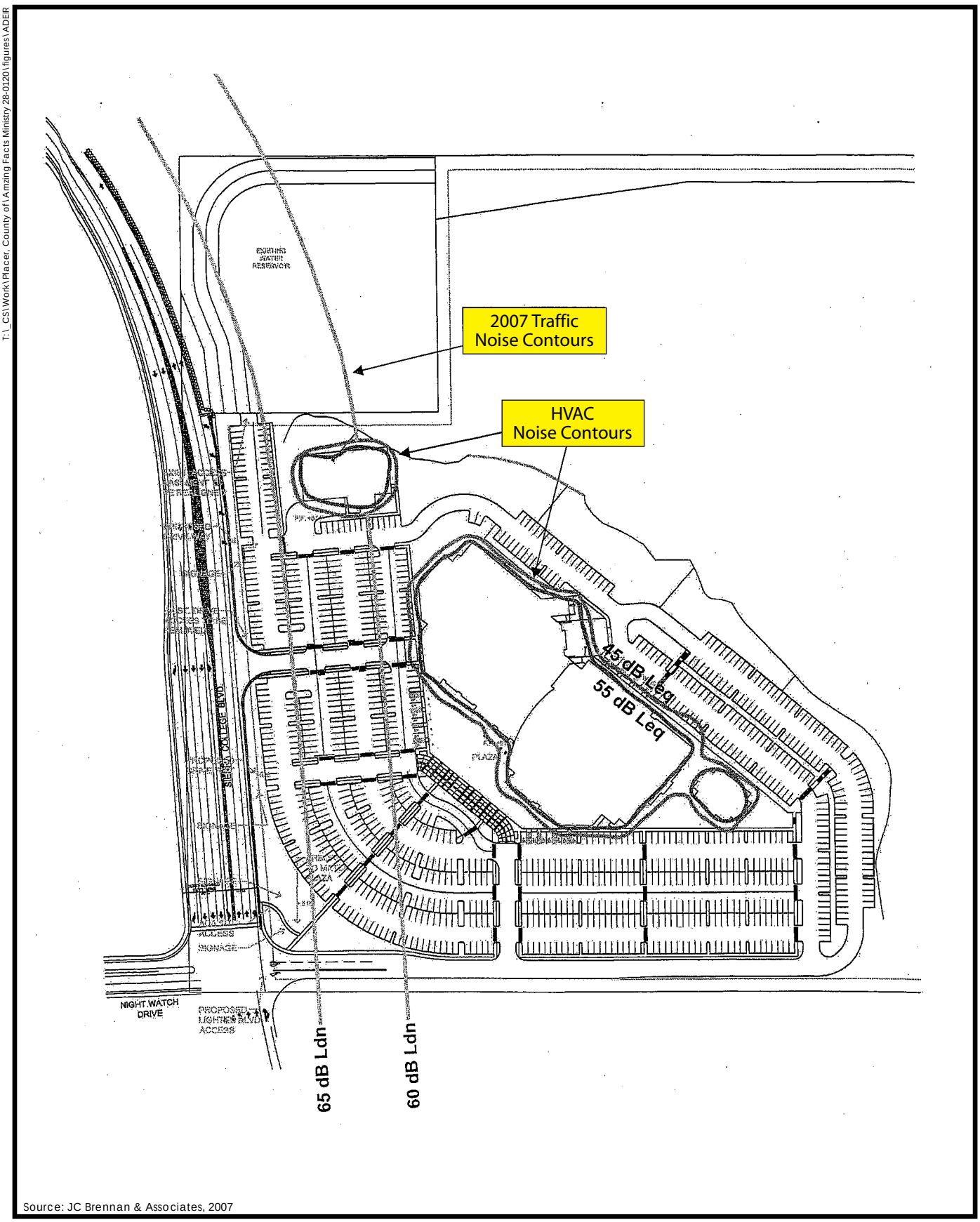

Source: JC Brennan & Associates, 2007

Figure 11-4

Predicted Noise Contours

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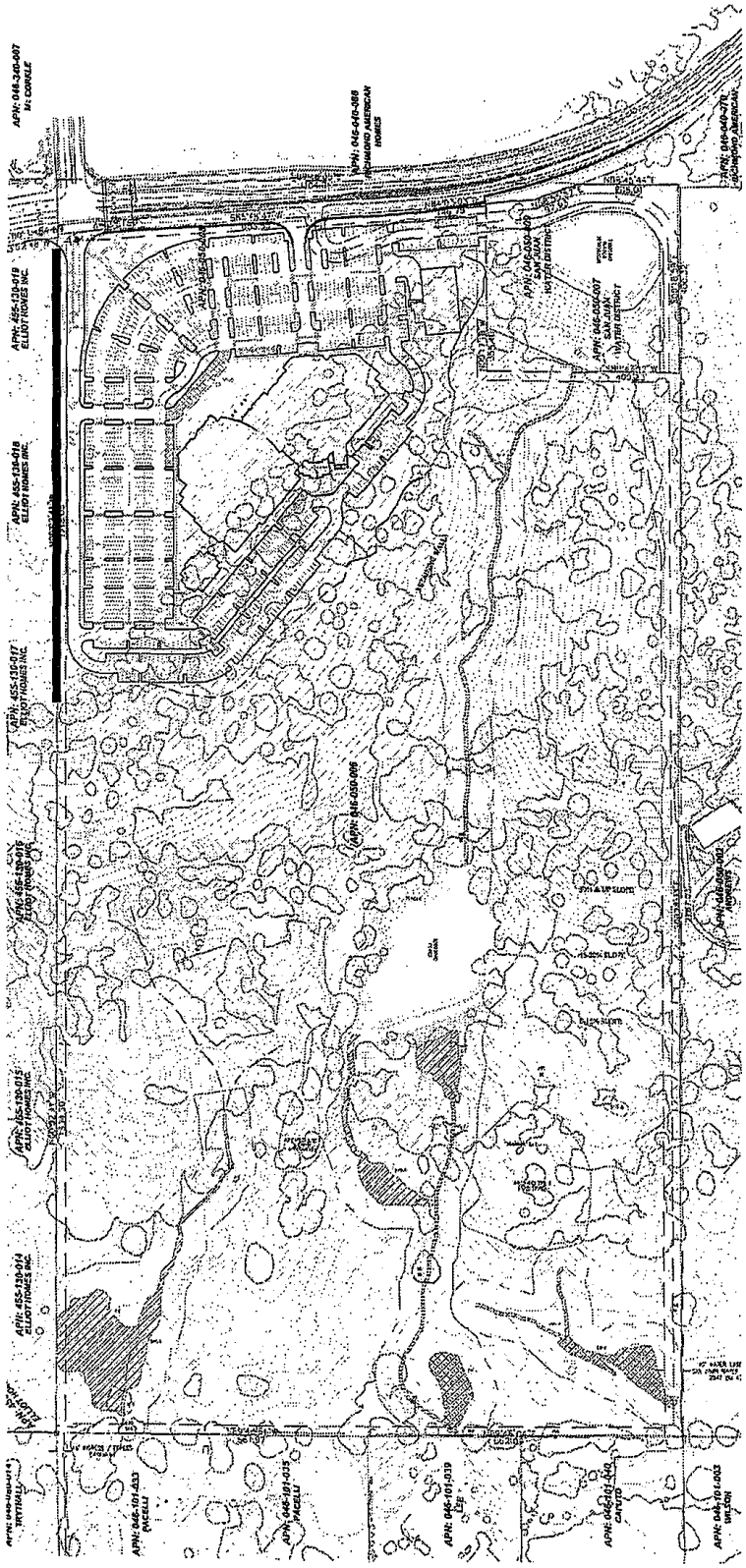

: Potential Sound Wall Location

Source: JC Brennan & Associates, 2007

Figure 11-5

Potential Sound Wall Location

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12.0
GEOLOGY

12.0 GEOLOGY, SOILS, AND SEISMICITY

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") describes potential impacts due to geologic conditions, seismic activity, and soil conditions resulting from the proposed project. For impacts related to the creation and exposure of the public to health hazards, airport hazards, and wildland fires, see Section 15.0 Hazards and Human Health**.** This section is based on review of available literature and maps, including geologic hazard maps created by the California Geological Survey, the Granite Bay Community Plan (Placer County, 2004), the Engineering Geologic Evaluation Proposed Residential Subdivision Granite Bay, California (Kleinfelder, 2003), and the Geotechnical Engineering Report for Amazing Facts Property, prepared by Holdrege & Kull (2009) (**Appendix 12** of the Draft EIR). Information regarding soils at the project site is taken from the geotechnical report, dated April 15, 2009. The study is inclusive of the entire project site and is sufficient to provide adequate geology and soils information for analysis in this DEIR. The project applicant has also prepared a preliminary grading plan, which shows locations of proposed cuts and fills included as a part of the project.

12.1 ENVIRONMENTAL SETTING

12.1.1 Regional Setting

Geology and Soils

The 75-acre project site is located in the Granite Bay Community Plan area in southwestern Placer County on the easterly side of the Sacramento Valley close to the intersection of the Great Valley and the Sierra Nevada geomorphic provinces. The Sierra Nevada is a large fault block composed of granitic and metamorphic rocks tilted gently from the summit near Donner Lake to the west, where the block dips under the sedimentary and alluvial units of the valley. Most of the Granite Bay area is underlain by granitic rocks ranging from 125 to 136 million years old. The granitic rocks were intruded in molten form at great depth into layered sedimentary and volcanic rocks, which were folded, faulted, crushed, and uplifted. In the process, these layered rocks were metamorphosed into amphibolite, greenstone, slates, and phyllites. This band of metamorphic rocks trends slightly west of north and has been called the "Mother Lode" because of the gold-rich quartz veins that were intruded along steep faults in the metamorphic rocks. Stream erosion during the episodic uplifts of the Sierra Nevada, combined with varied volcanic activity, has produced the variety of sedimentary rock units present in the Granite Bay Community Plan area. During the last million years, erosion and sedimentation have led to the formation of alluvial deposits. Weathering has produced the present-day landscape. Rounded hills of decomposed granite, scattered outcrops of more resistant rocks, and steep bluffs supported by the Mehrten Conglomerate or Volcanics are the dominant elements of the plan area (Placer County, 2004).

The Granite Bay Community Plan indicates that the predominant soil type in the area is the San Andreas series. Andregg coarse sandy loam dominates the northeast part of the project area. In the southern portion of the project area are the Caperton gravelly coarse sandy loam, the Cometa-Fiddyment complex, the Redding and Corning gravelly loams, and the Andregg coarse sandy loams. Small amounts of other types of soil are also found in the area; however only the dominant ones are identified in this discussion (Placer County, 2004).

Potential Soils Hazards

The principal soils hazards in the region are erosion, slope stability, and settlement. These hazards are discussed further below.

Slope Stability

Many areas of Placer County include steep slopes. As a general rule, on slopes of more than 30 percent, it is difficult to build structures and roads of any width without substantial grading. Slopes in the Granite Bay Community Plan Area are generally gentle; few areas have more than a 10 percent slope (Placer County, 2004).

Erosion

Various soils in Placer County have characteristics which are prone to erosion. Erosion is typically a site-specific issue which is dealt with on a project-by-project basis. The Placer County Land Development Manual requires that erosion control measures be developed for all projects. Erosion control measures must be delineated on improvement plans and reviewed by the Placer County Public Works Department (Placer County, 2004).

Settlement

Settlement can be caused by soils with a high shrink-swell potential. Differential settlement can occur when soils expand and contract and can result in damage to structures located on such soils. The potential for settlement to occur within Placer County is dependent on the soil type. Issues relative to settlement are typically addressed on a site-specific basis.

Expansive Soils

Expansive soils are soils that shrink or swell depending on the level of moisture they absorb. These swelling soils typically contain clay minerals. As they get wet, the clay minerals absorb water molecules and expand; conversely, as they dry they shrink, leaving large voids in the soil. Expansive soils are typical of Mehrten volcanics which are known to be present throughout Placer County. Naturally occurring erosion is a hazard only on a small scale.

Naturally Occurring Asbestos

Naturally occurring asbestos (NOA) has been identified in portions of Placer County as shown on the Placer County Naturally Occurring Asbestos Map (Placer County, 2008). NOA can be hazardous when asbestos fibers are disrupted and become airborne. NOA generally occur within mafic or ultramafic metamorphic rock units. The nearest mapped occurrence of the metamorphic rock units is the foothills Metamorphic Belt along the western Sierra Nevada foothills and located a minimum of 25 kilometers south and east of the site. At this distance, NOAs are not expected to influence site development (Kleinfelder, 2003).

Seismicity

Some faulting exists within Placer County. Faults are fractures in the earth's crust across which there has been relative displacement. When the earth moves along a fault, large amounts of energy are released in all directions from the fault, known as an earthquake. Earthshaking occurs in areas near the fault, varying according to distance, magnitude of the earthquake, and the type of intervening geologic material. The Granite Bay Community Plan states that three faults have been identified in the Community Plan area (see **Figure 12-1**). They have not been active historically and there is no evidence that there has been fault activity within the area for the last 6 to 8 million years.

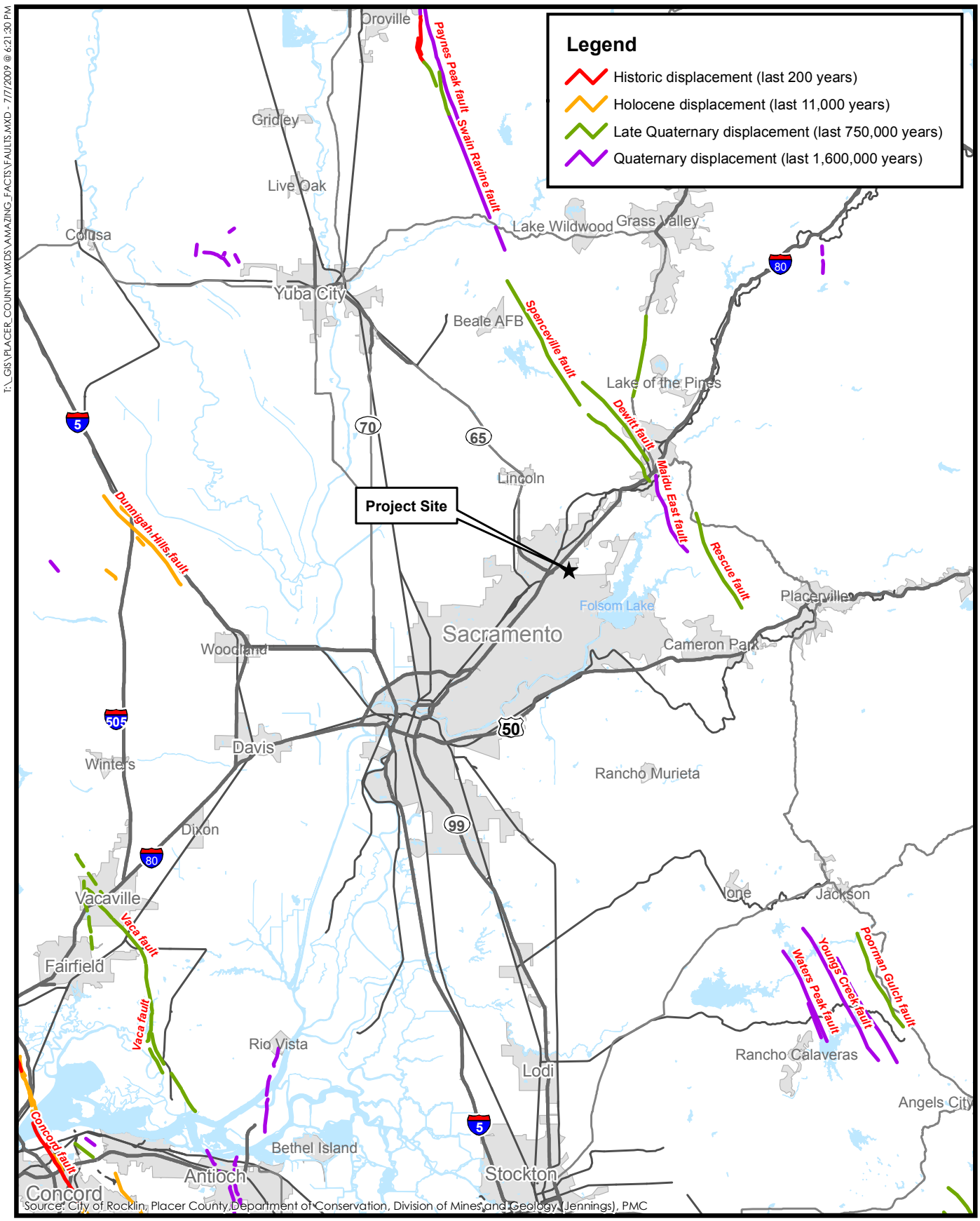

Figure 12-1
Fault Map

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The project site is located in the Foothill Fault Zone which approximately extends from Oroville in the north to east of Fresno in the south and is a complex series of northwest-trending faults that are related to the Sierra Nevada uplift. The activity of this fault zone is not well understood. This fault zone was the source of Oroville's 1975 earthquake (and an earlier event in the 1940s). Future earthquakes in the Placer County area have the potential to originate on nearby fault segments in the Foothill Fault Zone and result in ground shaking (Placer County, 2004). The possible effects of ground shaking on the project site may include damage to structures and infrastructure, as well as slope instability.

Mineral Resources

Mineral deposits are widespread throughout Placer County; known mineral resources in the county include sand, gravel, clay, gold, quartz, decomposed granite, and crushed quarry rock. Clay, stone, gold, and sand and gravel for construction aggregate are currently extracted in various parts of the county (Placer County, 2004).

12.1.2 Local Setting

Geology and Soils

The Geologic Map of the Sacramento Quadrangle, prepared by the California Division of Mines and Geology in 1987, indicates that early Pliocene-late Miocene age andesitic conglomerate and mudflow breccia (lahar) of the Mehrten Formation underlie the site. The andesitic lava flows that underlie the site contain subrounded to subangular boulders of andesite and other rock types that were entrained by the lava as it flowed downslope and solidified. The Miocene and Pliocene epochs are considered to have occurred between 22 to 5 million years and 5 to 2 million years before present, respectively.

The Engineering Geologic Evaluation prepared by Kleinfelder in 2003 indicates that the project site is located in an area containing the Exchequer very stony loam soil series (**Figure 12-2**). Both Exchequer and Inks soils are located in the upper part of the project site. These two units most likely correspond to the typical occurrence of hard Mehrten caprock in the extreme north underlain by the conglomeratic unit of the Mehrten forming the steeper upper portions of slopes.

Exchequer soil is shallow, somewhat excessively drained, very stony soil underlain by hard andesitic breccia. Typically, the surface soil consists of brown, very stony loam and cobbly loam, which extends to an approximate depth of 11 inches below the ground surface (bgs). The brown loam is typically underlain by hard andesitic breccia. The shallow soil depth and the presence of resistant shallow rock are noted as potential limitations to development on this soil type (Holdrege and Kull, 2009). Similar to Exchequer, the Inks soil series is described as stony soils developed on underlying hard, andesitic breccia.

The central portion of the site is mapped Andregg series. This soil is well-drained and typically develops over weathered granitic bedrock. The lower, southern part of the site is mapped as Xerofluvents soils series consisting of sandy and stony soils associated with recent alluvium in or adjacent to drainage channels (Kleinfelder, 2003).

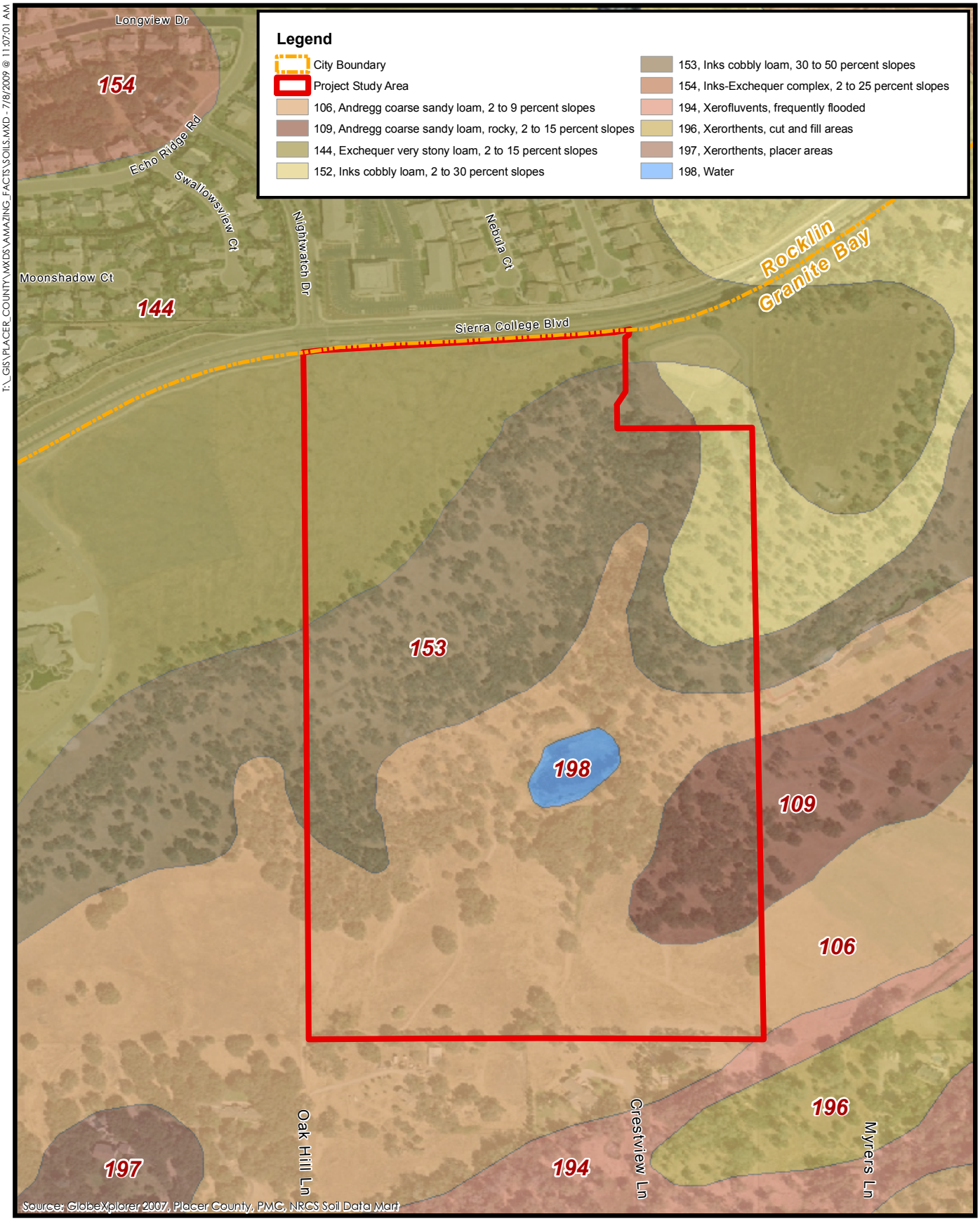

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Figure 12-2
Soils Map
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Seismicity

The project site is situated in the eastern portion of the greater Sacramento metropolitan area where historic seismicity is relatively moderate when compared to other regions of California. This reduced seismic activity is largely due to the absence of nearby active or major sources that generate large earthquakes (Kleinfelder, 2003).

Holdrege & Kull reviewed California Geological Survey Open File Report 96-08, Probabilistic Seismic Hazard Assessment for the State of California, and the 2002 update entitled California Fault Parameters. The documents indicate the project site is located within the Foothills Fault System, which is designated as a Type C fault zone, with low seismicity and a low rate of recurrence. The 1997 edition of California Geological Survey Special Publication 43, Fault Rupture Hazard Zones in California, describes active faults and fault zones (activity within 11,000 years), as part of the Alquist-Priolo Earthquake Fault Zoning Act. The map and document indicate the site is not located within an Alquist-Priolo active fault zone (Holdrege and Kull, 2009)

Mineral Resources

The Granite Bay Community Plan states that no active quarries or mining sites were identified in the plan area during a field visit conducted on June 17, 1993 (Placer County, 2004). Two inactive mining sites (for extraction of decomposed granite and crushed quarry rock) exist in the northwestern portion of the Granite Bay Community Plan area along Interstate 80; no additional potential mineral resource areas have been identified in the plan area (Placer County, 2004). Therefore, this issue will not be discussed further.

12.2 REGULATORY SETTING

Regulations and standards related to geology, soils, and seismicity are included in state regulations, local ordinances, and general and specific plans adopted to protect public safety and to conserve open space. The following is a brief summary of the regulatory context under which soils and geologic hazards are managed at the federal, state, and local level. Agencies with responsibility for protecting people and property from damage associated with soil conditions and geologic hazards in the project area are described below.

12.2.1 Federal

There are no federal standards and regulations applicable to the project site.

12.2.2 State

National Pollutant Discharge Elimination System Permit Program

As authorized by the Clean Water Act (CWA), the National Pollutant Discharge Elimination System (NPDES) Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. It is the responsibility of Regional Water Quality Control Boards to preserve and enhance the quality of the state's waters through the development of water quality control plans and the issuance of waste discharge requirements (WDRs). WDRs for discharges to surface waters also serve as NPDES permits (SWRCB, 2009). Under Phase II NPDES permit requirements, dischargers in any location whose projects disturb one or more acres of soil or whose projects disturb less than one acre but are part of a larger

common plan of development that in total disturbs one or more acres are required to obtain coverage under the statewide General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed buildings, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the project. The SWPPP must list best management practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. The SWPPP must also include a proposed schedule for the implementation and maintenance of erosion control measures and a description of the erosion control practices, including appropriate design details and a time schedule. Consideration must be given to the full range of erosion control BMPs, and the discharger is required to consider any additional site-specific and seasonal conditions when selecting and implementing appropriate BMPs. The SWPPP is also required to include a description of BMPs to reduce wind erosion at all times for the areas of active construction, with particular attention paid to stockpiled materials (SWRCB, 2009).

The Preliminary Grading and BMP Plan (King Engineering, 2008) indicate that the proposed project will comply with the design standards required by the NPDES General Permit by containing and detaining stormwater runoff and removing pollutants by soil contact, soil absorption, oxidation, root zone uptake, and bacterial breakdown.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. A direct result of the 1971 San Fernando earthquake and the extensive surface fault ruptures that damaged numerous homes, commercial buildings, and other structures, the Alquist-Priolo Earthquake Fault Zoning Act's main purpose is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The act only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Seismic Hazards Mapping Act (discussed below) addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning and controlling new or renewed construction. The law requires that before a project can be permitted, cities and counties must require a geologic investigation to demonstrate that proposed buildings will not be constructed across active faults. An evaluation and written report of a specific site must be prepared by a licensed geologist. If an active fault is found, a structure for human occupancy cannot be placed over the trace of the fault and must be set back from the fault (generally 50 feet) (DOC, 2009).

The project site is not located within an Alquist-Priolo active fault zone, earthquake hazard zone, or Seismic Hazard Zone (California Division of Mines and Geology, 2009b).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) of 1990 (Public Resources Code, Chapter 7.8, Section 2690-2699.6), passed by the legislature following the 1989 Loma Prieta earthquake, directs the Department of Conservation, California Geological Survey to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. The purpose of the SHMA is to minimize loss of life and property through the identification, evaluation, and mitigation of seismic hazards.

Staff geologists in the Seismic Hazard Zonation Program gather existing geological, geophysical, and geotechnical data from numerous sources to produce the Seismic Hazard Zone Maps. They integrate and interpret these data regionally in order to evaluate the severity of the seismic hazards and designate as Zones of Required Investigation those areas prone to liquefaction and earthquake-induced landslides. Cities and counties are then required to use the Seismic Hazard Zone Maps in their land use planning and building permit processes. The Seismic Hazards Mapping Act requires site-specific geotechnical investigations to be conducted within the Zones of Required Investigation to identify and evaluate seismic hazards and formulate mitigation measures prior to permitting most developments designed for human occupancy (DOC, 2009).

California Building Code

The State of California provides minimum standards for structural design and site development through the California Building Standards Code (California Code of Regulations (CCR), Title 24). The California Building Code (CBC) is based on the Uniform Building Code (UBC), used widely throughout the United States (generally adopted on a state-by-state or district-by-district basis), and has been modified for California conditions with numerous more detailed and/or more stringent regulations. Where no other building codes apply, Chapter 18 of the UBC/CBC regulates excavation, foundations, and retaining walls, and Appendix Chapter A33 regulates grading activities, including drainage and erosion control, and construction on expansive soils. The County has adopted the 2001 California Building Code, which is based on the 1997 Uniform Building Code. In addition, the County Code contains provisions related to building construction. The County Code has been amended for revisions, consolidations, and reinstatement/ clarification of various construction requirements, including revision of administrative requirements and procedures.

The state earthquake protection law (California Health and Safety Code 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety requirements are set forth in Chapter 16 of the UBC/CBC. The UBC/CBC identifies seismic factors that must be considered in structural design. It also divides California into two “seismic zones,” Zone 3 and Zone 4, each of which has its own seismic design and construction standards. Zone 4 standards are more stringent than Zone 3 standards, but seismic standards in both zones are more stringent than those generally applied elsewhere in the United States. The project site is located in Seismic Zone 3.

12.2.3 Local

Placer County General Plan

The Placer County General Plan includes policies that call for the County to ensure that planning of land uses and new development are compatible with the local geologic and soil resources. See **Table 12-1** below for applicable policies and an evaluation of the consistency of the proposed

project with those policies. While this DEIR analyzes the project's consistency with the Placer County General Plan pursuant to CEQA Section 15125(d), the Placer County Board of Supervisors will ultimately make the determination of the project's consistency with the General Plan.

TABLE 12-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

General Plan Policies	Consistent with General Plan?	Analysis
Policy 1.K.4: The County shall require that new development incorporates sound soil conservation practices and minimizes land alterations. Land alterations should comply with the following guidelines: a. Limit cuts and fills; b. Limit grading to the smallest practical area of land; c. Limit land exposure to the shortest practical amount of time; d. Replant graded areas to ensure establishment of plant cover before the next rainy season; and e. Create grading contours that blend with the natural contours on site or look like contours that would naturally occur.	Consistent, with Mitigation	The project proposes cut and fill as part of site engineering. Mitigation measures (MM 12.3a through MM 12.3h) are provided to address exposure of soils and to reduce erosion.
Policy 8.A.2: The County shall require submission of a preliminary soils report, prepared by a registered civil engineer and based upon adequate test borings, for every major subdivision and for each individual lot where critically expansive soils have been identified or are expected to exist.	Consistent	The applicant has prepared a Geotechnical Engineering Report prepared by Holdrege and Kull (2009). This report included laboratory tests on select soil samples obtained during a subsurface investigation to determine their engineering material properties.
Policy 8.A.3: The County shall prohibit the placement of habitable structures or individual sewage disposal systems on or in critically expansive soils unless suitable mitigation measures are incorporated to prevent the potential risks of these conditions.	Consistent, with Mitigation	The Geotechnical Engineering Report identified recommendations for engineering the project site to support the proposed project. Recommendations are identified which shall be followed as part of project construction. Mitigation measure MM 12.5a addresses potential impacts associated with expansive soils.

Granite Bay Community Plan

The Granite Bay Community Plan establishes specific goals and policies which are intended to ensure that planning of land uses and new development is compatible with the local geologic and soil resources. **Table 12-2** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to geology and soil resources. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Community Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this Draft EIR.

TABLE 12-2
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistent with Community Plan?	Analysis
General Community Policy 2: Population densities within the planning area should be guided by considerations of topography, geology, vegetative cover, preservation of natural terrain and resources, and access to transportation and service facilities.	Consistent	Topography, geology, vegetative cover, preservation of natural terrain and resources, and access to transportation and service facilities are all discussed in this DEIR in this section, Section 6.0, Biological Resources, and Section 9.0, Transportation and Traffic.
Safety Policy 1.1: Maintain strict enforcement of seismic safety standards for new construction contained in the Uniform Building Code.	Consistent	The plans for proposed project will be subject to County approval, which includes ensuring compliance with the Uniform Building Code.
Safety Policy 1.2: Review future developments using all available seismic data and considering recommendations from the Health and Safety Chapter of the Countywide General Plan Policy Document.	Consistent	See Table 12-1 above for a discussion of the project's compliance with policies in the Placer County General Plan.
Safety Policy 1.3: Require soils or geologic reports for construction or extensive grading in potential seismic problem areas.	Consistent	A geotechnical report was prepared for the proposed project by Holdrege & Kull on April 15, 2009.
Safety Policy 1.4: Implement fully the provisions of the Grading Ordinance which applies to the Granite Bay area.	Consistent, with Mitigation	Mitigation measure MM 12.3f, described below, requires the project to comply with specific provisions of the County Grading Ordinance.

Placer County Grading Ordinance – Article 15.48

The grading ordinance was codified in Article 15.48 of the Placer County Municipal Code to regulate grading on property to ensure public safety; to avoid pollution of watercourses with hazardous materials, nutrients, and sediments caused by surface runoff on or across the permit area; and to ensure that the intended use of a graded site is consistent with the County General Plan, any adopted specific plans, and applicable Placer County ordinances including the zoning ordinance, flood damage prevention ordinance (Article 15.52), environmental review ordinance (Chapter 18 Placer County Code), and applicable chapters of the California Building Code.

The grading ordinance requires a grading permit for projects with grading and/or other construction with ground disturbance of one acre or more. Grading permit conditions are detailed in the ordinance and include such items as mitigation measures, requirements for dust, erosion, sediment, and noise control, hours of operation, and haul routes. Furthermore, no grading activity shall be in violation of provisions of any applicable NPDES stormwater discharge permit.

12.3 IMPACTS

12.3.1 Standards of Significance

Based on Appendix G of the CEQA Guidelines, a geology, soils, or mineral resources impact is considered significant if project implementation would result in any of the following:

1) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death, involving:

   a. 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.

   b. Strong seismic ground shaking.

   c. Seismic-related ground failure, including liquefaction.

   d. Landslides.

2) Result in substantial soil erosion or the loss of topsoil.

3) 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.

4) 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.

5) 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.

Since the proposed project will be served with municipal wastewater service, no septic systems are proposed as part of the project. Therefore, item 5, above, will not be discussed further in the DEIR.

Methodology

Information to establish geological baseline conditions was compiled from published information and site visits by the preparer of this Draft EIR. Technical reports and information published by the California Geological Survey, the Placer County General Plan, the Granite Bay Community Plan, the Holdrege and Kull Geotechnical Engineering Report for this project, and other relevant environmental documents were used to describe existing conditions. The analysis of geologic and soils impacts is qualitative and evaluates the extent to which development activities could affect, or be affected by, known geologic and soils conditions. The significance of impacts is based on the Thresholds of Significance presented in the following section.

The information obtained from the aforementioned sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects.

12.3.2 Project-Level Impacts and Mitigation Measures

IMPACT 12-1: Exposure to Strong Seismic Shaking

The Geotechnical Engineering Report (Holdrege & Kull, 2009) included a review of the California Geological Survey Open File Report 96-08, Probabilistic Seismic Hazard Assessment for the State of California, and the 2002 update entitled California Fault

Parameters. These documents indicate the project site is located within the Foothills Fault System. The Foothills Fault System is designated as a Type C fault zone, with low seismicity and a low rate of recurrence. The 1997 edition of California Geological Survey Special Publication 43, Fault Rupture Hazard Zones in California, describes active faults and fault zones (activity within 11,000 years), as part of the Alquist-Priolo Earthquake Fault Zoning Act. The map and document indicate the project site is not located within an Alquist-Priolo active fault zone. As a result, potential for ground rupture is unlikely.

The site is located within Seismic Zone 3 and ground shaking will occur during seismic events on nearby active faults. The project will be required to be designed in accordance with the California Building Code. The Geotechnical Engineering Report identifies seismic design parameters for the project which were developed based on Section 1613 of the 2007 California Building Code (CBC) and the United States Geological Survey (USGS), Java Ground Motion Parameter Calculator, Earthquake Ground Motion Tools, Version 5.0.8. Construction of the project in compliance with the current edition of the California Building Code would reduce the likelihood of severe damage due to ground shaking to minimal levels. Therefore, impacts associated with strong seismic ground shaking are considered **less than significant**. No mitigation is required.

IMPACT 12-2: Seismic-Related Impacts

As mentioned above, the project site is located in an area classified as a low seismic activity zone under the Alquist-Priolo Act. The project site is not near any Alquist-Priolo Earthquake Fault Zone, and Placer County is not on the state's Alquist-Priolo Fault Zone Listing. Furthermore, the project site is not located in a designated Seismic Hazard Zone, indicating that liquefaction and landslide hazards would be insignificant (California Division of Mines and Geology, 2009a). In the Geotechnical Engineering Report, Holdrege and Kull indicated that the risk of seismically induced hazards such as liquefaction is remote at the project site. This conclusion is based on site observations, the geology of the region, and prior experience in the area (Holdrege and Kull, 2009).

In addition, there is no known landsliding or slope instability related to the project site. The proposed project avoids the majority of the steep (>30 percent) slopes located in the southeastern portion of the site. Further, materials underlying the site such as granite and volcanic bedrock are considered to be unlikely to be susceptible to compressibility or collapse (Holdrege and Kull, 2009). Therefore, seismically induced impacts such as liquefaction and landslides are considered **less than significant**. No mitigation beyond compliance with the requirements of the Geotechnical Engineering Report prepared by Holdrege and Kull (2009) is required.

IMPACT 12-3: Erosion and Loss of Topsoil
SIGNIFICANCE: Potentially significant
MITIGATION:

The proposed project will disturb approximately 17 acres of the property to accommodate construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements. Although the site has been previously disturbed, the disruption of soils associated with project construction will increase the potential for erosion and contamination of stormwater runoff. Clearing, grading, and excavation activities would remove vegetative cover from the soils and expose soils to the effects of wind, rain, and surface flow as a result of construction activities. Substantial earthwork would be necessary to prepare the site. Estimated fill depths of up to 20 feet and 10-foot cuts are proposed as part of site engineering (Holdrege and Kull, 2009). The transport of on-site material (approximately 101,000 cubic yards)

is also proposed (Placer County, 2008). Thus, the construction phase will create significant potential for erosion as disturbed soil may come in contact with wind or precipitation that could transport sediment to the air and/or adjacent waterways.

Discharge of concentrated runoff after the project is completed could also contribute to erosion potential in the long term. Erosion potential and water quality impacts are always present and occur when protective vegetative cover is removed and soils are disturbed. It is primarily the shaping of building pads, grading for roadways, and trenching for utilities that are responsible for accelerating erosion and degrading water quality. This disruption of soils on the site has the potential to result in significant increases in erosion of soils both on and off the site. While the project has prepared a Preliminary Grading & BMP Plan (King Engineering, 2008), additional mitigation measures are needed to address potential erosion impacts. Therefore, this impact is considered **potentially significant**.

Mitigation Measure 12-3 Erosion Mitigation Measures

MM 12-3a Water quality best management practices (BMPs) shall be designed according to the California Stormwater Quality Association Stormwater Best Management Practice Handbooks for Construction, for New Development/Redevelopment, and/or for Industrial and Commercial, and/or other similar source as approved by the County Engineering and Surveying Department (ESD).

Construction (temporary) BMPs for the project include, but are not limited to, a stabilized construction entrance, straw wattles, silt fences, water bars/berms, flow spreaders, gravel bags, straw mulch, inlet filters, sediment traps, and revegetation of disturbed areas.

Storm drainage from on- and off-site impervious surfaces (including roads) shall be collected and routed through specially designed catch basins, vegetated swales, vaults, infiltration basins, water quality basins, filters, etc. for entrapment of sediment, debris, and oils/greases or other identified pollutants, as approved by the ESD. BMPs shall be designed at a minimum in accordance with the Placer County Guidance Document for Volume and Flow-Based Sizing of Permanent Post-Construction Best Management Practices for Stormwater Quality Protection.

Post-development (permanent) BMPs for the project include, but are not limited to, clarifying basins, erosion mat/rock lines/seeded ditches and swales, rock flow spreaders, and detention basins. No water quality facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

All BMPs shall be maintained as required to ensure effectiveness. The applicant shall provide for the establishment of vegetation, where specified, by means of proper irrigation. Proof of ongoing maintenance, such as contractual evidence, shall be provided to the ESD upon request. Maintenance of these facilities shall be provided by the project owners/permittees unless, and until, a County Service Area is created and said facilities are accepted by the County for maintenance. Contractual evidence of a monthly parking lot sweeping/vacuuming and catch basin cleaning program shall be provided to the ESD upon request. Failure to do so will be grounds for discretionary permit revocation. Prior to Improvement

Plan or Final Map approval, easements shall be created and offered for dedication to the County for maintenance and access to these facilities in anticipation of possible County maintenance.

MM 12.3b The applicant shall obtain a construction stormwater quality permit of the National Pollutant Discharge Elimination System (NPDES) program from the State Regional Water Quality Control Board and shall provide to the Engineering and Surveying Department evidence of a state-issued WDID number or filing of a Notice of Intent and fees prior to start of construction.

MM 12.3c This project is located within the area covered by Placer County's municipal stormwater quality permit, pursuant to the National Pollutant Discharge Elimination System (NPDES) Phase II program. Project-related stormwater discharges are subject to all applicable requirements of this NPDES permit. BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff in accordance with "Attachment 4" of Placer County's NPDES Municipal Stormwater Permit (State Water Resources Control Board NPDES General Permit No. CAS000004).

MM 12.3d Graded portions of the site shall be seeded as soon as possible to allow vegetation to become established prior to and during the rainy season. In addition, since grading will result in more than one acre of soil disturbance, the applicant shall prepare a site-specific stormwater pollution prevention plan. At a minimum, the following controls shall be installed prior to and during grading to reduce erosion.

- Prior to commencement of site work, fiber rolls shall be installed down slope of the proposed area of disturbance to reduce migration of sediment from the site. Fiber rolls on slopes are intended to reduce sediment discharge from disturbed areas, reduce the velocity of water flow, and aid in the overall revegetation of slopes. The fiber rolls shall remain in place until construction activity is complete and vegetation becomes established.

- Soil exposed in permanent slope faces shall be hydroseeded or hand seeded/strawed with an appropriate seed mixture compatible with the soil and climate conditions of the site as recommended by the local Resource Conservation District.

- Following seeding, jute netting or erosion control blankets shall be placed and secured over the slopes steeper than 2:1, horizontal to vertical.

- Surface water drainage ditches shall be established as necessary to intercept and redirect concentrated surface water away from cut and fill slope faces. The intercepted water shall be discharged into natural drainage courses or into other collection and disposal structures.

MM 12.3e The applicant shall prepare and submit Improvement Plans, specifications, and cost estimates (per the requirements of Section II of the Land Development Manual [LDM] that are in effect at the time of submittal) to the Engineering and Surveying

Department (ESD) for review and approval of each project phase. The plans shall show all conditions for the project as well as pertinent topographical features both on- and off-site. All existing and proposed utilities and easements, on-site and adjacent to the project that may be affected by planned construction shall be shown on the plans. All landscaping and irrigation facilities within the public right-of-way (or public easements), or landscaping within sight distance areas at intersections, shall be included in the Improvement Plans. The applicant shall pay plan check and inspection fees. Prior to plan approval, all applicable recording and reproduction costs shall be paid. The cost of the above-noted landscape and irrigation facilities shall be included in the estimates used to determine these fees. It is the applicant's responsibility to obtain all required agency signatures on the plans and to secure department approvals. If the design/site review process and/or Placer County Development Review Committee (DRC) review is required as a condition of approval for the project, said review process shall be completed prior to submittal of Improvement Plans. Record drawings shall be prepared and signed by a California Registered Civil Engineer at the applicant's expense and shall be submitted to the ESD in both electronic and hard copy format prior to acceptance by the County of site improvements.

MM 12.3f All proposed grading, drainage improvements, vegetation, tree impacts, and tree removal shall be shown on the Improvement Plans and all work shall conform to provisions of the County Grading Ordinance (Section 15.48, Placer County Code) and the Placer County Flood Control District's Stormwater Management Manual. The applicant shall pay plan check fees and inspection fees. No grading, clearing, or tree disturbance shall occur until:

- Improvement Plans are approved and any required temporary construction fencing has been installed and inspected by a member of the Placer County Development Review Committee (DRC). All cut/fill slopes shall be at 2:1 (horizontal to vertical) unless a soils report supports a steeper slope and the Engineering and Surveying Department (ESD) concurs with said recommendation.

- All facilities and/or easements dedicated or offered for dedication to Placer County or to other public agencies which encroach on the project site or within any area to be disturbed by the project construction shall be accurately located on the Improvement Plans. The intent of this requirement is to allow review by concerned agencies of any work that may affect their facilities.

- The applicant shall revegetate all disturbed areas. Revegetation undertaken from April 1 to October 1 shall include regular watering to ensure adequate growth. A winterization plan shall be provided with project Improvement Plans. It is the applicant's responsibility to assure proper installation and maintenance of erosion control/winterization during project construction. Erosion control will be provided where roadside drainage is off of the pavement, to the satisfaction of the ESD.

- Submit to the ESD a letter of credit or cash deposit in the amount of 110 percent of an approved engineer's estimate for winterization and permanent erosion control work prior to Improvement Plan approval to guarantee protection against erosion and improper grading practices. Upon the County's acceptance of improvements and

satisfactory completion of a one-year maintenance period, unused portions of said deposit shall be refunded to the project applicant or authorized agent.

- If, at any time during construction, a field review by County personnel indicates a significant deviation from the proposed grading shown on the Improvement Plans, specifically with regard to slope heights, slope ratios, erosion control, winterization, tree disturbance, and/or pad elevations and configurations, the plans shall be reviewed by the DRC/ESD for a determination of substantial conformance to the project approvals prior to any further work proceeding. Failure of the DRC/ESD to make a determination of substantial conformance may serve as grounds for the revocation/modification of the project approval by the appropriate hearing body.

- Any work affecting facilities maintained by, or easements dedicated or offered for dedication to, Placer County or other public agency may require the submittal and review of appropriate Improvement Plans by the ESD or the other public agency.

MM 12.3g Staging Areas: Stockpiling and/or vehicle staging areas shall be identified on the Improvement Plans and located as far as practical from existing dwellings and protected resources in the area.

MM 12.3h If blasting is required for the installation of site improvements, the developer will comply with applicable County ordinances that relate to blasting and use only contractors licensed by the State of California to conduct these operations.

However, with implementation of mitigation measures **MM 12.3a** through **MM 12.3h**, impacts associated with soil erosion would be reduced to less than significant.

IMPACT 12-4: Unstable Geologic Unit

Geology underlying the site includes early Pliocene-late Miocene age andesitic conglomerate and mudflow breccia (lahar) of the Mehrten Formation. The andesitic lava flows that underlie the site contain subrounded to subangular boulders of andesite and other rock types that were entrained by the lava as it flowed downslope and solidified. Because the site is generally underlain by resistant rock at relatively shallow depths, the likelihood of deep-seated failure is considered very low (Holdrege and Kull, 2009). Overall, the site is generally considered to be geologically stable for development provided that the geotechnical engineering recommendations and design criteria presented in the Geotechnical Engineering Report are incorporated into the project plans. According to soil sampling, soil types, densities, and subsurface conditions are adequate to support planned construction, and there are no outstanding issues identified in the geotechnical analysis which would indicate the need for mitigation. Therefore, impacts associated with an unstable geologic unit are considered **less than significant**. No mitigation beyond compliance with the provisions of the Geotechnical Engineering Report prepared by Holdrege and Kull (2009) is required.

IMPACT 12-5: Expansive Soils

According to the preliminary geotechnical report dated May 23, 2003, by Kleinfelder and a letter from Holdrege and Kull dated June 26, 2007, the site is underlain by the Mehrten Formation (Placer County, 2008). Expansive soils are typical of Mehrten volcanics. Therefore there is a possibility that highly expansive soils will create substantial risks to life or property. Laboratory testing by Holdrege and Kull (2009) on trench excavations determined that the site consists

mainly of soil classified as silty gravel with sand. Expansion index test results indicated that this soil exhibited very low expansion potential, as classified by UBC guidelines. However the potential exists for fine grained, potentially expansive soil to be encountered during site preparation. If clayey, potentially expansive soil is observed, expansion index and/or Atterberg limits testing will be performed to evaluate the expansion potential of the soil. Such soils could present problems with regard to supporting building foundations.

Mitigation Measure 12-5 Expansive Soils Mitigation Measures

Fine grained, potentially expansive soil, as determined by the project's geotechnical engineer, that is encountered during grading shall be mixed with granular soil or overexcavated and stockpiled for removal from the project site or for later use in landscape areas. A typical mixing ratio for granular to expansive soil is 4 to 1. The actual mixing ratio shall be determined by the project's geotechnical engineer.

- Soil used for fill shall consist of uncontaminated, predominantly granular, non-expansive native soil or approved import soil. Rock used in fill shall be broken into pieces no larger than 8 inches in diameter. Rocks larger than 8 inches are considered oversized material and shall be stockpiled for off-haul or later use in landscape areas and drainage channels.

- Cohesive, predominantly fine grained, or potentially expansive soil encountered during grading shall be stockpiled for removal, mixed as directed by the project engineer, or used in landscape areas.

- As an option, cohesive fine grained or potentially expansive soil can often be placed in the deeper portions of proposed fill (e.g., depths greater than 3 feet below subgrade in building footprints). However, this option would have to be evaluated on a case-by-case basis with consideration of the fill depth and proposed loading.

- Footings for single story structures shall be a minimum of 12 inches wide and trenched through any loose surface material, potentially expansive soil, or untested fill, and a minimum of 12 inches into competent native soil, weathered rock or compacted fill. Footings for two-story structures shall be a minimum of 15 inches wide and trenched a minimum of 18 inches into competent native soil, weathered rock, or compacted fill. If clay is encountered at the base of footing excavations, the footing shall be deepened through the clay lens into underlying granular material or weathered rock, as determined in the field by the project engineer.

- Prior to placing the vapor retarder and concrete, slab subgrade soil must be moisture conditioned to between 75 and 90 percent saturation to a depth of 24 inches. Moisture conditioning shall be performed for a minimum of 24 hours prior to concrete placement. Clayey soil may take up to 72 hours to reach this required degree of saturation. If the soil is not moisture conditioned prior to placing concrete, moisture will be wicked out of the concrete, possibly contributing to shrinkage cracks. Additionally, moisture conditioning the soil prior to placing concrete will reduce the likelihood of soil swell or heave following construction at locations where fine grained, potentially expansive soil is encountered. To facilitate slab-on-grade construction, the project geotechnical engineer recommends that the slab subgrade soil be moisture conditioned following rock placement. Following moisture conditioning, the vapor retarder shall be placed.

Though this impact is considered **potentially significant, i**mplementation of mitigation measure **MM 12-5** would reduce impacts associated with expansive soils to less than significant.

13.0
HYDROLOGY AND WATER QUALITY

13.0 HYDROLOGY AND WATER QUALITY

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") identifies and describes the existing hydrologic resources, drainage conditions, flooding hazards, and surface and groundwater quality at, and in the vicinity, of the project site. This section also evaluates the potential impacts of implementing the proposed project with respect to erosion/sedimentation and water quality, drainage, flooding and dam failure inundation hazards, and groundwater recharge and depletion, and identifies appropriate mitigation measures to lessen the identified impacts, where necessary. The information provided in this section is based on state and regional studies on water quality, local studies and plans on water supply and infrastructure, and data from the Federal Emergency Management Agency (FEMA). See Section 14.0, *Public Services*, for a discussion of the project's potential impacts related to water supply infrastructure and the provision of water to the proposed project. See Section 9.0 *Biological Resources* for discussion of wetlands and vernal pools.

13.1 ENVIRONMENTAL SETTING

13.1.1 Climate and Precipitation

The climate of the County of Placer and the project site is generally characterized by warm summers and mild winters. Monthly averages of daily extreme temperatures range from 39 degrees Fahrenheit minimum to 52 degrees Fahrenheit maximum in January, to 58 degrees Fahrenheit and 90 degrees Fahrenheit in July. The annual rate of precipitation averages 25 inches. Approximately 90 percent of average annual rainfall occurs in the six-month period extending from November to April. The area does experience ground fog during winter months (Placer County, 1989).

13.1.2 Surface Water Resources

Surface watersheds are those land areas that catch rain or snow and drain to specific marshes, streams, rivers, lakes, or the groundwater table. The project site is located within the Sacramento River watershed, which covers approximately 27,210 square miles and includes the entire area drained by the Sacramento River. The principal streams in the basin are the Sacramento River and its larger tributaries: the Pit, Feather, Yuba, Bear, and American rivers to the east, and Cottonwood, Stony, Cache and Putah creeks to the west. Major reservoirs and lakes include Shasta, Oroville, Folsom, Clear Lake, and Lake Berryessa (CVRWQCB, 2007).

The Sacramento River watershed is made up of many smaller, local watersheds and sub-watersheds. On the local level, the project site is located within the Dry Creek watershed, which generally includes the communities of Granite Bay and Loomis and the eastern portions of the cities of Rocklin and Roseville as well as portions of northern Sacramento County (see **Figure 13-1**). The Dry Creek watershed is one of the fastest-urbanizing areas in California. The resulting development has stressed the natural environment through the loss of riparian vegetation, steam bank erosion, and sedimentation of streams resulting in the perceived decline of water quality in Dry Creek and its tributaries (Placer and Sacramento Counties, 2003).

The project site is located in southeastern Placer County just west of Folsom Lake. The topography of the project site ranges from flat to slopes of up to 35 percent. The site drains to the south, toward an unnamed tributary of Miners Ravine. Topographic features include a man-made pond located near the center of the site, with a watershed area of approximately 44 acres. The pond's dam is approximately 17 feet high and 300 feet long. The volume of the pond is estimated

at 6 acre-feet. Immediately northwest of the site is an existing water reservoir operated by the San Juan Water District (King Engineering, 2007). Major surface hydrologic features in the vicinity of the project site are the American River, including Folsom Lake and Lake Natoma, and several small creeks and canals.

Lower American River

The lower American River is the main hydrologic feature in the project area. It flows from the Sierra Nevada foothills east of the project site into the rolling upland plain of the Sacramento Valley. The plain gradually flattens as it meets the alluvial floodplain of the Sacramento River. The floodplain of the lower American River is bordered by high bluffs in its upper reaches and by levees in its lower reaches (Sacramento County, 2006).

Folsom Lake

Folsom Lake was created in 1955 when Folsom Dam, a concrete dam flanked by earth wing dams and dikes with a total length of about 9 miles, was constructed on the lower American River. The lake has a surface area of about 10,000 acres when full and has 75 miles of shoreline. It extends about 15 miles up the north fork and about 10½ miles up the south fork of the American River. The lake level normally varies from 466 feet elevation in early summer to a low of 426 feet in early winter (California Department of Parks and Recreation, 2009).

Lake Natoma

Lake Natoma was created by the construction of the Nimbus Dam and acts as an afterbay or regulating reservoir for Folsom Dam. The dam is located 7 miles downstream from Folsom Dam and is a straight concrete gravity structure, 87 feet high and 1,093 feet long. The lake stores releases from Folsom Dam and re-regulates them to a steady flow downstream in the American River. It also serves as a diversion dam to direct water into Folsom South Canal. Two 6,750-kilowatt generators produce power from Nimbus Dam water releases (California Department of Parks and Recreation, 2009).

Dry Creek

Dry Creek is a perennial stream, approximately 17.6 miles long that originates at the confluence of Secret Ravine and Miners Ravine near the intersection of Taylor Road and Eureka Road just east of Interstate 80 in the City of Roseville. Dry Creek flows year-round. Summer base flows are sustained by irrigation runoff, groundwater discharge, and treated sewage effluent from water treatment plant facilities. Dry Creek ultimately drains into Steelhead Creek (a.k.a. the Natomas East Main Drain) within the Ueda Parkway in the community of Rio Linda. In 2001, the creek's metered flow at the Vernon Street Bridge in Roseville ranged from a low of 14.3 cubic feet per second (cfs) in August to a high of 378 cfs in February. The average annual watershed runoff is approximately 16,400 acre-feet, with about 95 percent of this runoff occurring between December and May. The low summer flows comprise primarily groundwater seepage and wastewater flow from the Dry Creek Roseville Wastewater Treatment Plant in Roseville. Tributaries to Dry Creek include Miners Ravine, Secret Ravine, Antelope Creek, Strap Ravine, Linda Creek, and Cirby Creek (Placer and Sacramento Counties, 2003).

Miners Ravine

Miners Ravine is a perennial tributary of Dry Creek. The main channel is approximately 15.2 miles long and drains approximately 20.1 square miles of mixed-use land. The upper reaches are composed of intermittent drainages and the lower reaches are primarily intermittent with some perennial reaches. The upland areas surrounding the ravine are characterized by gently rolling hills separated by broad flat valleys. The valley floor is a flat floodplain that varies from 100 to 300 feet in width; however, the stream channel itself is only 12 to 30 feet wide and 4 to 12 feet deep.

Flow through Miners Ravine is flashy, due to the shallow depth to bedrock, limited soil permeability, and limited water holding capacity. Additionally, the natural channel is small relative to the floodplain area; therefore, flooding occurs fairly often. Summer flow is often less than one cfs, whereas flood flows have been estimated at as high as 8,428 cfs at the confluence with Dry Creek and Antelope Creek during the winter wet weather season (October through April). Summer flows are generally composed of spring flows and components or urban runoff including ponds, landscape water, and historically, sewage flows.

Miners Ravine is still known to support anadromous fish, including fall run Chinook salmon and steelhead. In addition to streams and creeks, Miners Ravine includes other water features such as Oak Lake, Cottonwood Lake, Pine Lake, Laurel Lake, Mamouth Reservoir, another unnamed reservoir, and more than approximately 20 small, unnamed ponds (Placer and Sacramento Counties, 2003).

Secret Ravine

Secret Ravine is a 7.8-mile-long perennial stream that originates in the northeastern-most portion of the Dry Creek watershed and flows southwest in a narrow valley nearly parallel to Interstate 80 before draining into Dry Creek. The upper reaches of Secret Ravine are all intermittent drainageways while the lower reaches are intermittent and perennial. The main channel is typically 6 to 8 feet deep with a flat bottom and a median width of 12 feet. Anadromous fish, including fall run Chinook salmon and steelhead, have been found in Secret Ravine.

Typical flows in Secret Ravine have been measured and estimated in previous studies which indicate that flows could be as low as 0.5 cfs during early fall, while wet weather (February) flows were approximately 25 cfs in the lower reaches and 5 to 10 cfs in the upper reaches. Ten-year peak flows have been modeled at approximately 1,729 cfs. Dry weather flows are primarily due to urban inputs, such as lawn irrigation and excess drainage, sewage effluent, unknown amounts of tailwater delivered by the Placer County Water Agency's irrigation releases, and other releases such as small amounts of freshwater seeps (Placer and Sacramento Counties, 2003).

Irrigation Facilities

Within the Dry Creek watershed there also numerous canals, aqueducts, siphons, reservoirs, ponds, dams, pipelines, and other non-natural water features that significantly influence local hydrology. There is little readily available information about these features or about water use/withdrawals and their resulting impact on the local/regional hydrology (Placer and Sacramento Counties, 2003). Major facilities within the vicinity of the project site include the Baughman Canal and the Placer County Water Agency's Boardman Canal.

Project Site Pond and Dam

There is a man-made pond with a volume of approximately 6 acre-feet located near the center of the project site. The pond is impounded by a dam approximately 17 feet high and 300 feet long and has a watershed area of about 44 acres. The age of the pond is unknown. The pond has a grass-lined earthen spillway with a trapezoidal-shaped cross section and is approximately 14 feet wide at its bottom (King Engineering, 2007). The pond has a bottom outlet slide gate valve of unknown size that is normally closed. The volume of the pond is estimated at 6 acre-feet. The pond and dam are too small to be under the jurisdiction of California Division of Safety of Dams.

In addition, there is a stormwater detention basin operated by the San Juan Irrigation District located immediately northeast of the project site (see **Figure 4-1**).

13.1.3 Drainage and Flooding

Soils

The Natural Resources Conservation Service (NRCS) has defined the following four Soil Group designations:

Group A: *Low runoff potential* soils having high infiltration rates even when thoroughly wetted and consisting chiefly of deep, well-drained sands or gravels. These soils have a high rate of water transmission.

Group B: Soils having *moderate infiltration* rates when thoroughly wetted and consisting chiefly of moderately deep to deep, moderately well to well-drained sandy-loam with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission.

Group C: Soils having a *low infiltration* rate when thoroughly wetted and consisting chiefly of silt-loam soils with a layer that impedes downward movement of water, or soils with moderately fine to fine texture. These soils have a slow rate of water transmission.

Group D: *High runoff potential* soils having very slow infiltration rates when thoroughly wetted and consisting chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a clay pan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have slow rate of water transmission.

The Soil Survey of Placer County (USDA Soil Conservation Service, 1980) shows the on-site soil series to be comprised of Andregg, Exchequer, and Inks Xerofluvent soils. These soils are classified as hydrologic groups C and D (King Engineering, 2007).

Topography and Drainage

Ground slopes within the project site range from flat to 35 percent. As described above, topographic features on the site include a man-made pond located near the center of the site, having a watershed area of about 44 acres (King Engineering, 2007).

Figure 13-2 illustrates the pre-development drainage conditions on the site and designates the locations where drainage discharges across the subdivision boundary (at points A and B). As shown on this figure, the project site generally drains to the south, toward an unnamed tributary to Miners Ravine. Runoff drains from the site at four locations as described below.

1) Point A and downstream: This is an unnamed intermittent drainage course flowing downstream to the south with a 32-acre watershed area. At Point A, this drainage course is grass lined with some blackberry bushes and surrounding oaks. The flow line is stable with only minor erosion. The drainage course leaves the project site under a wire fence and continues south to a gravel driveway.

2) Point B and downstream: This is an unnamed interment drainage course flowing downstream to the south with a 55-acre watershed area. At Point B, this drainage course has thick grass and no erosion. The drainage course leaves the project site under a split rail fence and continues south through a broad "v" shaped riprap swale approximately 10 feet wide to a concrete driveway with two 15-inch diameter culverts. No downstream erosion is apparent.

3) Point C and downstream: This is the south road gutter of Sierra College Boulevard which flows west and has a watershed area of 1.5 acres.

4) Area D and downstream: Drainage runoff from Basin D leaves the west property line as sheet flow with no defined drainage course (King Engineering, 2007).

Flooding

The FEMA Flood Insurance Rate Map for Placer County (Community-Panel No. 06061 C0481G) shows that the project site is in Flood Zone X indicating that the area is outside the 1 percent annual chance floodplain and is considered to be at minimal risk of flooding (FEMA, 2001; FEMA, 2009). Wetlands and vernal pools have been mapped on the site. See Section 9.0 *Biological Resources* for further discussion of wetlands and vernal pools.

Dam Failure Inundation

Dam failure flooding can occur as the result of partial or complete collapse of an impoundment. Dam failures often result from prolonged rainfall and flooding. The primary danger associated with dam failure is the high velocity flooding of those properties downstream of the dam. The Placer County Multi-Hazard Mitigation Plan (2005) identifies dams that could potentially impact Placer County including both dams within the county and dams that may lie in neighboring counties that drain into Placer County. There are 90 dams rated as "high" or "significant" hazard that could potentially impact Placer County should a failure occur. The areas at risk are located within the American River, Upper Bear River, North Tahoe, and Truckee River watersheds. The project site is located west of the American River watershed within the Dry Creek watershed. As such, the project site is not considered to be at risk of flooding resulting from a dam failure (Placer County, 2005).

13.1.4 Groundwater Resources

The Great Central Valley of California contains the largest basin-fill aquifer system in the state. The valley is in a structural trough about 400 miles long and ranges from 20 to 70 miles wide, extending over more than 20,000 square miles. The trough is filled to great depths by marine and continental sediments, which are the result of millions of years of inundation by the ocean and

erosion of the rocks that form the surrounding mountains. Sand and gravel beds in this basin-fill material form an important aquifer system.

The Department of Water Resources (DWR) divides this aquifer system into two groundwater basins, the Sacramento Valley Groundwater Basin and the San Joaquin Valley Groundwater Basin. It further divides the Sacramento Valley Basin into subbasins including the North American Groundwater Subbasin which underlies the project site (DWR, 2006).

The North American Groundwater Subbasin (DWR Basin No. 5-21.64) is located in the eastern central portion of the Sacramento Groundwater Basin. The surface area of the subbasin is approximately 548 square miles and is generally bounded by the Bear River to the north, the Feather River to the west, and the Sacramento River to the south. The eastern boundary is a north-south line extending from the Bear River south to Folsom Lake, which passes about 2 miles east of the City of Lincoln (DWR, 2006). The project site lies along this eastern boundary.

DWR estimates the total storage capacity of the subbasin at approximately 4.9 million acre-feet; however, there are no published reports on the actual amount of groundwater in storage in the subbasin (DWR, 2006).

Groundwater Levels and Recharge

Groundwater levels in southwestern Placer County and northern Sacramento County have generally decreased, with many wells experiencing declines at a rate of about 1½ feet per year for the last 40 years or more. Some of the largest decreases have occurred in the area of the former McClellan Air Force Base (DWR, 2006). According to DWR well data, groundwater levels in the vicinity of the project site range from 100 to over 160 feet below ground surface (DWR, 2009).

13.1.5 Water Quality

Surface Water Quality

The California Clean Water Act Section 303(d) list identifies water bodies with impaired water quality. Neither the American River nor any of the other minor streams in the vicinity of the project site are on the most recent (2006) 303(d) list. As such, none of these waterways are subject to a Total Maximum Daily Load (TMDL).

According to the U.S. Environmental Protection Agency's (USEPA) 2000 National Water Quality Report to Congress, the water quality of Dry Creek is slightly impaired due to unknown toxicity, pesticides, and priority organics. The sources of these impairments are unknown. However, flows in this creek below the Roseville Wastewater Treatment Plant (WWTP) are dominated by effluent which greatly influences downstream water quality characteristics. In addition, flows in Miners Ravine, a tributary to Dry Creek, are partially derived from effluent from the Placer WWTP located near Dick Cook Road. Wastewater treatment plants are generally required to monitor the water quality of their discharge and receiving water body to comply with the terms of their National Pollutant Discharge Elimination System (NPDES) permits. According to monitoring conducted at the Placer WWTP discharge point, Miners Ravine experiences dissolved oxygen impairment during the summer and temperature impairment most of the year, both of which appear to be unrelated to WWTP discharges. In addition, the ravine experiences higher conductivity (but within standards) and lower turbidity (but still exceeding standards) as a result of WWTP discharges. According to monitoring conducted at the Roseville WWTP discharge point, Dry Creek experiences dissolved oxygen impairment for cold water fish support

during the summer, temperature impairment from June through September, turbidity impairment November through May, and intermittent pH impairment, all of which appear to be unrelated to discharges from the WWTP. In addition, the creek experiences higher conductivity (but within standards), lower turbidity (within standards), lower dissolved oxygen (but no impairment), higher temperature (exceeding standards), lower pH (within standards), and unknown nutrient contributions, all associated with WWTP discharges (Placer and Sacramento Counties, 2003).

Water quality sampling within the Dry Creek watershed was also conducted by the Central Valley Regional Water Quality Control Board between fall 2000 and winter 2002 for dissolved oxygen, turbidity, conductivity, temperature, and pH. According to the sampling results, dissolved oxygen values were generally within standards except some summer samples likely due to the lower solubility of oxygen in warmer waters. Temperature measurements were similar to those of the Roseville WWTP with lower values upstream of the plant and lower values downstream. During the summer months of June through August, in-stream temperatures may impair water quality for aquatic life support based on established temperature standards for the nearby American River. Turbidity values were highly variable with 67 to 92 percent of samples exceeding standards. Conductivity was within standards during all sampling events, and all samples met pH standards with few exceptions (Placer and Sacramento Counties, 2003).

Groundwater Quality

Many areas of good quality groundwater exist in the North American subbasin. In some portions of the subbasin, groundwater quality is marginal. Elevated levels of total dissolved solids (TDS), chloride, sodium, bicarbonate, boron, fluoride, nitrate, iron, manganese, and arsenic may be of concern in some locations within the subbasin (DWR, 2006).

There are three sites within the subbasin with significant groundwater contamination issues: the former McClellan Air Force Base, the Union Pacific Railroad Rail Yard in Roseville, and the Aerojet Superfund site. Although the Aerojet site lies south of the subbasin, a contaminant plume extends north from Aerojet, under the American River, and into the subbasin. Other localized areas of contamination exist throughout the subbasin and are generally smaller in scope and extent of contamination (DWR, 2006).

13.1.6 Municipal Water Service

Municipal water service would be provided to the project site by the Placer County Water Agency (PCWA). PCWA provides water to approximately 220,000 people in Placer County including the cities of Auburn, Colfax, Loomis, and Rocklin, and to most of the small communities in unincorporated western Placer County along the Interstate 80 corridor below Alta. The site is located within PCWA's Zone 1 which extends from Auburn south to the northern boundary of Roseville. Sources of water for this zone are surface water from Pacific Gas & Electric's (PG&E) Wise/South Canal, PCWA's Boardman Canal, and the American River. American River water is pumped to the Auburn Tunnel, a 3-mile-long tunnel which connects the American River canyon with Auburn Ravine near Ophir. Water is also supplied to PG&E's South Canal by pumps that intercept the Auburn Tunnel and pump water to the surface and into the South Canal. PCWA also plans in the future to pump water from the Sacramento River to serve Zone 1 (PCWA, 2006). See Section 14.0, *Public Services*, for a discussion of the project's potential impacts related to water supply infrastructure and the provision of water to the proposed project.

13.2 REGULATORY FRAMEWORK

13.2.1 Federal

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e);
- Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual state or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such state or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain federal or state projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).

Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

Federal Emergency Management Agency

Placer County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency (FEMA). Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years although

such a flood may occur in any given year. The county is occasionally audited by the DWR to ensure the proper implementation of FEMA floodplain management regulations.

13.2.2 State

Senate Bill (SB) 610 and Assembly Bill (AB) 901

During the 2001 regular session of the State Legislature, SB 610 and AB 910 – Water Supply Planning, were signed and became effective January 1, 2002. SB 610 amends Public Resources Code Section 21151.9, requiring any environmental impact report, negative declaration, or mitigated negative declaration for a qualifying project to include consultation with affected water supply agencies (current law applies only to notices of preparation). SB 610 also amends the following: Water Code Sections 10656 and 10657 to restrict state funding for agencies that fail to submit their urban water management plan to the Department of Water Resources; and Water Code Section 10910 to describe the water supply assessment that must be undertaken for projects referred under PRC Section 21151.9, including an analysis of groundwater supplies. Water agencies would be given 90 days from the start of consultation in which to provide a water supply assessment of the CEQA lead agency; Water Code Section 10910 would also specify the circumstances under which a project for which a water supply assessment was once prepared would be required to obtain another assessment. AB 910 amends Water Code Section 10631, expanding the contents of the urban water management plans to include further information on future water supply projects and programs and groundwater supplies.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within 5 days of the subdivision application being accepted as complete for processing by the city or county. It adds Government Code Section 66473.7 with detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring a sufficient water supply to be available. Proof of availability must be requested of and provided by the applicable public water system. If there is no public water system, the city or county must undertake the analysis described in Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Act governs the coordination and control of water quality in the state and includes provisions relating to non-point source pollution. The California Coastal Commission, pursuant to the coastal act, specified duties regarding the federally approved California Coastal Management Program. This law requires that the State Water Resources Control Board, along with the California Coastal Commission, regional boards, and other appropriate state agencies and advisory groups, prepare a detailed program to implement the state's non-point source management plan on or before February 1, 2001. The law also requires that the state board, in consultation with the Commission and other agencies, submit copies of prescribed state and regional board reports containing information related to non-point source pollution, on or before August 1 of each year.

Regional Water Quality Control Board, Central Valley Region

The Regional Water Quality Control Board, Central Valley Region (CVRWQCB) provides planning, monitoring, and enforcement techniques for surface and groundwater quality in the Central Valley region. A basin plan provides more specific information for specific waterways within the region, in terms of establishing monitoring techniques to control pollutant levels within the waterways. The CVRWQCB also monitors stormwater quality from construction activities through a National Pollutant Discharge Elimination System (NPDES) permitting process.

Central Valley Regional Water Quality Control Plan (Basin Plan)

The Central Valley Regional Water Quality Control Plan covers all the drainage basin areas for the Sacramento and San Joaquin rivers, extending approximately 400 miles from the California-Oregon border to the headwaters of the San Joaquin River. The plan describes the beneficial uses to be protected in these waterways, water quality objectives to protect those uses, and implementation measures to make sure those objectives are achieved.

National Pollutant Discharge Elimination System

The Phase II NPDES Program is intended to reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. The Phase II NPDES Program contains the following six program elements, termed “Minimum Control Measures.”

Public Participation/Involvement

Providing opportunities for citizens to participate in program development and implementation, including effectively publicizing public hearings and/or encouraging citizen representatives to attend stormwater management program meetings.

Public Education and Outreach

Distributing educational materials and performing outreach to inform citizens about the impacts polluted stormwater runoff discharges can have on water quality.

Construction Site Runoff Control

Development, implementing, and enforcing an erosion and sediment control program for construction activities that disturb one or more acres of land (controls could include silt fences and temporary stormwater detention ponds).

Illicit Discharge Detection and Elimination

Developing and implementing a plan to detect and eliminate illicit discharges to the storm drain system. This includes developing a system map, informing the community about hazards associated with illegal discharges and improper disposal of waste, and enforcement measures.

Pollution Prevention/Good Housekeeping

Developing and implementing a program with the goal of preventing or reducing pollutant runoff from municipal operations. The program must include municipal staff training on pollution

prevention measures and techniques, which might include such things as regular street sweeping, reduction in the use of pesticides or street salt, or frequent catch-basin cleaning.

Post-Construction Runoff Control

Developing, implementing, and enforcing a program to address discharges of post-construction stormwater runoff from new development and redevelopment areas. Applicable controls could include preventative actions such as protecting sensitive areas (e.g., wetlands) or the use of structural best management practices (BMPs) such as grassed swales or porous pavement.

13.2.3 Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 13-1** lists the General Plan policies that relate to hydrology and water quality and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 13-1
GENERAL PLAN CONSISTENCY ANALYSIS – HYDROLOGY AND WATER QUALITY

General Plan Goals and Policies	Consistency Determination	Analysis
Public Facilities and Services Section		
Policy 4.C.5: The County shall require that new development adjacent to bodies of water used as domestic water sources adequately mitigate potential water quality impacts on these water bodies.	Consistent	The project site is located adjacent to a San Juan Water District water reservoir. However, due to the topography of the project site and its natural and planned drainage courses, no runoff would drain to this reservoir and there would be no impact to its water quality (see Figure 13-2 and Impact 13-3).
Policy 4.C.11: The County shall protect the watersheds of all bodies of water associated with the storage and delivery of domestic water by limiting grading, construction of impervious surfaces, application of fertilizers, and development of septic systems within these watersheds.	Consistent	Grading associated with construction of the proposed project would comply with all local regulations, would not be performed during the rainy season, and would comply with an approved Storm Water Pollution Prevention Plan (SWPPP) to protect water quality. The project would result in the construction of about 11.9 acres of impervious surfaces. However, this represents only about 16 percent of the total site and the remaining area to the south of the proposed church facilities would continue to remain undeveloped. In addition, the project includes an adequate drainage system with BMPs to manage runoff and protect water quality. No septic systems are proposed as part of the project.

General Plan Goals and Policies	Consistency Determination	Analysis
Policy 4.E.1: The County shall encourage the use of natural stormwater drainage systems to preserve and enhance natural features.	Consistent	The existing drainage pattern and watershed boundaries of the project site are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds. Over 80 percent of the site would be preserved in its natural condition.
Policy 4.E.4: The County shall ensure that new storm drainage systems are designed in conformance with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County Land Development Manual.	Consistent	The proposed drainage system would be designed and constructed in accordance with the Placer County Flood Control and Water Conservation District's Stormwater Management Manual and the County's Land Development Manual.
Policy 4.E.5: The County shall continue to implement and enforce its Grading Ordinance and Flood Damage Prevention Ordinance.	Consistent	The proposed project would comply with the County's Grading Ordinance and Flood Damage Prevention Ordinance as applicable.
Policy 4.E.7: The County shall prohibit the use of underground storm drain systems in rural and agricultural areas, unless no other feasible alternatives are available for conveyance of stormwater from new development or when necessary to mitigate flood hazards.	Consistent	Underground storm drain systems would be utilized only within the proposed parking areas and along proposed buildings. The existing drainage pattern and watershed boundaries of the project site are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds.
Policy 4.E.10: The County shall strive to improve the quality of runoff from urban and suburban development through use of appropriate and feasible mitigation measures including, but not limited to, artificial wetlands, grassy swales, infiltration/sedimentation basins, riparian setbacks, oil/grit separators, and other best management practices (BMPs).	Consistent	The proposed drainage system includes the use of both temporary and permanent BMPs to minimize sediment and pollutant content of site runoff.
Policy 4.E.11: The County shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures should take into consideration impacts on adjoining lands in the unincorporated area and on properties in jurisdictions within and immediately adjacent to Placer County.	Consistent	As discussed under Impact 13-3, the peak flows and volumes of project drainage would remain the same or be reduced with implementation of the project and proposed drainage improvements.
Policy 4.E.12: The County shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions.	Consistent	The project would result in the construction of about 11.9 acres of impervious surfaces. However, this represents only about 16 percent of the total site and the remaining area would continue undeveloped. The existing drainage pattern and watershed boundaries of the project site are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds.

General Plan Goals and Policies	Consistency Determination	Analysis
Policy 4.E.13: The County shall require that new development conforms with the applicable programs, policies, recommendations, and plans of the Placer County Flood Control and Water Conservation District.	Consistent	The proposed project would be designed and constructed in accordance with all Placer County regulations including those of the Placer County Flood Control and Water Conservation District.
Policy 4.E.14: The County shall require projects that have significant impacts on the quantity and quality of surface water runoff to allocate land as necessary for the purpose of detaining post-project flows and/or for the incorporation of mitigation measures for water quality impacts related to urban runoff.	Consistent	All project site runoff would be detained on-site in the existing pond/detention basin. The project would not have significant impacts on the quantity or quality of surface water runoff (see Impacts 13-1, 13-2, and 13-3 below).
Policy 4.E.16: The County shall strive to protect domestic water supply canal systems from contamination resulting from spillage or runoff.	Consistent	There are no domestic water supply canal systems on the project site. Runoff from the site would be routed through BMPs to minimize its sediment and pollutant content to protect downstream water quality.
Policy 4.F.1: The County shall require that arterial roadways and expressways, residences, commercial and industrial uses and emergency facilities be protected, at a minimum, from a 100-year storm event.	Consistent	The project site and surrounding roadways are located outside the 100-year flood zone.
Policy 4.F.4: The County shall require evaluation of potential flood hazards prior to approval of development projects. The County shall require proponents of new development to submit accurate topographic and flow characteristics information and depiction of the 100-year floodplain boundaries under fully-developed, unmitigated runoff conditions.	Consistent	The potential flood hazards associated with the proposed project are evaluated under Impact 13-5 below. The project is not located within a flood hazard zone as determined by FEMA and would not result in on-site or off-site flooding conditions due to increased stormwater runoff (see Impact 13-3).
Natural Resources Section		
Policy 6.A.5: The County shall continue to require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities and urban runoff and to encourage the use of BMPs for agricultural activities.	Consistent	The proposed drainage system includes the use of temporary and permanent BMPs on the project site in order to protect water quality.
Policy 6.A.7: The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.	Consistent	In accordance with this policy, Policy 36 from the Granite Bay Community Plan, and the County's Erosion and Sediment Control Ordinance (Section 15.48.630 of the County Code), grading activities would not be permitted during the rainy season.
Policy 6.A.10: The County shall protect groundwater resources from contamination and further overdraft by pursuing the following efforts: a. Identifying and controlling sources of potential contamination; b. Protecting important groundwater recharge areas; c. Encouraging the use of surface water to supply major municipal and industrial consumptive demands; d. Encouraging the use of treated wastewater for	Consistent	The proposed project would incorporate BMPs during construction and post-construction to protect surface water and groundwater quality. The project would not be served by groundwater supplies and would not affect groundwater levels.

General Plan Goals and Policies	Consistency Determination	Analysis
groundwater recharge; and e. Supporting major consumptive use of groundwater aquifer(s) in the western part of the County only where it can be demonstrated that this use does not exceed safe yield and is appropriately balanced with surface water supply to the same area.		
Policy 6.B.3: The County shall discourage direct runoff of pollutants and siltation into wetland areas from outfalls serving nearby urban development. Development shall be designed in such a manner that pollutants and siltation will not significantly adversely affect the value or function of wetlands.	Consistent	A portion of project site runoff would be directed to on-site vernal pools for storage/percolation. However, all runoff would be routed through BMPs to minimize sediment and pollutant levels and protect water quality.
Health and Safety Section		
Policy 8.B.4: The County shall require that the design and location of dams and levees be in accordance with all applicable design standards and specifications and accepted state-of-the-art design and construction practices.	Consistent	The existing pond and dam on the project site would be improved for use as a detention basin and to comply with all applicable standards.
Policy 8.B.5: The County shall coordinate with neighboring jurisdictions to mitigate the impacts of new development in Placer County that could increase or potentially affect runoff onto parcels downstream in a neighboring jurisdiction.	Consistent	As discussed under Impact 13-3 below, peak runoff flows and volumes leaving the project site would be the same or less than under current conditions and there would be no impact to downstream parcels within or outside Placer County.

Granite Bay Community Plan

The Granite Bay Community Plan was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). **Table 13-2** lists the Community Plan goals and policies that relate to hydrology and water quality and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 13-2
COMMUNITY PLAN CONSISTENCY ANALYSIS – HYDROLOGY AND WATER QUALITY

General Plan Goals and Policies	Consistency Determination	Analysis
Resources		
Policy 15: Retain in their natural condition all stream influence areas, including floodplains and riparian vegetation areas, while allowing for limited stream crossings for public roads, trail, and utilities.	Consistent	The existing drainage pattern and watershed boundaries of the project site are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds. There are no streams on the project site.
Policy 26: Review proposed projects for their potential adverse affect on air and water quality.	Consistent	The project's potential adverse affects on water quality are discussed under Impacts 13-1 and 13-2 below. The reader is referred to Section 10.0 for a discussion of the project's potential effects on air quality.

Policy 27: Encourage application of measures to mitigate erosion and water pollution from earth disturbing activities such as land development and road construction.	Consistent	The project's proposed drainage system includes the use of both temporary and permanent BMPs to protect water quality during and post construction. The project would also be subject to the state's NPDES permit program and the County's Stormwater Management Plan.
Policy 36: Grading activities shall be prohibited during the rainy season.	Consistent	In accordance with this policy, Policy 6.A.7 of the Placer County General Plan, and the County's Erosion and Sediment Control Ordinance (Section 15.48.630 of the County Code), grading activities would not be permitted during the rainy season.

Placer County Stormwater Management Plan

Placer County has prepared the Placer County Stormwater Management Plan 2003–2008 (SWMP) in compliance with NPDES Phase II regulations. The Placer County SWMP is a comprehensive program designed to reduce pollution in stormwater runoff in the western portions of the county. The SWMP was submitted to the CVRWQCB as part of an application package and permitting requirements set forth under the state's jurisdiction of the NPDES Phase II program. Thereby, the County was granted a permit under the state's General NPDES Phase II program and the final version of the SWMP was published in March 2004. The SWMP is required to be updated every five years. The SWMP will help the County to reduce pollutants in local waterways by reducing pollutants in stormwater runoff through the following control measures:

- Public education and outreach on stormwater impact
- Public involvement/participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management in new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

In addition to these measures, the SWMP imposes discharge prohibitions, effluent limitation, receiving water limitations, new development design standards, and additional evaluation and reporting requirements. The SWMP also includes specific BMPs that support the program's main control measures.

Dry Creek Watershed Coordinated Resource Management Plan

In 2003, Placer and Sacramento counties prepared a Resource Management Plan for the Dry Creek watershed that compiles available data regarding the watershed's resources and identifies management goals and implementation strategies that address issues related to water quality, floodplain management, habitat restoration, recreational opportunities, water supply, and public education (Placer and Sacramento Counties, 2003).

Placer County Code

Chapter 15.48 of the Placer County Code contains ordinances that regulate grading and erosion. The ordinances under this chapter were enacted to regulate grading on property within unincorporated areas of Placer County to:

safeguard life, limb, health, property and public welfare; to avoid pollution of watercourses with hazardous materials, nutrients, sediments, or other earthen materials generated on or caused by surface runoff on or across the permit area; and to ensure that the intended use of a graded site is consistent with the Placer County General Plan, and specific plans adopted thereto and applicable chapters of the California Building Ordinance (Chapter 18 Placer County Code) and applicable chapters of the California Building Code.

Section 15.48.050 Water obstruction.

No person shall do or permit to be done any grading which may obstruct, impede or interfere with the natural flow of stormwaters, in such manner as to cause flooding where it would not otherwise occur, aggravate any existing flooding condition or cause accelerated erosion. This section applies whether such waters are unconfined upon the surface of the land or confined within land depressions or natural drainage ways, unimproved channels or watercourses, or improved ditches, channels or conduits.

Section 15.48.570 Drainage--General.

Any drainage structure(s) or device(s) carrying surface water runoff required by this article shall be designed and constructed in accordance with standards herein, the current Placer County flood control and water conservation district stormwater management manual and criteria authorized by the agency director.

Section 15.48.580 Drainage discharge requirements.

All drainage facilities shall be designed and engineered to carry surface and subsurface waters to the nearest adequate street, storm drain, natural watercourse, or other juncture.

Section 15.48.590 Drainage—Water accumulation

All areas shall be graded and drained so that drainage will not cause erosion or endanger the stability of any cut or fill slope or any building or structure.

Section 15.48.600 Drainage protection of adjoining property

When surface drainage is discharged onto any adjoining property, it shall be discharged in such a manner that it will not cause erosion or endanger any cut or fill slope or any building or structure.

Section 15.48.630 Erosion and sediment control

The following shall apply to the control of erosion and sediment from grading operations:

a) Grading plans shall be designed with long-term erosion and sediment control as a primary consideration. Erosion prevention and source control are to be emphasized over sediment controls and treatment.

b) Grading operations during the rainy season shall provide erosion and sediment control measures except upon a clear demonstration, to the satisfaction of the community development resource agency that at no stage of the work will there by any substantial risk of increased sediment discharge form the site. Temporary mulch, revegetation, or other stabilization methods shall be applied to areas where permanent revegetation or landscaping cannot be immediately implemented. Unless otherwise exempted in this article, grading activity must be scheduled to ensure completion or winterization by October 15th of each year.

c) Grading activity shall be conducted such that the smallest practicable area of erodible land is exposed at any one time during grading operations and the time of exposure is minimized. Land disturbance shall be limited to the minimum area necessary for construction.

d) Natural features, including vegetation, terrain, watercourses and similar resources shall be protected and preserved wherever possible. Units of grading shall be clearly defined and marked to prevent damage by construction equipment.

e) Permanent vegetation and structures for erosion and sediment control shall be installed as soon as possible.

f) Adequate provision shall be made for effective maintenance of temporary and permanent erosion and sediment control structures and vegetation. Sediment and other construction-related wastes shall be retained and properly managed on the site or properly disposed of off-site.

g) No topsoil shall be removed from the site unless otherwise directed or approved by the community development resource agency. Topsoil overburden shall be stockpiled and redistributed where appropriate within the graded area after rough grading to provide a suitable base for seeding and planting. Runoff from the stockpiled area shall be controlled to prevent erosion and resultant sedimentation of receiving water.

h) Runoff shall not be discharged from the site in quantities or at velocities substantially above those which occurred before grading except into drainage facilities, whose design has been specifically approved by the community development resource agency.

i) The permittee shall take reasonable precautions to ensure that vehicles do not track or spill earth materials into public streets and shall immediately remove such materials if this occurs.

j) All cut and fill slopes shall be adequately stabilized to prevent erosion and failure through temporary and permanent means.

k) Control measures shall be employed to prevent transport of dust off the project site or into any drainage course or water body.

Section 15.48.670 Vehicular ways--Drainage.

Vehicular ways shall be graded and drained in such a manner that will not allow erosion or endanger the stability of any adjacent slope. Surface discharge onto adjoining property shall be controlled in such a manner that it does not cause erosion or endanger existing improvements. Bridges and culverts installed in watercourses may be reviewed by the Placer County Flood Control and Water Conservation District and must be approved by the Public Works Director, and any other required permitting agency. (Ord. 5056-B (part), 2000)

Ordinances in this chapter describe in detail standards for levees, obstructing natural flows of stormwater, drainage discharge requirements, water storage areas, drainage protection of adjacent properties, terraced drainage, subsurface drainage, erosion and sediment control plan requirements, and drainage of roads. The County also enacted the Flood Damage Prevention Ordinance which limits construction in areas within the 100-year flood zone to prevent damage to property and limit the effect of development on loss of floodplain storage and flood water elevations. This ordinance uses the following methods to reduce flood losses:

Section 15.52.040 Methods of reducing flood losses.

In order to accomplish its purpose, this article includes methods and provisions for:

a) Restricting or prohibiting uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increase in erosion or flood heights or velocities;

b) Requiring that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

c) Controlling the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel floodwaters;

d) Controlling fill, grading, dredging, and other development which may increase flood damage; and

e) Preventing or regulating the construction of flood barriers which will unnaturally divert floodwaters or which may increase flood hazards in other areas.

Placer County Flood Control and Water Conservation District

The Placer County Flood Control and Water Conservation District (PCFCWCD) was formed by Senate Bill 1312, effective August 23, 1984. PCFCWCD formulates regional strategies for flood control management. In 1990, PCFCWCD developed a Storm Water Management Manual (SWMM) that presents policy, guidelines, and specific criteria for evaluating hydrologic and hydraulic conditions associated with new development within the context of regional stormwater issues. The manual was revised in 1992, 1994, and 1997.

Placer County Land Development Manual

Section 5 of the Placer County Land Development Manual (1996) provides supplemental design considerations for drainage facilities and includes specific criteria used for preparation of

drainage reports identical to those in the SWMM (as described above under Placer County Flood Control and Water Conservation District). The Land Development Manual states that in case of conflict with the SWMM, the most stringent requirement shall apply. The Land Development Manual also contains general information with regard to erosion control and BMPs for stormwater drainage.

13.3 IMPACTS

13.3.1 Standards of Significance

Based on Appendix G of the CEQA Guidelines and Placer County's established significance criteria, the proposed project would result in a significant impact to hydrology or water quality if it would:

1) Violate any water quality standards or waste discharge requirements.

2) 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).

3) Alter the direction or rate of flow of groundwater.

4) 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.

5) 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.

6) 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.

7) Otherwise substantially degrade water quality.

8) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map.

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

10) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam.

11) Inundation by seiche, tsunami, or mudflow.

12) Impact the watershed of important surface water resources, including but not limited to Lake Tahoe, Folsom Lake, Hell Hole Reservoir, Rock Creek Reservoir, Sugar Pine Reservoir, French Meadows Reservoir, Combie Lake, and Rollins Lake.

Methodology

The hydrology and water quality analysis presented below is based on a review of published information, reports and plans regarding regional and local hydrology, climate, topography, and geology obtained from private and governmental agencies as well as from Internet websites. Primary sources include the Preliminary Drainage Study (2007) prepared to address the proposed project by King Engineering, Inc. (see **Appendix 13**), CVRWQCB's Water Quality Control Plan for the Sacramento and San Joaquin River Basins (2007), the Dry Creek Watershed Coordinated Resource Management Plan (2003), FEMA Flood Insurance Rate Maps (FIRMS), and the Department of Water Resources Bulletin 118 for the North American Groundwater Subbasin. Agencies consulted include Placer County, the Department of Water Resources, the Central Valley Regional Water Quality Control Board, FEMA, and the Placer County Water Agency.

13.3.2 Project-Level Impacts and Mitigation Measures

IMPACT 13-1: Degrade Water Quality – Construction

Construction of the proposed project would introduce sediments and other contaminants typically associated with construction into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. Stormwater flowing over the project site during construction could carry various pollutants downstream such as sediment, nutrients, bacteria and viruses, oil and grease, heavy metals, organics, pesticides, gross pollutants, and miscellaneous waste. These pollutants could originate from soil disturbances, construction equipment, building materials, and workers (CSQA, 2003). The proposed project has the potential to result in the generation of new dry weather runoff containing these pollutants and also has the potential to increase the concentration and/or total load of the pollutants in wet weather stormwater runoff. Erosion potential and water quality impacts are always present during construction and occur when protective vegetative cover is removed and soils are disturbed. In this case, it is primarily the grading associated with the site improvements, utilities, driveways, and building pads that could contribute to erosion and water quality degradation.

In addition, a review of Placer County Environmental Health Services records shows an existing well served the house which was located near the stock pond on the project site. This well could serve as a conduit to the water table and has the potential to violate potable water quality standards by acts of vandalism or by mismanagement of the water well. This impact could be **potentially significant**.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and has issued a statewide General Permit (Water Quality Order 99-08-DWQ) for construction activities within the state. The Construction General Permit (CGP) is implemented and enforced by the Regional Water Quality Control Boards (RWQCBs). The CGP applies to construction activities that disturb one acre or more and requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) to minimize pollutants from discharging from the construction site to the maximum extent practicable (MEP).

The BMPs that must be implemented can be grouped into two major categories: (1) erosion and sediment control BMPs and (2) non-stormwater management and materials management BMPs. Erosion and sediment control BMPs fall into four main subcategories:

- Erosion controls

- Sediment controls
- Wind erosion controls
- Tracking controls

Erosion controls include practices to stabilize soil, to protect the soil in its existing location, and to prevent soil particles from migrating. Examples of erosion control BMPs are preserving existing vegetation, mulching, and hydroseeding. Sediment controls are practices to collect soil particles after they have migrated, but before the sediment leaves the site. Examples of sediment control BMPs are street sweeping, fiber rolls, silt fencing, gravel bags, sand bags, storm drain inlet protection, sediment traps, and detention basins. Wind erosion controls prevent soil particles from leaving the site in the air. Examples of wind erosion control BMPs include applying water or other dust suppressants to exposed soils on the site. Tracking controls prevent sediment from being tracked off-site via vehicles leaving the site to the extent practicable. A stabilized construction entrance not only limits the access points to the construction site, but also functions to partially remove sediment from vehicles prior to leaving the site.

Non-stormwater management and material management controls reduce non-sediment-related pollutants from potentially leaving the construction site to the extent practicable. The CGP prohibits the discharge of materials other than stormwater and authorized non-stormwater discharges (such as irrigation and pipe flushing and testing). Non-stormwater BMPs tend to be management practices with the purpose of preventing stormwater from coming into contact with potential pollutants. Examples of non-stormwater BMPs include preventing illicit discharges and implementing good practices for vehicle and equipment maintenance, cleaning and fueling operations, such as using drip pans under vehicles. Waste and materials management BMPs include implementing practices and procedures to prevent pollution from materials used on construction sites. Examples of materials management BMPs include:

- Good housekeeping activities such as storing of materials covered and elevated off the ground, in a central location.
- Securely locating portable toilets away from the storm drainage system and performing routine maintenance.
- Providing a central location for concrete wash-out and performing routine maintenance.
- Providing several dumpsters and trash cans throughout the construction site for litter/floatable management.
- Covering and/or containing stockpiled materials and overall good housekeeping on the site.

Prior to construction of the proposed project, a SWPPP must be developed and submitted to the County that identifies the specific BMPs to be implemented and maintained on the site. A Notice of Intent must also be filed with CVRWQCB. The CGP also requires that construction sites be inspected before and after storm events and every 24 hours during extended storm events. The purpose of the inspections is to identify maintenance requirements for the BMPs and to determine the effectiveness of the BMPs that are being implemented. The SWPPP is a “living document” and as such can be modified as construction activities progress.

Furthermore, groundwater may be encountered during certain construction activities, such as drilling and excavating for building footings and foundations and trenching for infrastructure. As a result, dewatering may be required of both the construction site and any saturated material removed during construction. Dewatering refers to the removal of non-stormwater (such as groundwater encountered during drilling or excavations) and accumulated precipitation from a construction site so that construction work may be accomplished (CASQA, 2003). Although such water is generally considered to be relatively pollutant-free, it would likely contain sediments, particularly remnants of mud from drilling and excavations. Discharge of these sediments and the release of pollutants associated with the sediments to downstream waters or the underlying groundwater aquifer could violate water quality standards.

The SWRCB has also issued a statewide General Permit (Water Quality Order R5-2008-0081, NPDES No. CAG995001) for dewatering and other low-threat discharges to surface waters within the state. Should construction of the proposed project require dewatering, the project proponent would be required to submit a Notice of Intent, as well as a Best Management Practices Plan, to comply with the general permit. The BMP Plan would include disposal practices to ensure compliance with the general permit such as the use of sediment basins or traps, dewatering tanks, or gravity or pressurized bag filters. Monitoring and reporting would also be performed to ensure compliance with the permit (CVRWQCB, 2008; CSQA, 2003).

Mitigation Measure 3-1a Properly destroy on-site groundwater well via permit

In order to protect the existing water table, the water well shall be properly destroyed via permit through the Placer County Environmental Health Services Department prior to approval of the Improvement Plans. Additionally, the water well location shall be shown on the Improvement and Grading Plans to prevent the well from being damaged by grading equipment.

Mitigation Measure 13-1b Implement best management practices during construction

The applicant shall implement temporary BMPs to include minimum erosion control measures such as straw logs, silt fence, water bars, or diversion berms directing stormwater to flow spreaders, gravel bags, straw mulch, and inlet filters. The project shall utilize a gravel construction entry which would reduce tracked mud onto Sierra College Boulevard. Sediment traps shall be installed to protect the wetlands.

Compliance with the SWRCB's statewide General Permits for construction and dewatering, the Placer County Land Development Manual and Chapter 15.48 of the Placer County Code as described above, and adherence to mitigation measures **MM 13-1a** and **MM 13-1b** would minimize the potential degradation of stormwater quality and downstream surface water and groundwater associated with construction of the proposed project. This would assist in reducing this impact to a **less than significant** level.

IMPACT 13-2: Degrade Water Quality – Operation

Operation of the proposed project would introduce sediments and other contaminants typically associated with urban development into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. This impact is **potentially significant**.

The proposed project would convert approximately 17 acres of the 75 acre undeveloped project site to urban uses. This conversion to urban uses would substantially increase the impervious surface area, which in turn would increase runoff from the introduction of driveways, parking

areas, rooftops, and other surfaces and could contain oil and grease, heavy metals, chemicals, and other urban pollutants. Runoff from proposed landscape areas could also contribute chemicals from fertilizers, pesticides, and herbicides. This runoff would be collected and retained within the proposed on-site drainage system and existing detention pond (see Impact 13-3) and slowly released to downstream surface waters and on-site wetlands and swales where it would percolate into the underlying groundwater aquifer. The project would be required to utilize stormwater best management practices to prevent erosion and to ease stormwater runoff and downstream drainage impacts. Though the increase in impervious surfaces has the potential to degrade water quality by introducing oils, greases, and sediments into the stormwater runoff, the proposed drainage system would include temporary BMPs consisting of silt barriers and sediment basins as well as permanent BMPs such as rock slope protection, open clarifying basins, and rock flow spreaders which discharge to a near sheet flow condition or to natural swales. These BMPs would remove sediment and pollutants from site runoff and minimize impacts to downstream waterways and the underlying aquifer. No runoff from the site would flow into the adjacent San Juan Water District water reservoir.

Mitigation Measure 13-2a Implement best management practices after construction and during operation of the proposed project

The applicant shall implement permanent BMPs to include the minimum erosion control measures such as inlets, culverts, open clarifying basins, erosion mat-lined, rock-lined or seeded ditches, rock flow spreaders, and detention basins. Seeding, mulching, and landscaping are proposed to stabilize disturbed soils.

Mitigation Measure 13-2b Include specific design details and criteria to implement the permanent BMPs

The following design details and criteria shall be followed to implement the permanent best management practices required on the project site.

- Culverts 30 inches in diameter and less shall be designed for 50 percent blockage at the inlet, as in the case of a FES (flared end section). However, where there is a grated inlet or OMP inlet with 8-inch maximum size opening, the inlet shall be designed for 50 percent blockage, but the culvert connected to such an inlet may be sized without blockage (figuring that large objects cannot enter through the inlet openings and then block the culvert).
- Lined ditches, vegetative sediment basins, or grass swales shall be sized for the 100-year storm flow with no overtopping, taking into consideration the slope of the water surface at curves in the ditches.
- Where the HEC-1 computer program is not used, the following Placer County formulas shall be used to determine peak discharge from contributing areas:

Sheet flow: $t_r = \dfrac{.355(nL)^{.6}}{S^{.3}}$

Channel flow: $tr = \dfrac{.00735Ln^{.75}(1+z)^{.25}}{S^{.375}(A_c z)^{.25}}$

Peak Discharge: $A = qA - A_p F_1$

With implementation of mitigation measures **MM 13-2a** and **MM13-2b**, this impact would be reduced to **less than significant**.

IMPACT 13-3: Increase Stormwater Runoff

When land is in a natural or undeveloped condition, soils, mulch, vegetation, and plant roots absorb rainwater. This absorption process is called infiltration or percolation. Much of the rainwater that falls on natural or undeveloped land slowly infiltrates into the soil and is stored either temporarily or permanently on the surface or in underground layers of soil. When the soil becomes completely saturated with water or the rate of rainfall exceeds the infiltration capacity of the soil, the rainwater begins to flow over the surface of the land to low-lying areas, ditches, channels, streams, and rivers as stormwater runoff. The natural drainage flows on the project site are shown on **Figure 13-2**.

The infiltration and runoff process is altered when a site is developed with urban uses. Buildings, roads, and parking lots introduce asphalt, concrete, and roofing materials to the landscape. These materials are relatively impervious, which means that they absorb less rainwater. Grading associated with development also eliminates many of the low-lying areas that may have been providing a degree of surface storage. In addition, construction of underground storm drains as part of urban development provides for efficient conveyance of runoff to downstream locations of discharge. As impervious surfaces are added to the ground conditions and surface and underground drainage conveyance becomes more efficient and more concentrated, the natural infiltration and storage processes are reduced. As a result, the frequency, volume, and flow rate of stormwater runoff increases. The effect of these increases in runoff frequency, rates, and volumes would be more pronounced during storms of lower magnitude and higher frequency. This is due to reductions in initial abstraction (infiltration and surface storage) and time of concentration (travel times) that would be created by urban development. The increased frequency, volumes, and flow rates of stormwater runoff may result in increased downstream flooding and/or erosion/sedimentation processes if not properly mitigated.

Development of the proposed project would increase stormwater runoff rates and volumes when compared with existing conditions for the reasons described above. Specifically, the project would impact, fill, or disturb approximately 17 acres, would fill or disturb an undetermined amount of vernal pools, and would also disturb 0.03 acres of Pond B1 outlet. Additionally, the project would add approximately 11.9 acres of impervious roof, driveway, and parking lot area.

The project would include the construction of an on-site drainage system that would generally consist of parking lot gutters, inlets, and culverts directing drainage through temporary and permanent BMPs (as described above) and into the existing man-made pond (Pond B1) which would continue to be used as a detention basin. The existing drainage patterns and watershed boundaries on the site are proposed to remain essentially the same with no significant areas being diverted to other drainage watersheds.

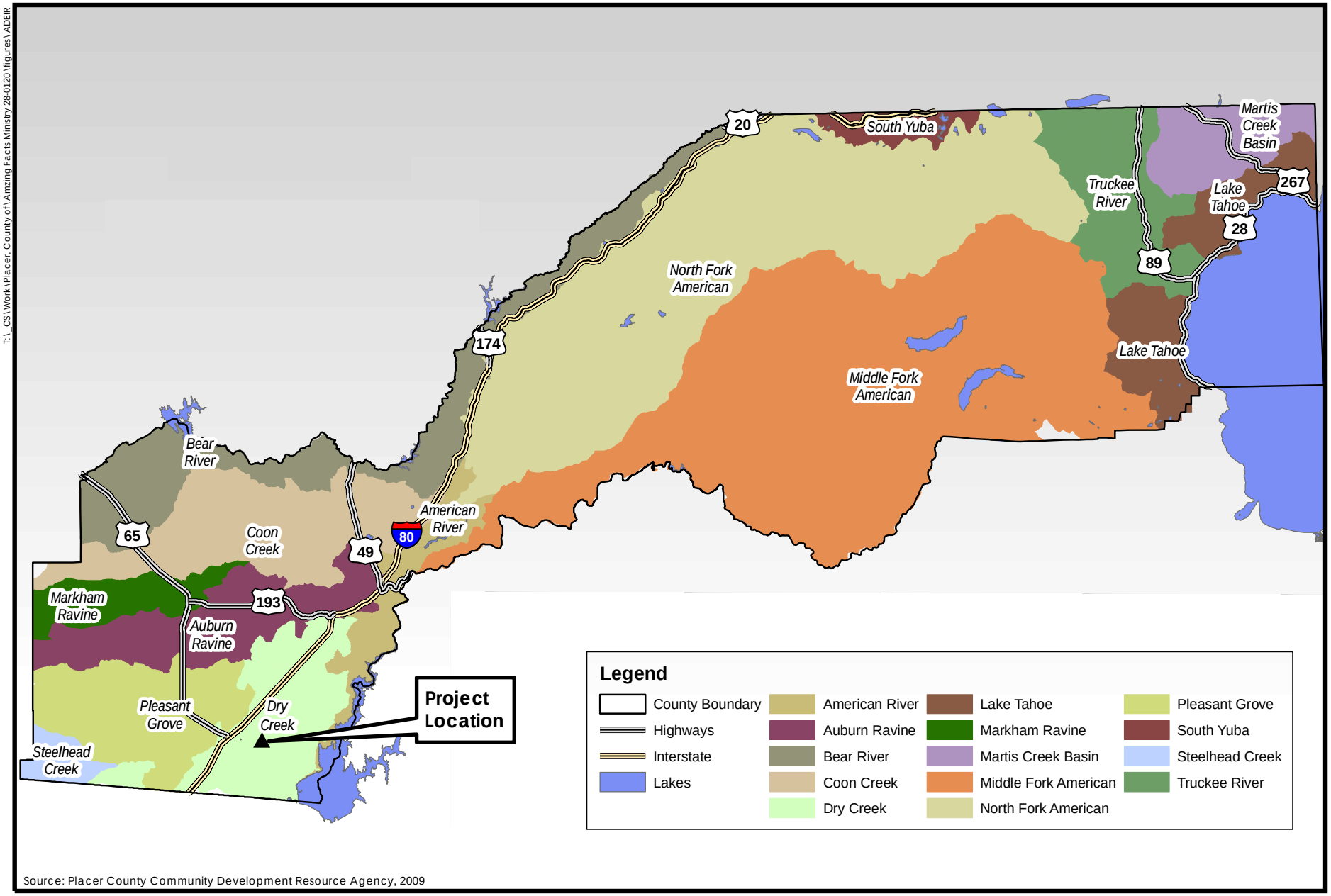

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Figure 13-1
Watersheds in Placer County

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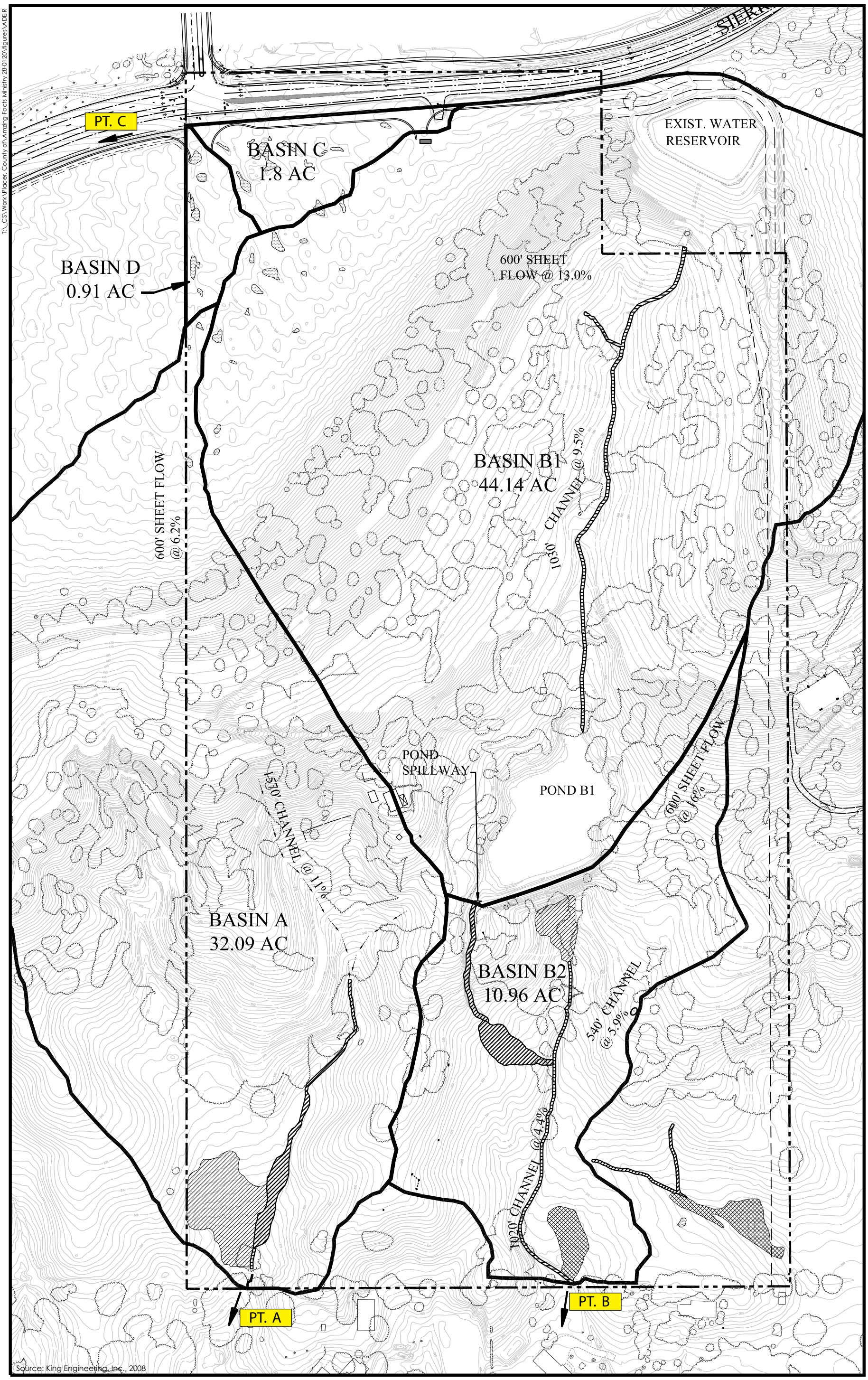

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Figure 13-2
Pre-development Drainage Conditions

PMC®

A detailed comparison of pre- and post-development flows is provided in **Appendix 13**. The reader is also referred to Section 6.0, Biological Resources, for further discussion of potential impacts to the on-site vernal pools and associated mitigation. Based on the pre-development drainage conditions on the site and the proposed improvements, the Preliminary Drainage Report prepared for the proposed project determined the following anticipated effects at each of the site's drainage points (see **Figure 13-2**):

- Point A: There would be no increase to the peak drainage flow to Point A and no further mitigation is recommended beyond implementation of mitigation measure MM 13-2a.
- Point B: There would be an increase in the peak runoff at this point, potentially affecting downstream properties with deeper flows and higher velocities. This increase would be primarily from impervious improvements increasing the runoff and reducing the travel time of the drainage to this point. Pond B1 is proposed to remain and act as a detention pond. Mitigation is recommended to address this increase in peak runoff.
- Point C: There would be a decrease to the peak drainage flow at this point in the gutter of Sierra College Boulevard and no further mitigation is recommended beyond implementation of mitigation measure MM 13-2a.
- Point D: There would be a decrease in the peak drainage flow from this area and no further mitigation is recommended beyond implementation of mitigation measure MM 13-2a.

The drainage study determined that without more detention than presently provided by the on-site pond, peak runoff from Basin B would increase and affect downstream properties with deeper flow and higher velocities and this is a **potentially significant** impact.

Mitigation Measure 13-3a Prepare and adhere to final drainage study

The Engineering and Surveying Department shall review the preliminary drainage study dated December 23, 2008 submitted by the project proponent. The Department shall determine if this study is adequate and meets all applicable standards including Section 5 of the Placer County Land Development Manual and the Placer County Storm Water Management Manual that are in effect at the time review. Any changes to the preliminary study required to achieve compliance with applicable standards shall be incorporated into a final drainage study which shall be submitted with the project Improvement Plans to the Department for final review and approval. All provisions of the final drainage study shall be adhered to during design, construction and operation of the proposed project.

Mitigation Measure 13-3b Reduce stormwater runoff to pre-project conditions

Stormwater runoff shall be reduced to pre-project conditions through the installation of detention facilities. Detention facilities shall be designed in accordance with the requirements of the Placer County Storm Water Management Manual that are in effect at the time of submittal and to the satisfaction of the Engineering and Surveying Department (ESD). The ESD may, after review of the project drainage report, delete this requirement if it is determined that drainage conditions do not warrant installation of this type of facility. In the event on-site detention requirements are waived, this project may be subject to payment of any in-lieu fees prescribed by County

Ordinance. No retention/detention facility construction shall be permitted within any identified wetlands area, floodplain, or right-of-way, except as authorized by project approvals.

Mitigation Measure 13-3c Design drainage facilities in accordance with County requirements

Drainage facilities, for purposes of collecting runoff on the project site, shall be designed in accordance with the requirements of the Placer County Storm Water Management Manual that are in effect at the time of submittal and shall be in compliance with applicable stormwater quality standards, to the satisfaction of the Engineering and Surveying Department (ESD). These facilities shall be constructed with site improvements and easements provided as required by ESD. Maintenance of these facilities shall be provided by the property owners.

Mitigation Measure 13-3d Pay drainage improvement and flood control fees (Recommended)

The applicant is subject to the one-time payment of drainage improvement and flood control fees pursuant to the Dry Creek Watershed Interim Drainage Improvement Ordinance (Ref. Chapter 15, Article 15.32, Placer County Code). The current estimated development fee is $2,493, payable to the Engineering and Surveying Department prior to building permit issuance. The actual fee shall be that in effect at the time payment occurs.

Mitigation Measure 13-3e Fence preserved vernal pools to prevent trespass and damage

The vernal pools that are to remain undisturbed shall be surrounded with colored poly fencing prior to the start of construction. A low profile permanent perimeter fence with signs shall be constructed once project construction is completed to identify the pools in the dry season and prevent trespass and damage to the pools.

Mitigation Measure 13-3f Improve or rebuild dam to increase detention capacity

The applicant shall retain a qualified engineer to assess the structural integrity of the dam on the project site based on all applicable state and local standards. Based on the results on this assessment, one of the following courses shall be taken:

1) If the dam is found to have the required integrity, including a non-seeping core, a new spillway shall be constructed with a lower spill elevation to increase the available detention volume. A lower spill elevation would lower the pond's normal water surface by 1.8 feet. This could cause a loss of wetland habitat. In order for these improvements to be implemented, the pond would be partially drained and there would be disturbance to the spillway area during construction. The U.S. Army Corps of Engineers Section 404 permit for the project (required under mitigation measure MM 6-6) shall address this potential loss of wetland at the spillway and pond perimeter.

2) If the dam is found not to have the required integrity, it shall be rebuilt to meet all structural requirements. The new dam shall be constructed at an elevation 1.8 feet higher than the existing dam's elevation and the associated spillway shall be constructed at the existing spillway's elevation. This would result in the pond's water surface remaining the same but the footprint of the dam would increase, resulting in a loss of wetland habitat at the spillway. In order for these improvements to be implemented, the pond would be completely drained

and there would be disturbance to the pond during construction. The dam slope shall be planted with grass of like kind to the existing site vegetation. Any trees removed shall be replanted with like kind in a compatible location. The U.S. Army Corps of Engineers Section 404 permit for the project (required under mitigation measure MM 6-6) shall address the potential loss of wetland habitat at the spillway.

In addition, a new concrete weir shall be constructed at the spillway channel. As a result, the pond spillway would discharge less than pre-development flow to Point B. Pond B1 would then function as a detention basin in accordance with Placer County drainage standards and the criteria listed in the Preliminary Drainage Report for the project (**Appendix 13**).

With implementation of mitigation measure **MM 13-3a** through **MM 11-3f**, the project applicant would be required to submit a final drainage report with the final improvement plans for County review and approval, as well as having to provide adequate runoff collection facilities. This would reduce peak drainage flows to at or below pre-development conditions and this impact would be reduced to a **less than significant** level.

IMPACT 13-4: Deplete Groundwater Supplies or Interfere with Groundwater Recharge

The project proposes the use of publicly treated surface water supplies, so there would be no direct impacts to groundwater quantity or direction due to well withdrawals. However, the introduction of the proposed buildings and associated impervious surfaces could interfere with natural percolation and recharge of the underlying groundwater aquifer.

The proposed project is located within the Placer County Water Agency's Zone One, which is served entirely by surface water supplies from the American River and the Bear and Yuba rivers via Lake Spaulding. Therefore, implementation of the proposed project would have no direct impacts to groundwater supplies due to well withdrawals. However, the project would create about 11.9 acres of impervious surfaces on the project site and direct stormwater runoff to an improved drainage system. This could impede groundwater percolation on-site and reduce the rate of recharge of the underlying groundwater aquifer. The soil types in the project area are not conducive to recharge, except along major drainage ways. As this project does not involve disturbance of major drainage ways, impacts related to groundwater recharge would be **less than significant** and no further mitigation is required.

IMPACT 13-5: Flooding Hazards

The project site is located in a minimal flood risk zone, or outside a 100-year flood hazard area, as designated by FEMA. As described above, the project site has been designated by the Federal Emergency Management Agency as being within Flood Zone X. This zone consists of areas of minimal flood hazard from the principal source of flood in the area and that are determined to be outside of the 0.2 percent annual chance floodplain. The project site slopes significantly (up to 35 percent) to the south, further minimizing the potential for flooding on-site or for exposing people and structures to a significant risk of loss, injury, or death as a result of flooding. Therefore there is **no impact** from flooding hazards and no further mitigation is required.

14.0
PUBLIC SERVICES

14.0 PUBLIC SERVICES

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") describes the public services and utilities that would be required to serve the proposed project. Public services include: fire protection and emergency medical services, law enforcement, schools, electrical, natural gas, telephone service, cable television service, parks and recreation, water, wastewater, and other associated services. This section of the Draft EIR identifies thresholds of significance for identified public services and provides an evaluation of potential impacts to public services that could result from the implementation of the Amazing Facts project. See Section 15.0-Hazards and Human Health of this document for a detailed discussion of wildland fire hazards and Section 13.0 Hydrology and Water Quality for a detailed discussion of water and stormwater drainage.

14.1 FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

14.1.1 Environmental Setting

The proposed project site is located within the Granite Bay Community Plan Planning Area and is covered by the fire district services provided to this area.

14.1.1.1 South Placer Fire District

Fire protection in the Granite Bay Community Plan area is provided by the South Placer Fire District (SPFD). SPFD is a tax supported governmental agency that provides service under local agreements and the California Sate Mutual Aid Plan. SPFD also supports the state wide mutual aid system by staffing a State of California Office of Emergency Services Engine. There are 70 approved positions in SPFD, of which 51 are full-time employees, and the remaining are apprentice and volunteer employees. The SPFD provides "All Risk" emergency services, which include but are not limited to fires, medical aids, hazmat incidents, and rescues.

SPFD operates out of five fire stations, including four in Granite Bay. The closest station to the project site is Station 16, located at 5300 Olive Ranch Road, approximately 3.5 miles from the site, that includes a three-person Advanced Life Support Engine Company and one paramedic. Station 15, at 4650 East Roseville Parkway, has two engines in its company. Station 17, at 6900 Eureka Road, has a three person Truck Company and an Advanced Life Support Ambulance staffed with two including a Paramedic. Station 19, at 7070 Auburn Folsom Road, has a three person Engine Company. Station 20, at 3505 Auburn Folsom, has a two person Advance Life Support Ambulance. All five stations "cross staff" on multiple pieces of emergency equipment, depending on the nature of the call.

SPFD's apparatus includes seven type one engines, three type three wildland engines, two brush units, one light rescue unit, one quintuple combination pumper (quint) ladder truck, one water tender, one mobile air unit, three transporting ambulances, two utility trucks and six staff vehicles including three command units.

Funding sources for SPFD include general and unsecured property taxes, the SPFD Special Tax, ambulance service fees, Cellular Tower Lease and Cost Recovery.

Service Standards

An Insurance Services Office (ISO) rating is a collection of information on a community's public fire protection, which is determined by using a Fire Suppression Rating Schedule (FSRS). The FSRS is the manual that the ISO uses in reviewing the firefighting capabilities of individual communities. The schedule measures the major elements of a community's fire suppression system and develops a numerical grading called a Public Protection Classification (PPC). The FSRS determines a PPC from 1 to 10. Class 1 represents the best public protection, and Class 10 indicates less than the minimum recognized protection. By classifying a community's ability to suppress fires, ISO helps communities evaluate their public fire protection services. Placer County (County) has a General Plan policy stating that the following minimum fire protection standards are encouraged: 4 in urban areas, 6 in suburban areas, and 8 in rural areas. The SPFD's current ISO rating is 4. (Richardson, 2009) SPFD responded to 1,713 calls for service during 2007/2008.

SPFD's service standards consist of the following:

Structure Fire: response force of fourteen (14) responders. First unit arrival within seven (7) minutes total reflex time, eighty (80) percent of the time. Second unit arrival within ten (10) minutes total reflex time eighty (80) percent of the time. The remaining units, including the Incident Commander shall arrive within twelve (12) minutes total reflex time (Response time measured from call receipt at police 911 to fire unit arrival on scene), eighty (80) percent of the time.

Medical Emergencies: response force of four (4) responders and one Ambulance (ALS capable). First unit arrival within seven (7) minutes total reflex time, eighty (80) percent of the time. Second unit including Advance Life Support arrival within ten (10) minutes total reflex time, eighty (80) percent of the time.

Automatic Aid Agreements

SPFD entered into an automatic aid agreement with Rocklin, Roseville, Penryn, Loomis, and Folsom Fire Departments. The agreement calls for reciprocal aid for major structures within each District's jurisdiction. A recognized automatic aid response is provided to a portion of the graded areas of the project site by these departments.

14.1.1.2 Fire Hazard

The proposed project site is located at the top of Sierra College Blvd., which is considered upslope of undeveloped property with unmanaged vegetation. This area is considered by SPFD to be a Moderate Fire Severity Zone. See Section 15.0- Hazards and Human Health of this document for a detailed discussion of wildland fire hazards.

14.1.1.3 Emergency Medical Services

Granite Bay is served by two comprehensive area hospitals, which include Kaiser Permanente in Roseville, and Sutter Roseville Medical Center with a 24-hour Emergency Department and Trauma Center.

14.1.2 Regulatory Framework

14.1.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.2.1.2 State

There are no state regulations and standards that are applicable to the project site.

14.1.2.3 Local

Placer County Code

Article 9.32 of the Placer County Code sets various requirements for fire prevention. Specifically, it sets standards for the storage of explosives and hydrocarbon liquid, as well as fire hazards and hazardous vegetation abatement on unimproved parcels. The proposed project would have to comply with these standards as enforced by Placer County.

Placer County General Plan

The Placer County General Plan Public Facilities and Services and Fire Protection Elements address fire protection for the county. **Table 14.1-1** analyzes the project's consistency with the Placer County General Plan policies pertaining to fire services. While this Draft EIR analyzes the project's consistency with the Placer County General Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this General Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with General Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.1-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

Placer County General Plan Policies	Consistency with General Plan	Analysis
Public Facilities and Services Policy 4.B.3: The County shall require, to the extent legally possible, that new development pay the cost of providing public services that are needed to serve the new development; exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues. This includes working with the cities to require new development within city limits to mitigate impacts on Countywide facilities and services.	Consistent	The project applicant will pay all fees required by the County to pay for the project's fair share of fire services.
Fire Protection Policy 4.I.1. The County shall encourage local fire protection agencies in Placer County to maintain the following minimum fire protection standards (expressed as Insurance Service Organization (ISO) ratings): a. ISO 4 in urban areas b. ISO 6 in suburban areas	Consistent	Implementation of the proposed project will not cause ISO ratings to increase to levels beyond those encouraged in the General Plan.

Placer County General Plan Policies	Consistency with General Plan	Analysis
c. ISO 8 in rural areas		
Fire Protection Policy 4.I.1. The County shall encourage local fire protection agencies in the County to maintain the following standards (expressed as average response times to emergency calls): a. 4 minutes in urban areas b. 6 minutes in suburban areas c. 10 minutes in rural areas	Consistent	The proposed project site is adequately served by an internal roadway network connecting the project site to Sierra College Boulevard and Night Watch Drive. The internal roadway network would allow for easy fire access to the project site. The project applicant will work with SPFD to ensure adequate response times to the project site, as well as adequate circulation throughout the parking lot and two points of entry and egress.
Fire Protection Policy 4.I.3. The County shall require new development to develop or fund fire protection facilities, personnel, and operations and maintenance that, at a minimum, maintains the above service level standards.	Consistent	The project applicant will pay any fees required by the County to help maintains the required service level standards.
Fire Protection Policy 4.I.9. The County shall ensure that all proposed developments are reviewed for compliance with fire safety standards by responsible local fire agencies per the Uniform Fire Code and other County and local ordinances.	Consistent	The proposed project is consistent with all applicable local policies and regulations regarding the implementation of built-in fire safety standards, including Article 9.32 of the Placer County Code.

Granite Bay Community Plan

The Granite Bay Community Plan Land Use Element addresses fire protection within the community. **Table 14.1-2** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to fire services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.1-2
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	Adequate fire services will be in place prior to construction of the proposed project per Article 16.08 of the Placer County Code, and as enforced by the Placer County Planning Department.

14.1.3 Impacts

14.1.3.1 Standards of Significance

Project impacts are considered significant if the project results in the following (based on State CEQA Guidelines Appendix G):

1) 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.

Methodology

The analysis of fire protection impacts is based upon review of objectives, goals and policies identified in the Placer County General Plan and Granite Bay Community Plan, consultations with County staff and SPFD staff, and review of other relevant documents.

14.1.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.1.1: Fire Protection and Emergency Medical Services

The proposed project would not result in the need for additional or expanded fire protection facilities and would not result in decreased fire protection service levels.

The proposed project would result in the construction and use of a church facility, which would include event space, offices, classrooms, a chapel, storage space, a kitchen, and parking facilities. The project site is currently within the service area of the SPFD, and would create an area for which fire services would be required. However, additional firefighters and staff should not be necessary to service the project site. (Richardson, 2009) SPFD's existing facilities and equipment in the county currently serve the existing project area. Implementation of the proposed project would not require the construction of a new fire station to serve the project area, nor would it require the physical expansion of an existing fire station.

Implementation of the proposed project would not result in an increase in the population of the SPFD service area. However, it would create additional buildings for which fire services may be required, and therefore may result in an incremental increase in the number of fire and emergency response calls received by the SPFD in a given year. The revenue generated from the property taxes and SPFD Special Tax assessed on the project would offset the costs of staff and equipment to serve the project site.

All development and structures associated with the project must comply with Uniform Fire Code (UFC) requirements, per Article 15.04 of the Placer County Code, which would decrease the likeliness of structure related fires. Implementation and enforcement of the UFC would ensure adequate fire flows and water supply to serve the proposed project and mandate the installation of on-site fire suppression systems for all new development. This impact is considered **less than significant** and no further mitigation is required.

14.2 LAW ENFORCEMENT

14.2.1 Environmental Setting

The proposed project site is located within the Granite Bay Community Plan Planning Area and is within the service area for the Placer County Sheriff's Department.

14.2.1.1 Placer County Sheriff's Department

The Placer County Sheriff's Department (PCSD) provides all law enforcement services to Granite Bay. The PCSD provides all aspects of law enforcement, including patrol, investigations, 24 hour emergency communication services (911 dispatches), traffic enforcement, and traffic collision investigations. PCSD operates the South Placer Substation at 6140 Horseshoe Bar Road in Loomis, approximately 5.5 miles from the project site. The next closest Sheriff's station is at the Auburn Justice Center located at 2929 Richardson Drive, approximately 18.8 miles from the project site.

Within the PCSD, Patrol Division personnel are the first to respond to emergencies within the county. Patrol Deputies handle the enforcement of criminal and vehicle code regulations, and investigate misdemeanors and felony crimes. Patrol Deputies are also responsible for the enforcement of some of the County Code ordinances, including parking and snow removal violations.

The Patrol Division is staffed by approximately 120 uniformed officers and supervisors who provide 24-hour coverage through a three-shift system. Officers also work special assignments including Motorcycle patrol, Bicycle patrol, Snowmobile patrol, Helicopter Patrol, Marine patrol, Canine, Explosives Ordinance Disposal (E.O.D.), Special Enforcement Team (SWAT) and Drug Abuse Resistance Education (D.A.R.E.) Patrol resources are directed to those areas of the County where specific crime trends are occurring. Twelve canine officers and their dogs are used for the search of suspects, missing persons and the location of evidence. Three of these canines specialize in narcotics detection.

The Placer County Sheriff's Department also has a very active Citizen Volunteer program. Approximately 100 volunteers in Auburn, Granite Bay, Foresthill, Kings Beach and West Roseville provide hundreds of hours of support by taking counter reports, filing and other office tasks that free up department personnel.

Response times vary greatly in the PCSD's service area based on call priority type, beat deputy location, availability of additional personnel, distance, time of day, weather, and traffic conditions. Priority 1 calls are life threatening and Priority 2 are crimes in progress; all others are considered non-emergency and not given priority. The Placer County General Plan includes a goal that PSCD strive to achieve a response time for emergency calls of 6 minutes in urban areas, 8 minutes in suburban areas, 15 minutes in rural areas, and 20 minutes in remote rural areas.

PCSD is funded through various sources, including the County General Fund, which provides PCSD with the majority of its revenues. Limited services are contracted and paid for by government and non-government entities.

14.2.2 Regulatory Framework

14.2.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.2.2.2 State

There are no state regulations and standards that are applicable to the project site.

14.2.2.3 Local

Placer County General Plan

The Placer County Public Facilities and Services and Law Enforcement elements address law enforcement for the County. **Table 14.2-1** analyzes the project's consistency with the Placer County General Plan policies pertaining to law enforcement services. While this Draft EIR analyzes the project's consistency with the Placer County General Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this General Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with General Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.2-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

Placer County General Plan Policies	Consistency with General Plan	Analysis
Public Facilities and Services Policy 4.B.3: The County shall require, to the extent legally possible, that new development pay the cost of providing public services that are needed to serve the new development; exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues. This includes working with the cities to require new development within city limits to mitigate impacts on Countywide facilities and services.	Consistent	The project applicant will pay all fees required by the County to pay for the project's fair share of law enforcement services.
Law Enforcement Policy 4.H.1. Within the County's overall budgetary constraints, the County shall strive to maintain the following staffing ratios (expressed as the ratio of officers to population): a. 1:1,000 for unincorporated areas b. 1:7 for jail population c. 1:16,000 total County population for court and civil officers	Consistent	The proposed project will not result in an impact that would significantly effect police staffing ratios and response times, resulting in the need to maintain additional staffing above the current level.
Law Enforcement Policy 4.H.2. The County Sheriff shall strive to maintain the following average response times for emergency calls for service: a. 6 minutes in urban areas b. 8 minutes in suburban areas c. 15 minutes in rural areas	Consistent	The proposed project site is adequately served by an internal roadway network connecting the project site to Sierra College Boulevard and Night Watch Drive. The internal roadway network would allow for easy police access to the project site. The project applicant will work with PCSD to ensure adequate response

Placer County General Plan Policies	Consistency with General Plan	Analysis
d. 20 minutes in remote rural areas		times to the project site.
Law Enforcement Policy 4.H.4. The County shall require new development to develop or fund sheriff facilities that, at a minimum, maintain the above standards.	Consistent	The project applicant will pay any fees required by the County to help maintains the required service level standards.
Law Enforcement Policy 4.H.5. The County shall consider public safety issues in all aspects of commercial and residential project design, including crime prevention through environmental design.	Consistent	The Placer County Sheriff's Department will review the Amazing Facts project application to ensure compliance with this policy.

Granite Bay Community Plan

The Granite Bay Community Plan Land Use Element addresses law enforcement within the community. **Table 14.2-2** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to law enforcement services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.2-2
PROJECT CONSISTENCY GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	Adequate police services are in place. .

14.2.3 Impacts

14.2.3.1 Standards of Significance

Law enforcement impacts are considered significant if implementation of the project results in the following (based on State CEQA Guidelines Appendix G):

1) 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.

Methodology

The analysis of law enforcement impacts is based upon review of objectives, goals and policies identified in the Placer County General Plan and Granite Bay Community Plan, consultations with county staff and PCSD staff, and review of other relevant documents.

14.2.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.2.1: Law Enforcement Services

The proposed project would not result in the need for additional or expanded law enforcement facilities and would not result in decreased law enforcement service levels.

The addition of the proposed project would create a new urban use for which law enforcement police services would be required. PCSD has a staffing ratio of 1 officer per 1,000 residents for unincorporated areas. This project would not directly add additional residents to Placer County, and would not have an effect on PCSD staffing ratios. Additional police officers and staff should not be necessary to service the project site. PCSD's existing facilities and equipment in the county currently serve the existing project area. Implementation of the proposed project would not require the construction of a new police station to serve the project area, nor would it require the physical expansion of an existing police station. However, in the event that additional staffing or equipment is required to service the project site, the tax revenue provided by the project to the county should sufficiently fund the additional costs that are incurred by PCSD. Since PCSD's funding is provided by the county, any necessary increase in additional personnel will be paid for through the county budget.

Implementation of the proposed project would not result in the need to construct new or expanded police facilities. Therefore, this project would result in a **less than significant** impact and no further mitigation is required.

14.3 PUBLIC SCHOOLS

14.3.1 Environmental Setting

The project site is located within the Granite Bay Community Plan area which is served by two school districts.

14.3.1.1 Roseville Joint Union High School District and Loomis Union School District

Five public schools in two school districts generally serve the Granite Bay Community Plan area. These schools include Granite Bay High School in the Roseville Joint Union High School District, and Cavitt Junior High School, Eureka Elementary School, Greenhills Elementary School, Oakhills Elementary School and Ridgeview Elementary School in the Eureka Union School District. Though the project site is located within the jurisdiction of the Loomis Union School District (LUSD) for elementary and junior high school, the proposed project is a church facility and will not generate the need for additional students in the District.

In the 2007-2008 school year, Granite Bay High School had 2,099 students and 94 teachers, and LUSD had 2,123 students and 95 teachers.

According to Senate Bill 50 (SB 50), Chapter 407, Statutes 1998, which became effective on November 4, 1998, a school district is required to conduct a School Facilities Needs Analysis (Needs Analysis), which provides the justification for the imposition of Level 2 fees and calculates the amount of the school impact fee according to a complex statutory formula. Government Code Section 65995.5, specifies the data that must be evaluated in the Needs Analysis, such as the extent of overcrowding in the district, the number of un-housed students, existing school building capacity, surplus property available to the district, projected enrollment growth, and identification of other potential sources of revenue.

Funding and Financing Mechanisms

Developer Fees

State law authorizes school districts to impose School Facility Fees (Developer Fees) as a condition of the issuance of building permits to finance certain school facility costs. In order to establish developer fees, the districts are required to develop justification reports which demonstrate the nexus between the fee that is imposed and the need for public facilities created by the new development.

14.3.2 Regulatory Framework

14.3.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.3.2.2 State

Leroy F. Greene School Facilities Act of 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 (Stats. 1998, Ch.407), governs a school district's authority to levy school impact fees. This comprehensive legislation, coupled with the $9.2 billion education bond act approved by the voters in November 1998 as "Proposition 1A," reforms methods of school construction financing in California.

Prior to the Leroy F. Greene School Facilities Act of 1998 (Government Code Sections 65995-65998), case law allowed counties or cities to consider and impose conditions to mitigate impacts of new development on school facilities. The 1998 School Facilities Act suspended this authority, commonly referred to as *Mira* authority.

Government Code Section 65995, as amended by SB 50, establishes the dollar amount school districts may impose on new development. The statute provides that, with limited exceptions, the amount of any fees, charges, dedications, or other requirements may not exceed the following:

1) In the case of residential construction, $1.93 per square foot of assessable space; or

2) In the case of any commercial or industrial construction, $0.31 per square foot of chargeable covered and enclosed space (Gov. Code Section 65995, subd. (b)). These fees are to be adjusted for inflation as set forth in the statewide cost index class B construction.

Under specified circumstances, school districts may impose alternative fees pursuant to Government Code Sections 65995.5 and 65995.7 (Level 2 and/or Level 3 fees, respectively). If State funding expires at any time, school districts may impose up to 100 percent of the State average cost of school facilities on new development (alternative Level 3 fees). However, if a State bond measure fails, *Mira* authority is partially restored to the extent that a city could deny an application but could not condition the project to pay fees above the fee set by the State.

Government Code Section 65995(e) states that a county or city does not have the ability to condition any land use approval, whether legislative or adjudicative, on the need for school facilities. In addition, Government Code Section 65995(f) prohibits a county or city from imposing a requirement to participate in a Community Facilities District ("CFD," also known as Mello-Roos district). Government Code Section 65995(g)(1) further states that a developer's refusal to participate in a CFD cannot be a factor in considering a "legislative or adjudicative" act. However, Government Code Section 65995(g)(2) further states that a "person can voluntarily elect" to pay a fee through a CFD.

New construction funds are allocated on a priority point basis. As a result, only schools with high priority points will be funded while districts without a high number of priority funds will not be funded (Cias, pers. comm., 2002). The State maintains a list of projects that have received an approval by the State Allocation Board (SAB) but are designated as "unfounded approvals" since no funding has been made available. Essentially this is a list waiting for potential future funding and does not represent total unfounded need for projects on file. The list is updated monthly following the State Allocation Board Meeting. It is also important to note that an un-funded project approval does not guarantee a future apportionment by the SAB.

The Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47)

This act was approved by voters in November 2002 and provides for a bond issue of $13,050,000,000 (thirteen billion fifty million dollars) to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted to areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California to provide adequate higher education facilities to accommodate growing student enrollment.

14.3.2.3 Local

The Placer County General Plan Public Facilities and Services and Schools Elements address school services for the County. In addition, the Granite Bay Community Plan Land Use Element addresses school services within the community. However, these policies addressing school services would not be applicable to the proposed project as there will be no new students generated as a result of the project.

14.3.3 Impacts

14.3.3.1 Standards of Significance

School facilities impacts are considered significant if implementation of the project results in the following (based on State CEQA Guidelines Appendix G):

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service and performance objectives.

Methodology

The analysis of public school impacts is based upon consultation with school district and County staff and review of relevant planning documents and policies.

14.3.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.3-1: Impacts on Schools and Related Facilities

Implementation of the project would not increase student enrollment at either RJUSD or LUSD schools and would not require new school facilities or related services.

The increase in employment opportunities caused by the proposed project could indirectly result in new students in the RJUSD and LUSD; however, the project does not have a residential component and is not expected to directly generate a significant number of new students in the RJUSD and LUSD. When new public school facilities are needed, they must undergo rigorous site-specific CEQA and California Board of Education evaluation prior to construction to identify and lessen environmental related impacts. Typical environmental effects as a result of the construction and operation of new school facilities include, air quality (during construction and operation), noise (during construction and operation), biological and cultural resources (depending on location), public services (electric, water and wastewater), and traffic (during construction and operation RJUSD and LUSD would be required to perform independent environmental review of any new school facilities or the expansion existing facilities to comply with CEQA.

The RJUSD and LUSD charge developer fees, which adequately fund students generated as a result of a project. Additionally, ACUSD receives funding from the State of California to pay for the construction of new facilities and improvements to existing facilities, equipment, and personnel. The existing funding mechanisms under the Kindergarten-University Public Education Facilities Bond Act of 2002 (Prop 47), which was approved by voters in November 2002, would fully fund the need for new schools from future development in the RJUSD and LUSD per California Government Code Section 65995(h) which states "the payment or satisfaction of a fee, charge, or other requirement levied or imposed… [is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." Additionally, Section 65996(b) states that the provisions of [Sections 65995-65998] are hereby deemed to provide full and complete school facilities mitigation. It should be noted that although fees are considered adequate as defined by state law, current construction and

land costs are much higher than the fees collected to provide the schools needed to serve the population. However, because no new students would be directly generated as a result of this project and the funding mechanisms available to the RJUSD and LUSD would continue to provide adequate funding to public schools, there would be **no impact** and no mitigation is required.

14.4 ELECTRICAL, CABLE, AND TELECOMMUNICATION SERVICES

14.4.1 Environmental Setting

The project site is located within the service areas of Pacific Gas and Electric Company for electrical and natural gas services, and AT&T, Surewest Telephone and Wave Broadband for telecommunication, and cable services

14.4.1.1 Electricity Services

Pacific Gas and Electric Company

Electric services for the project would be provided by the Pacific Gas and Electric Company (PG&E). The Pacific Gas and Electric Company filed a Plan of Reorganization in 2001. The Company's reorganization established the reorganized Pacific Gas and Electric as an independent, investor-owned company focused on retail electricity and natural gas distribution to its customers in Northern and Central California. The reorganized Pacific Gas and Electric Company will continue to be regulated by the California Public Utilities Commission; however, this entity will no longer be affiliated with the PG&E Corporation. Retail customers of Pacific Gas and Electric Company will continue to receive all of the same electric and natural gas services they currently receive.

Pacific Gas and Electric Company (PG&E) provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California (http://www.pge.com, 2008).

Electricity Consumption

PG&E supplies approximately 81,923 million kilowatt-hours of electricity to 13 million customers throughout its service area (EDAW, 2007, p.4.6-6). **Table 4.4-1** below shows natural gas consumption by land use for PGE's service area from 1996 to 2006 expressed in millions of kWh. PG&E currently maintains underground telephone lines that run parallel to Sierra College Boulevard.

TABLE 14.4-1
ELECTRICITY CONSUMPTION FOR PG&E'S SERVICE AREA
(IN MILLIONS OF KWH)
1996-2006

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Streetlight	Total Usage
1996	5,723	29,466	5,104	20,486	2,629	28,120	542	**92,069**
1997	5,975	31,203	4,897	21,750	2,716	28,599	559	**95,699**
1998	5,000	31,156	4,841	21,117	2,563	29,596	572	**94,845**
1999	6,005	33,176	5,165	20,572	2,585	30,521	509	**98,534**
2000	6,004	34,503	5,279	20,748	2,599	31,646	552	**101,331**
2001	6,350	33,329	4,857	18,893	2,397	29,657	509	**95,993**
2002	6,439	34,220	4,944	18,143	2,283	30,537	503	**97,070**
2003	6,324	35,243	4,682	17,954	2,477	31,976	516	**99,171**
2004	6,778	35,741	4,987	18,352	2,642	32,708	532	**101,740**
2005	5,402	35,819	5,113	18,619	2,863	33,106	537	**101,460**
2006	6,010	36,943	5,407	18,561	2,912	34,345	542	**104,719**

Source: http://www.ecdms.energy.ca.gov/elecbyplan.asp#results. *Accessed October 27, 2008.*

14.4.1.2 Natural Gas Services

Natural Gas Consumption

Table 4.4-2 below shows natural consumption by land use for PGE's service area from 1996 to 2006 expressed in millions of therms.

TABLE 14.4-2
NATURAL GAS CONSUMPTION FOR PG&E'S SERVICE AREA
(IN MILLIONS OF THERMS)
1996-2006

Year	Ag & Water Pump	Commercial Building	Commercial Other	Industry	Mining & Construction	Residential	Total Usage
1996	55	706	81	2,081	44	1,982	**4,950**
1997	64	723	67	2,014	163	1,978	**5,010**
1998	70	789	67	1,914	319	2,283	**5,442**
1999	71	831	64	1,837	236	2,422	**5,461**
2000	79	797	55	1,909	288	2,164	**5,291**
2001	50	642	67	1,770	296	2,029	**4,853**
2002	59	819	35	1,547	272	2,086	**4,818**
2003	85	887	49	1,471	268	2,051	**4,810**
2004	65	812	68	1,538	304	2,024	**4,811**
2005	41	779	79	1,560	329	1,935	**4,724**
2006	48	923	104	1,517	286	2,021	**4,899**

Source: http://www.ecdms.energy.ca.gov/GasByPlan.asp#results. *Accessed October 27, 2008.*

Electric and Natural Gas Infrastructure Funding

Funding for the installation of natural gas and electric facilities are via charges to ratepayers in accordance with the Electric & Gas Tariff currently on file with the California Public Utilities Commission (CPUC). New development is required to ensure a clear and acceptable route is provided to PG&E for the installation of these facilities (i.e. rights of way, adequate tree clearances, clear of any environmental issues).

14.4.1.3 Telecommunication Services

Telephone and Internet Services

AT&T

AT&T is one of two providers of telephone service within Granite Bay. AT&T serves customers nationwide with a range of wireless voice and data services (http://www.att.com/, 2008).

Surewest Telephone

SureWest provides digital cable TV, fiber optics, DSL, high-speed Internet access, data transport, and local and long distance telephone service. SureWest Telephone serves 110,000 access lines to homes and businesses, offering communications products and services within an 83 square-mile service territory that includes Granite Bay. In addition, SureWest Telephone is capable of providing DSL service to 100 percent of its service area (http://www.surw.com/, 2008).

Cable TV - Wave Broadband

Cable TV services in Granite Bay are provided by Wave Broadband. WaveDivision Holdings, LLC is a cable, Internet, and phone services company currently serving over 275,000 customers in Washington, Oregon and California. Wave Broadband, a retail division of Wave Division Holdings, serves communities surrounding Sacramento, including Rocklin, Auburn, Lincoln, Loomis, and West Sacramento (http://www.wavebroadband.com, 2008).

14.4.2 Regulatory Framework

14.4.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.4.2.2 State

California Public Utilities Commission

The California Public Utilities Commission (CPUC) is the state agency that regulates privately owned electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies, in addition to authorizing video franchises. The CPUC grants operating authority, regulates service standards, sets rates, and monitors utility operations for safety, environmental stewardship, and public interest (CPUC, 2007, p. 10).

Traditionally, general rate cases have been the major form of regulatory proceeding for the CPUC. General rate case applications may be filed every three years, and take about a year to complete. The utility bases its revenue request on its estimated operating costs and revenue needs for a particular future year. Customer rates will be based on the CPUC's determination of how much revenue the utility reasonably requires to operate (CPUC, 2007, p. 10).

California Building Energy Efficiency Standards

Title 24, Part 6 of the California Code of Regulations, known as the Building Energy Efficiency Standards, was established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The Energy Commission adopted the 2008 Standards on April 23, 2008, and the Building Standards Commission approved them for publication on September 11, 2008. The new standards will go in to effect on July 1, 2009 (http://www.energy.ca.gov/, 2008).

14.4.2.3 Local

Placer County General Plan

The Placer County Housing, Public Facilities and Services Elements address electrical and natural gas services for the County. **Table 14.4-3** analyzes the project's consistency with the Placer County General Plan policies pertaining to electrical and natural gas services. While this Draft EIR analyzes the project's consistency with the Placer County General Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this General Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with General Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.4-3
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

Placer County General Plan Policies	Consistency with General Plan	Analysis
Public Facilities and Services Policy 4.A.4: The County shall require proposed new development in identified underground conversion districts and along scenic corridors to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute funding for future undergrounding.	Consistent	There are no officially designated scenic vistas or corridors in the project area. Furthermore, the project site is not located within an identified underground conversion district.
Public Facilities and Services Policy 4.B.3: The County shall require, to the extent legally possible, that new development pay the cost of providing public services that are needed to serve the new development; exceptions may be made when new development generates significant public benefits (e.g., low income housing, needed health facilities) and when alternative sources of funding can be identified to offset foregone revenues. This includes working with the cities to require new development within city limits to mitigate impacts on Countywide facilities and services.	Consistent	The project applicant will pay all fees required to pay for the project's need for electrical, natural gas and telecommunication infrastructure.

Granite Bay Community Plan

The Granite Bay Community Plan Land Use Element addresses electrical and natural gas services within the community. **Table 14.4-4** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to electrical and natural gas services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.4-4
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	Adequate electric, natural gas and telecommunication infrastructure will be available to the project site.

14.4.3 Impacts

14.4.3.1 Standards of Significance

Electrical, natural gas and telecommunication facilities impacts are considered significant if implementation of the project results in the following (based on State CEQA Guidelines Appendix G):

1) Result in substantial adverse physical impacts associated with the provision of new or physically altered electricity, natural gas, or telephone facilities, need for new or physically altered electricity, natural gas, or telephone facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service and performance objectives.

Methodology

Evaluation of potential impacts on electrical, gas and telecommunication services resulting from the proposed project was based on consultation with the service providers and county staff, review of California Energy Commission policies, State standards, and review of objectives, goals and policies identified in the Placer County General Plan and Granite Bay Community Plan. The analysis focuses on the environmental effects associated with the provision of these services to the project site.

14.4.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.4-1: Electrical, Natural Gas and Telecommunication Services

Build-out of the proposed project would require additional electric, natural gas, and telecommunication supplies. The actual placement of underground transmission lines and their alignment has yet to be determined; however, the project would most likely tie into the existing power supply line in the electrical service right-of-way near the project site entrance on Sierra College Boulevard, rather than have new sets of electrical lines and cables run to the project siteto service the facility. All electric line extensions would be made in accordance with the appropriate tariffs on file with and approved by the California Public Utilities Commission: Electric Rule 15 and 16. Therefore, the extension of infrastructure and construction related activities are not expected to result in any adverse impacts.

In addition, the project would be required to comply with changes to Title 24 of the California Code of Regulations regarding energy efficiency that became effective in September 2005. These energy efficiency standards were developed in response to the state's energy crisis as well as AB

970 and SB 5X in regards to improving residential and nonresidential building energy efficiency, minimizing impacts to peak energy usage periods and to reduce impacts on overall state energy needs. See **Section 16.0 Climate Change** for a discussion of compliance with these standards.

AT&T provides telephone services to the Granite Bay area. Considering that AT&T already provides telephone services to surrounding properties, it will be able to serve the proposed project without impacting existing services in the area.

Comcast cable would be able to serve the proposed project site by tying into the existing transmission line(s) on Sierra College Boulevard into the project site. Based on the size of the development, serving the proposed project will create a minimal impact to existing services and customers. Also, the environmental effects of extending utility infrastructure within roadway right-of-ways would be limited to minor and temporary construction effects associated with air quality, noise, and water quality as discussed in those chapters. Therefore, this impact is considered **less than significant** and no further mitigation is required.

14.5 PARKS AND RECREATION

14.5.1 Environmental Setting

The project site is located within the Granite Bay Community Plan area which is served by five parks and one natural reserve area.

14.5.1.1 Placer County Parks and Grounds Division

The Placer County Parks and Grounds Division oversees and manages park and recreation resources within the Granite Bay community. Parks within Granite Bay consist of Ronald L. Feist Park (5 miles north of the project site), Douglas Ranch Park, Granite Bay Community Park, Treelake Park, and Treelake Terrace Park. These parks, all within 6 miles of the project site, provide sports fields and facilities, picnic areas, and bicycle and pedestrian trails to Granite Bay residents. The Miners Ravine Natural Reserve, located 7 miles northwest of the project site, also provides a passive park and interpretive nature trail.

Trails

In addition to providing a trail connection to the existing trail along Sierra College Blvd to the west, the Granite Bay Community Plan identifies a trail route that includes a small portion of trail at the south east corner of the Amazing Facts property. That trail segment contains wetlands, vernal pools, and buffer zones which must be avoided (see Section 6.0 Biological Resources). The project proponent has granted the request to provide a 25-foot easement along the south portion of the project site with an expanded 40-foot by 40-foot easement area in the very south east portion of the property. The expanded easement area was requested to provide adequate room for an existing fire hydrant as well as the trail. The purpose of such easement is for a public multi use trail not larger than 12 feet wide. The county is responsible for all environmental studies, impacts, permits and construction of such trail.

14.5.2 Regulatory Framework

14.5.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.5.2.2 State

There are no state standards and regulations applicable to the project site.

14.5.2.3 Local

The Placer County General Plan Public Facilities and Services and Public Recreation and Parks Elements address parks and recreation services for the County. The Granite Bay Community Plan Land Use Element addresses parks and recreation services within the community. However, these policies addressing park and recreation services would not be applicable to the proposed project as the project does not include any residential units, and therefore would not necessitate new or expanded parks facilities.

14.5.3 Impacts

14.5.3.1 Standards of Significance

A recreation impact is considered significant if implementation of the project would result in the following (based on State CEQA Guidelines Appendix G):

1) 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.

2) Inclusion of recreational facilities, or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment.

Methodology

The project was evaluated for its impacts on parks and recreational services based on a review of the Placer County General Plan, Granite Bay Community Plan, and consultations with relevant county staff. Section XIV of the proposed project's Initial Study states that implementation of the –proposed project will have no impact in regards to increasing the use of existing parks and recreational facilities, nor will it require the construction or expansion of recreational facilities. Therefore, impacts to parks and recreational facilities will not be discussed further in this document.

14.5.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.5-1: Park and Recreation Facilities

Build-out of the proposed project would not require the construction or expansion of additional park and recreational facilities, as the proposed project does not contain a residential component. Therefore there would **no impact** and no mitigation is required**.**

14.6 SOLID WASTE SERVICE

14.6.1 Environmental Setting

The project site is located within the Granite Bay Community Plan area which is served by one residential and commercial garbage and one residential and commercial recycling service.

14.6.1.1 Auburn Placer Disposal Service

Auburn Placer Disposal Service (APDS) provides residential and commercial garbage service, debris box service and recycling to residents and businesses in the cities of Rocklin and Auburn, the Town of Loomis, and in unincorporated Placer County. The company processes more than 100,000 tons of garbage and recyclable material annually. Auburn Placer Disposal Service also offers spring clean-up day for residents, and provides commercial cardboard recycling and newspaperdrop-off.

Auburn Placer Disposal Service's office, maintenance shop, transfer station and recycling buyback center are located in Auburn. The company also operates two other transfer stations in Placer County and is responsible for the post-closure of the closed Auburn landfill.

Auburn Placer Disposal Service offers a wide variety of recycling opportunities at the Auburn Transfer Station including newspapers, cardboard, white paper, motor oil, batteries, aluminum, glass, and plastic. Latex paint, appliances, tires, scrap metal, wood and green waste are accepted with a processing fee. Ninty gallon trash cans (toters) are typically provided by Auburn Placer Disposal Service. Curbside recycling is provided to to residents of Auburn, Loomis, and unincorporated Placer County.

14.6.1.2 Material Recovery Facility

The Western Placer Waste Management Authority (WPWMA) is a regional agency that provides recycling and refuse disposal services to the commercial and residential sectors of Auburn, Lincoln, Loomis, Rocklin, Roseville, and Unincorporated Placer County. The WPWMA's Western Regional Sanitary Landfill is located near Highway 65 between Roseville and Lincoln. Permitted capacity for the 281-acre landfill is 36,350,000 cubic yards and the estimated closure date is 2036. Approximately 80 percent of the landfill's capacity remains. (CIWMB, 2009a)

In January of 1990, AB 939 was passed which requires that jurisdictions divert 25 percent of solid waste from landfills by 1995 and 50 percent by 2000. The WPWMA owns and operates a materials recovery facility (MRF) which is designed to recover recyclable materials (including newspaper, cardboard, metals, glass, plastics, green waste, and wood waste) from the trash to reduce the amount of material going to the landfill. The MRF is a key element in the jurisdiction's efforts to comply with the state law to divert 50 percent of its waste from landfills. Based on California Integrated Waste Management Board (CIWMB) reports, the 2006 diversion rate in unincorporated Placer County was 68 percent.

14.6.2 Regulatory Framework

14.6.2.1 Federal

There are no federal standards and regulations applicable to the project site.

14.6.2.2 State

State of California

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties are required to

divert 50 percent of all solid waste from landfill facilities by January 1, 2000. Solid waste plans are required to explain how each city's AB 939 plan will be integrated with the City plan. They must promote (in order of priority); source reduction, recycling and composting, and environmentally safe transformation and land disposal.

14.6.2.3 Local

Placer County General Plan

Table 14.6-1 summarizes the project's consistency with the applicable Placer County General Plan objectives and policies, related to solid waste services. While this EIR analyzes the project's consistency with the General Plan pursuant to CEQA Section 15125(d), the Placer County Board of Supervisors will ultimately make the determination of the project's consistency. Environmental impacts associated with inconsistency with General Plan policies are addressed in the appropriate impact discussions of this EIR.

TABLE 14.6-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN WASTE MANAGEMENT AND RECYCLING POLICIES

General Plan Objectives and Implementing Policies	Consistency	Analysis
Policy IV G 1: The County shall require waste collection in all new urban and suburban development.	Consistent	Waste collection services will be provided to the project.
Policy IV G 7: The County shall require that all new development complies with applicable provisions of the Placer County Integrated Waste Management Plan.	Consistent	The Amazing Facts ministry project will comply with all rules and regulations set forth in the Placer County Integrated Waste Management Plan.
Policy IV G 9: The County shall encourage businesses to use recycled products in their manufacturing processes and consumers to buy recycled products.	Consistent	The Amazing Facts ministry project will comply with all county regulations regarding the use of recycled products.

Granite Bay Community Plan

The Granite Bay Community Plan Land Use Element addresses parks and recreation services within the community. **Table 14.6-2** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to solid waste services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.5-2
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	Adequate solid waste resources will be available before construction of the proposed project commences.

14.6.3 Impacts

14.6.3.1 Standards of Significance

A solid waste impact is considered significant if implementation of the project would result in any of the following:

1) Be served by a landfill without sufficient permitted capacity to accommodate the project's solid waste disposal needs.
2) Non-compliance with federal, state, and local statutes and regulations related to solid waste.

Methodology

Evaluation of potential solid waste impacts was based on consultation with Placer County staff, review of the Placer County General Plan and Granite Bay Community Plan, review of the programs and policies of APDS, and information provided by the California Integrated Waste Management Board (CIWMB) website.

14.6.3.2 Project Level Impacts and Mitigation Measures

Impact 14.6-1 Solid Waste Disposal

Implementation of the project would cause a minimal increase in demand for solid waste collection and disposal services beyond the current service level. Based on the solid waste generation rates, the capacity of existing landfills, and the waste diversion rate of Placer County, it is concluded that the proposed project would be served under the existing capacity of APDS, and Placer County to service residential, commercial, and industrial customers.

In order to calculate solid waste generation rates for the project, the conservative commercial rate of 1 pound per 100 square feet per day from the CIWMB was used. (CIWBM, 2009b) Based on this rate, the project could produce up to 230.1 pounds of solid waste per day (230,100 sf x 1 lb/100 sf/day), or 42 tons per year. Also, based on the 68 percent diversion rate for Placer County, approximately 28.5 tons (42 x .68 = 11,019) of solid waste should be diverted from the Western Regional Sanitary Landfill each year. Thus, an estimated 13.4 tons of solid waste should be deposited in the Western Regional Sanitary Landfill per year. Given that the landfill has 29 million cubic yards of capacity remaining, an additional 13.4 tons per year of waste would not be significant to the landfill.

The City's compliance with AB 939, by means of the WPWMA, reduces potential impacts on the capacity of the landfill. As stated above, WPWMA operates the MRF within Placer County. All

solid waste collected in the area is transported to the MRF where recyclable materials are sorted from the waste stream. AB 939 requires all cities and counties to divert 50 percent of all solid waste to landfills.

It is concluded that the proposed project would result in a **less than significant** impact and would be served by a landfill with adequate capacity and would not reduce the county's ability to comply with state-mandated solid waste diversion requirements. No further mitigation is required.

14.7 WATER SERVICES

The proposed project is located within the service area for the Placer County Water Agency.

14.7.1 Environmental Setting

14.7.1.1 Placer County Water Agency

The Placer County Water Agency (PCWA) provides water service to the project area and would serve the project site. PCWA's service area encompasses the entire boundary of Placer County, ranging from the rim of the Sacramento Valley on the west to the Sierra Nevada and Lake Tahoe on the east. PCWA provides water resource planning and management, retail and wholesale supply of irrigation water and drinking water, and production of hydroelectric energy within its service area (PCWA, 2009).

PCWA serves over 36,000 water accounts providing annual deliveries to 220,000 residents, businesses, industrial customers, and agriculture. A significant amount of raw water irrigates pastures, orchards, rice fields, farms, ranches, golf courses, and other uses. PCWA-treated water is sold directly to customers residing in Auburn, Colfax, Loomis, Rocklin, and portions of Roseville and the surrounding unincorporated areas of Placer County. PCWA-treated water is also sold wholesale to the City of Lincoln and several smaller special districts which treat the water and retail it directly to their customers. PCWA raw water is also sold to the City of Roseville, San Juan Water District (Granite Bay), and several special districts that treat the water and retail it to their customers (Brown & Caldwell, 2005).

The PCWA service area is currently divided into five zones. The proposed project site is located in Zone 1, which is the largest of the five zones and extends north from the northern boundary of the City of Roseville to the City of Auburn and extends to the northwest to include the City of Lincoln. There is also a small detached portion southwest of the City of Roseville near Baseline Road and Crowder Lane that is included in Zone 1. PCWA provides retail treated water service to most of Zone 1 and also serves wholesale treated water to the City of Lincoln, California American Water Company, and to other property owner associations located in Zone 1 (Brown & Caldwell, 2005).

Surface Water Supply and Water Rights

PCWA's surface water supply sources consist of water purchased from Pacific Gas & Electric (PG&E) from the Yuba and Bear rivers, Middle Fork Project (MFP) water from the American River, and Central Valley Project water from the American River (Brown & Caldwell, 2006). **Figure 14.7-1** below shows a schematic of PCWA's water supply system. Water for Zone 1 is supplied from PG&E's Drum-Spaulding system on the Yuba/Bear River System and from the PCWA's MFP from the American River.

FIGURE 14.7-1 PCWA WATER SUPPLY SYSTEM

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Yuba/Bear River System

The main source of water supply in Zone 1, as well as in the entire PCWA service area, is from the Yuba/Bear River System (Brown & Caldwell, 2006). The Yuba/Bear River System supply originates in Lake Spaulding and is purchased from PG&E. PCWA has two water supply contracts with PG&E that provide options to purchase up to 125,400 acre-feet (af) annually from PG&E's rights to water for consumptive purposes from the Yuba and Bear river systems. These water rights were developed prior to 1914 by PG&E and its predecessors by appropriation, with the places of use for the water being western Placer County and PCWA's Zone 3. PCWA currently takes delivery of up to 105,400 acre-feet per year (af/y) of water annually for delivery to Zones 1 and 5 from the Yuba/Bear River System through PG&E's Bear River Canal and its downstream canal network. The 105,400 af/y is delivered pursuant to the PCWA's existing Zone 1 PG&E water supply contract. The contract for the 105,400 acre-feet annually supplied to Zones 1 and 5 terminates in 2013, at which time the contract will come up for renewal for an adjustment in the price to be paid for the water (Brown & Caldwell, 2006).

Middle Fork American River System

PCWA also has permits from the California State Water Resources Control Board (SWRCB), and an agreement with the United States Bureau of Reclamation (USBR), to divert up to 120,000 af/y for consumptive use from the American River. The water is available from direct diversions from the north fork of the American River between November and June and from the rediversion of releases from the Agency's Middle Fork American River Project in the remainder of the year. Western Placer County and a portion of northeastern Sacramento County are the places of use for this water source (Brown &Caldwell, 2005). Of PCWA's 120,000 permitted af/y from the American River, Zone 1 and Zone 5 receive 35,500 af/y of MFP water via the American River Pump Station, which was completed in 2007 (PCWA, 2008).

Other Surface Water Supplies

In addition to the above supplies, PCWA is negotiating with USBR for the right to take 35,000 af/y of Central Valley Project (CVP) entitlement from the Sacramento River and/or Feather River for delivery to Zones 1 and 5 (WFA, 2000). If circumstances prevent PCWA from developing the diversion from the Sacramento and/or Feather rivers, one alternative is to increase the American River diversion by 35,000 af/y to 70,500 af/y.

Groundwater Supply

Although groundwater from the North American Groundwater subbasin is pumped by several water agencies in western Placer County, PCWA does not use significant amounts of groundwater for its water supply. Currently, Zones 2 and 4 are the only zones that pump groundwater (Brown & Caldwell, 2006). The predominant historical use of groundwater in western Placer County has been for agriculture, and the estimated historical average annual agricultural groundwater demand has been approximately 90,000 af/y (Brown & Caldwell, 2006). Total groundwater use in 2003 for western Placer County was 97,371 af/y (Brown & Caldwell, 2006). Under these pumping conditions, the groundwater levels at the southern end of the western Placer County basin have been stable since about 1982 (following a steady decline of about 1½ feet per year from 1950 to 1982), and at the northern end of the basin the levels have risen slightly since completion of Camp Far West Reservoir in 1974. These stable groundwater levels indicate that groundwater pumping is currently in balance with the natural groundwater recharge rate (Brown & Caldwell, 2006). The most recent evaluation of the western Placer

County groundwater basin lists the estimated sustainable safe yield as 95,000 af/y for the western Placer County portion of the North American Groundwater subbasin (Brown & Caldwell, 2006).

PCWA anticipates that under drought conditions it would need to rely on groundwater in conjunction with demand reductions in order to meet demands when surface water supply is reduced. It is anticipated that groundwater pumping exceeding the safe yield during dry periods is feasible as long as the long-term (multiple year) average does not exceed the safe yield of 95,000 af/y (Brown & Caldwell, 2006)

Water Supply Reliability

Water quality, legal issues, and environmental concerns are not anticipated to have a significant impact on PCWA surface water supply reliability. However, during single and multiple dry years, PCWA's surface water supply could become unreliable. For planning purposes, PCWA assumes California's 1977 drought, which was the worst on record, is the single dry year event. During that drought, PCWA relied exclusively on the PG&E supply, which was reduced to approximately 50,000 acre-feet. Therefore, PCWA assumes a similar supply reduction from 105,400 to 50,000 acre-feet during a single dry year.

The drought from the late 1980s to early 1990s is the benchmark for a multi-year drought for most watersheds in the state. During that time, the PG&E supply was not cut back for PCWA, as ample supply was available. However, for a conservative estimate, the PG&E contract is assumed to be reduced 25 percent for each year of the multiple dry year condition.

In addition, PCWA has completed computer modeling of the Middle Fork Project to determine the reliability of its water supply under the 70 years of available hydrologic record. That report concluded the Middle Fork Project could have supplied the full 120,000 acre-feet in all the years of record and could provide full deliveries even in an assumed worst-case three-year consecutive event, which is a repeat of 1976, 1977, and with a third year a repeat of 1977. Therefore, there is no assumed supply reduction of the Middle Fork Project American River supply during the dry year planning event.

PCWA's total dry year supplies are summarized in **Table 14.7-1**. Alternatives for replacing inconsistent sources include transfers and increased use of recycled water and groundwater.

TABLE 14.7-1
PCWA'S ASSUMED DRY YEAR SURFACE WATER SUPPLIES

Water Supply	Normal Year Supply (af/y R)	Single Dry Year Supply (af/y R)	Multiple Dry Year Supply (af/y R)
PG&E	100,400	50,000	75,300
Middle Fork Project	120,000	120,000	120,000
Central Valley Project	35,000	26,250	26,250
Total	**255,400**	**196,250**	**221,550**

Source: Brown & Caldwell, 2006, pg. 6-7

PCWA Projected Water Supply Demand

Table 14.7-2 shows the 2004 treated water demand in Zone 1 by customer category, along with the number of connections.

TABLE 14.7-2
2004 TREATED WATER DEMAND AND NUMBER OF CONNECTIONS BY CUSTOMER CATEGORY IN AF/Y

Customer Type	Number of Connections in Zone 1	Water Demand in Zone 1 (af/y)
Residential	25,647	16,063.07
Multi Units (7,324)	664	1,982.61
Commercial	1,433	2,945.75
Industrial	2	1,078.26
Municipal	132	971.22
Landscape-Greenbelt	335	1,323.99
Irrigation/Ag	81	411.00
Construction	-	210.01
Fire Protection	-	8.83
Resale	8	7,978.85
No Demand	-	139.29
Interties	-	16.18
Misc. Connections	1,550	-
Total	**29,852 Connections**	**33,129.06 af/y**

Source: Brown & Caldwell, 2005, pg. 3-3; Brown & Caldwell, 2006, p. 3-9

PCWA's 2006 Integrated Water Resources Plan (IWRP) presents an integrated water supply strategy for normal, single dry, and multiple dry years for western Placer County and identifies several different growth scenarios in order to project future water demand. The water supply to demand comparison for PCWA is based on Scenario 2b, which is assumed by the IWRP to be the most likely representation of the buildout of western Placer County, based on the currently approved General Plans within the PCWA's service area, as well as proposed projects that were in the approval process during the IWRP planning period. **Table 14.7-3** below shows the projected demand at buildout of Scenario 2b, compared to PCWA supplies.

TABLE 14.7-3
WEST PLACER COUNTY SUPPLY TO DEMAND COMPARISON BUILDOUT OF SCENARIO 2B

	Normal Year (af/y)	Multi-Dry Years (af/y)	Single Driest Year (af/y)
Water Demand			
PCWA			
Auburn	12,188	12,188	11,822
Lincoln	44,243	44,243	42,916
Rocklin	27,841	27,841	27,006
Loomis/Granite Bay	16,284	16,284	15,795
West Placer	52,125	51,125	50,561
Roseville	65,970	65,970	65,970
San Juan Water District	16,415	16,415	16,415
Raw Water	75,000	55,000	34,000
Total Demands	**310,066**	**290,066**	**264,485**
Water Supplies			
PCWA			
MFP	120,000	120,000	120,000
CVP	35,000	26,250	26,250
PG&E	100,400	75,000	50,000
South Sutter WD	5,000	0	0
Lincoln (NID)	3,300	2,475	1,650
Roseville (CVP)	32,000	24,000	24,000
Total Recycled Water	21,261	21,261	21,261
Private Groundwater	5,273	5,273	5,273
Groundwater			
Roseville	0	6,790	6,790
Lincoln/PCWA	0	10,000	10,000
Total Supplies	**322,234**	**291,049**	**265,224**

Source: Brown & Caldwell, 2006, p. 9-9.

As shown, there is adequate water supply to reliably meet all of the projected PCWA western Placer County service area demands, including Zone 1, under normal climate, multiple year, and single year drought conditions. However, under drought conditions, PCWA, Roseville, and Lincoln will all need to rely on groundwater to improve the reliability of their system (Brown & Caldwell, 2006).

Under current pumping conditions, the groundwater levels at the southern end of the western Placer County basin have been stable since about 1982 and at the northern end of the basin the levels have risen slightly since completion of Camp Far West Reservoir in 1974. These stable groundwater levels indicate that groundwater pumping is currently in balance with the natural groundwater recharge rate (Brown & Caldwell, 2006). The most recent evaluation of the western Placer County groundwater basin lists the estimated sustainable safe yield as 95,000 af/y for the western Placer County portion of the North American Groundwater subbasin. It is anticipated that groundwater pumping exceeding the safe yield during dry periods is feasible as long as the long-term (multiple year) average does not exceed the safe yield of 95,000 af/y (Brown & Caldwell, 2006).

Water Infrastructure

Zone 1 includes four water treatment facilities, 14 storage tanks, and approximately 370 miles of treated water piping (Brown & Caldwell, 2006).

In addition, PCWA plans to construct a new water treatment plant that will be located on Ophir Road in the Newcastle/Ophir area adjacent to the American River Pump Station. The new WTP will have an initial capacity of 30 million gallons per day (mgd) with an ultimate design capacity of 120 mgd. The Ophir WTP is planned for operation in 2011 (PCWA, 2007).

Water Treatment

There are four WTPs in PCWA's Zone I. A portion of Granite Bay, along with Rocklin, Penryn, Loomis, and Lincoln are served by the Foothill and Sunset WTPs that are located in the southern part of Zone 1 (lower Zone 1).

The Foothill WTP consists of two parallel treatment trains which are treated as separate plants (Foothill 1 and 2) (Starr Consulting, 2008, p. 2-2). Foothill 1 WTP has a design flow of 40 mgd, an average winter flow of 10 mgd, and an average summer flow of 30 mgd (Starr Consulting, 2008, p. 2-3). The Foothill 2 WTP has a design flow of 15.0 mgd, an average winter flow of 7 mgd, and an average summer flow of 15 mgd (Starr Consulting, 2008).

The Sunset WTP has a design flow of 8 mgd, with average flows of 5 mgd (Starr Consulting, 2007, p. 2-8). The Sunset WTP is typically operated during the peak summer months and during outages in the PG&E supply to the Foothill WTP (Brown & Caldwell, 2006).

Water Distribution Infrastructure

The PCWA Zone 1 water system service area begins at an elevation of approximately 1,800 feet and ends at an elevation of 100 feet. For the most part, gravity moves raw water through a series of water canals to the WTPs and then to the water distribution system without additional pumping (PCWA, 2003, p. 5-8). The proposed project would connect to an existing 20-inch water line east of the intersection of Sierra College Boulevard and Night Watch Drive and west of the entry driveway to the project site via three separate water lines (a 4-inch, 8-inch and 12-inch line). On-site water lines would range from 4-inches in diameter to 12-inches and would provide both potable water and water for fire suppression.

14.7.2 Regulatory Framework

14.7.2.1 Federal

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) was originally passed by Congress in 1974 to protect public health by regulating the nation's public drinking water supply. The law was amended in 1986 and 1996 and requires many actions to protect drinking water and its sources: rivers, lakes, reservoirs, springs, and groundwater wells. The SDWA applies to every public water system in the United States but does not regulate private wells which serve fewer than 25 individuals.

The SDWA authorizes the United States Environmental Protection Agency (EPA) to set national health-based standards for drinking water to protect against both naturally-occurring and man-made contaminants that may be found in drinking water. Originally, the SDWA focused primarily on treatment as the means of providing safe drinking water at the tap. The 1996 amendments changed the existing law by recognizing source water protection, operator training, funding for water system improvements, and public information as important components of safe drinking water. This approach is intended to ensure the quality of drinking water by protecting it from source to tap (EPA, 2009).

14.7.2.2 State

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code Sections 10610–10656). The act states that every urban water supplier that provides water to 3,000 or more customers, or that provides over 3,000 acre-feet of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. The act describes the contents of the Urban Water Management Plans (UWMP) as well as how urban water suppliers should adopt and implement the plans. It is the intention of the act to permit levels of water management planning commensurate with the numbers of customers served and the volume of water supplied (DWR, 2009b). As discussed under Regional Regulatory Framework below, the PCWA adopted its most recent UWMP in 2005.

Senate Bill (SB) 610

SB 610 makes changes to the Urban Water Management Planning Act to require additional information in Urban Water Management Plans if groundwater is identified as a source available to the supplier. Required information includes a copy of any groundwater management plan adopted by the supplier, a copy of the adjudication order or decree for adjudicated basins, and if non-adjudicated, whether the basin has been identified as being overdrafted or projected to be overdrafted in the most current California Department of Water Resources (DWR) publication on that basin. If the basin is in overdraft, that plan must include current efforts to eliminate any long-term overdraft. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act (CEQA) supplied with water from a public water system be provided a specified water supply assessment, except as specified in the law (DWR, 2009a).

Assembly Bill (AB) 901

AB 901 requires Urban Water Management Plans to include information relating to the quality of existing sources of water available to an urban water supplier over given time periods and the manner in which water quality affects water management strategies and supply (DWR, 2009a).

Senate Bill (SB) 221

SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections. The law defines criteria for determining "sufficient water supply" such as using normal, single dry, and multiple dry year hydrology and identifying the amount of water that the supplier can reasonably rely on to meet existing and future planned uses. Rights to extract additional groundwater, if groundwater is to be used for the project, must be substantiated (DWR, 2009a).

California Urban Water Conservation Council

The California Urban Water Conservation Council (CUWCC) was created in 1991 by numerous urban water agencies, public interest organizations, and private entities throughout California to assist in increasing water conservation in the state. The goal of the CUWCC is to integrate best management practices (BMPs) into the planning and management of California's water resources. A Memorandum of Understanding [MOU] Regarding Urban Water Conservation in California (2007) was signed by these agencies and formalizes an agreement to implement the BMPs and makes a cooperative effort to reduce the consumption of California's water resources (CUWCC, 2008). PCWA is a signatory of the memorandum. By signing the Council's MOU, members agree to implement 14 BMPs to conserve water in urban areas. The Council's BMPs were updated in 2008 to include current technology and to credit agencies for innovative water conservation programs. The 14 BMPs are now organized into five categories. Two categories, Utility Operations and Education, are Foundational BMPs, because they are considered to be essential water conservation activities by any utility and are adopted for implementation by all signatories to the MOU as ongoing practices with no time limits. The remaining BMPs are Programmatic BMPs and are organized into Residential, Commercial, Industrial, and Institutional (CII), and Landscape categories. The BMPs are shown in **Table 14.7-4** below.

TABLE 14.7-4
CUWCC REVISED BMPS

Old BMP Number & Name	New BMP category
1. Water Survey Programs for Single-Family Residential and Multi-Family Residential Customers	Programmatic: Residential
2. Residential Plumbing Retrofit	Programmatic: Residential
3. System Water Audits, Leak Detection and Repair	Foundational: Utility Operations – Water Loss Control
4. Metering with Commodity Rates for All New Connections and Retrofit of Existing Connections	Foundational: Utility Operations – Metering
5. Large Landscape Conservation Programs and Incentives	Programmatic: Landscape

Old BMP Number & Name	New BMP category
6. High-Efficiency Clothes Washing Machine Financial Incentive Programs	Programmatic: Residential
7. Public Information Programs	Foundational: Education – Public Information Programs
8. School Education Programs	Foundational: Education – School Education Programs
9. Conservation Programs for Commercial, Industrial, and Institutional (CII) Accounts	Programmatic: Commercial, Industrial, and Institutional
10. Wholesale Agency Assistance Programs	Foundational: Utility Operations – Operations
11. Retail Conservation Pricing	Foundational: Utility Operations – Pricing
12. Conservation Coordinator	Foundational: Utility Operations – Operations
13. Water Waste Prohibition	Foundational: Utility Operations – Operations
14. Residential ULFT Replacement Programs	Programmatic: Residential

Source: CUWCC, 2009

14.7.3 Regional

Water Forum Agreement

Initiated in 1995, the Water Forum process brought together a diverse group of stakeholders that included business and agricultural leaders, citizens' groups, environmentalists, water managers, and local governments to evaluate available water resources and future water needs of the Sacramento metropolitan area. These stakeholders identified the following coequal objectives to guide the development of the Water Forum Agreement (WFA):

- Provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and
- Preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

After a six-year consensus-based stakeholder process, the WFA, along with an environmental impact report for the WFA, was completed. The comprehensive WFA, which includes a Memorandum of Understanding signed by each of the stakeholder organizations, allows the region to meet its needs in a balanced way through implementation of seven elements. These elements include detailed understandings among stakeholder organizations on how this region will deal with key issues such as groundwater management, water diversions, dry year water supplies, water conservation, and protection of the Lower American River (WFA, 2000, p. 1). The WFA establishes a regional conjunctive-use water program for the lower American River and the connected groundwater basin, including purveyor-specific agreements (PSAs) that define the benefits each water purveyor will receive as a stakeholder and the actions each must take to receive these benefits. The key water supply provisions in the PSA for PCWA are as follows (Brown &Caldwell, 2006, p. 6-5):

- In most years, when the projected March through November unimpaired inflow to Folsom Reservoir is greater than 950,000 af/y, PCWA will divert and use up to 35,500 af/y from the

American River and 35,000 af/y from the Sacramento and/or Feather rivers with certain conditions. The 35,000 af/y limitation does not apply to PCWA's Middle Fork water supply.

- In the drier years and driest years, when the Folsom Reservoir inflow is less than 950,000 af/y, PCWA would divert 35,500 af/y plus replace up to 27,000 af/y of water in the American River from reoperation of the Middle Fork Project reservoirs.

Within the WFA, there are also water conservation plans identified for individual water purveyors. The BMPs from the water supply provisions listed above are found in these individual conservation plans, and were derived from the original MOU developed by CUWCC. The BMPs were then customized for each water purveyor so are a bit different than those identified in CUWCC's MOU. The BMPs listed in the conservation plan for PCWA in the WFA are listed in **Table 14.7-5**.

TABLE 14.7-5
WATER FORUM BEST MANAGEMENT PRACTICES FOR PCWA

BMP Number	BMP Name
1	Interior and exterior water audits and incentive programs for single-family residential, multi-family residential and institutional customers.
2	Plumbing retrofit of existing residential accounts.
3	Distribution system water audits, leak detection and repair.
4	Non-residential and residential meter retrofit.
5	Large landscape water audits and incentives for commercial, industrial, institutional, and irrigation accounts.
6	Landscape water conservation requirements for new and existing commercial, industrial, institutional and multi-family developments.
7	Public information.
8	School education.
9	Commercial and industrial water conservation.
11	Conservation pricing for metered accounts.
12	Landscape water conservation for new/existing single family homes.
13	Water waste prohibition.
14	Water conservation coordinator.
16	Ultra-low flush toilet replacement program for non-residential and residential customers.

Source: WFA, 2000

The WFA is a long-term water supply plan that addresses water supplies and demands to 2030 for existing (as of January 2000) purveyors and agencies. The WFA did not address water supplies beyond 2030 and did not account for new incorporations for the cities of Elk Grove (2000) and Rancho Cordova (2003), or updates to general plans. Rather, the WFA analysis was based on existing land use plans that were available at the time it was prepared.

PCWA 2005 Urban Water Management Plan

PCWA prepared urban water management plans in 1985, 1992, 1997, 2000, and most recently in 2005. The 2005 Urban Water Management Plan (UWMP) provides a description of the existing

water system, historical and projected water use, water supply sources, water conservation best management practices, recycled water, and a comparison of water supply versus demand.

PCWA 2006 Integrated Water Resources Plan

In 2004, PCWA initiated the preparation of an Integrated Water Resources Plan (IWRP) to assess the buildout water demands in western Placer County. Completed in 2006, the IWRP includes the projected service demands of several new development projects proposed to be included in future general plan updates and presents an update of unit water use analysis using 2004 water use information. The IWRP plans for the integration of a variety of water supply sources, including groundwater, reclaimed water, and additional water conservation measures.

14.7.4 Local

Placer County General Plan

The Placer County General Plan addresses water service for the County. **Table 14.7-6** analyzes the proposed project's consistency with the Placer County General Plan policies pertaining to water services. While this Draft EIR analyzes the project's consistency with the Placer County General Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this General Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with General Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.7-6
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

Placer County General Plan Policies	Consistency with General Plan	Analysis
Policy 4.C.1. The County shall require proponents of new development to demonstrate the availability of a long-term, reliable water supply. The County shall require written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy. Where the County will approve groundwater as the domestic water source, test wells, appropriate testing, and/or report(s) from qualified professionals will be required substantiating the long-term availability of suitable groundwater.	Consistent	As discussed under Impact 14.7.1 below, the PCWA has adequate water supplies from existing supplies to serve the proposed project in both normal and drought years. In addition, mitigation measures MM 14.7.1 through MM 14.7.3 under Impact 14.7.2 would ensure that the project applicant would enter into a facilities agreement with the PCWA to provide any on-site or off-site pipelines or other facilities needed to supply water for domestic or fire protection services consistent with this policy.
Policy 4.C.2. The County shall approve new development based on the following guidelines for water supply: a. Urban and suburban development should rely on public water systems using surface supply. b. Rural communities should rely on public water systems. In cases where parcels are larger than those defined as suburban and no public water system exists or can be extended to the property, individual wells may be permitted. c. Agricultural areas should rely on public water systems where available, otherwise individual water wells are acceptable.	Consistent	The proposed project is considered urban development and would be served by the PCWA, which relies solely on surface water during normal years.

Placer County General Plan Policies	Consistency with General Plan	Analysis
Policy 4.C.6. The County shall promote efficient water use and reduced water demand by: a. Requiring water-conserving design and equipment in new construction; b. Encouraging water-conserving landscaping and other conservation measures; c. Encouraging retrofitting existing development with water-conserving devices; and d. Encouraging water-conserving agricultural irrigation practices.	Consistent	
Policy 4.C.12. The County shall limit the annual rate of growth to 3 percent in areas where domestic water is supplied by individual or community wells. Where surface water supplies provide domestic water, the amount of growth shall be limited to what can be served by available surface water supplies assuming a 4-year drought period and usage of one acre foot of water per year per household.	Consistent	As discussed under Impact 14.7-1 below, the PCWA has adequate water supplies from existing supplies to serve the proposed project in both normal and drought years

Granite Bay Community Plan

The Granite Bay Community Plan addresses water services within the community. **Table 14.7-7** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to water services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.7-7
PROJECT CONSISTENCY WITH GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 18: The rate of development and location of projects shall not exceed the capacity of the community, special districts and utility companies to provide all needed services and facilities in an orderly and economic manner.	Consistent	As discussed under Impact 14.7.1 below, the PCWA has adequate water supplies from existing supplies to serve the proposed project in both normal and drought years
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	See response under Land Use Policy 18 above.
Policy 2. To allow development requiring treated water only where an adequate distribution system is in place to serve such development.	Consistent	Mitigation measures MM 14.7.1 through MM 14.7.3 under Impact 14.7.2 would ensure that the project applicant would enter into a facilities agreement with the PCWA to provide any on-site or off-site pipelines or other facilities needed to supply water for domestic or fire protection services consistent with this policy.

14.7.3 Impacts

14.7.3.1 Standards of Significance

The impact analysis provided below is based on the following State CEQA Guidelines Appendix G thresholds of significance. A water service impact is considered significant if implementation of the project would:

1) Result in the need for new entitlements or a substantial expansion or alteration to local or regional water supplies that would result in a physical impact to the environment; or

1) Result in the need for new systems or a substantial expansion or alteration to the local or regional water treatment or distribution facilities that would result in a physical impact to the environment.

Methodology

Evaluation of potential water service impacts of the proposed project was based on consultations with the Placer County Water Agency (PCWA), as well as review of the Placer County General Plan, the Granite Bay Community Plan, and PCWA's Urban Water Management Plan and Integrated Water Resources Plan. In addition, the Water Forum Agreement was reviewed. A detailed list of resources used to complete this evaluation can be found in the References subsection located at the end of this section. The impact evaluation considered existing water service conditions and whether or not the proposed project would have physical environmental impacts to those conditions.

14.7.3.2 Project level Impacts and Mitigation Measures

IMPACT 14.7-1: Project Water Demand

The proposed project would result in annual treated water demand of 64.34 af/y and would result in increased demand for water supply from the Placer County Water Agency (PCWA). According to the PCWA's 2006 Integrated Water Resources Plan, public land uses in lower Zone 1, which include institutional uses such as the proposed project, have treated water demands of approximately 3,379 gpd per acre. Therefore, the proposed project would require approximately 57,443 gpd (3,379 gpd per acre x 17 acres), or 64.34 acre-feet per year (af/y).

As noted in **Table 14.7-3** in the Existing Setting subsection, PCWA currently has adequate water supply to reliably meet all of the projected PCWA western Placer County demands. Specifically, in a normal year the PCWA has total water supplies of 322,234 af/y and total water demands of 310,066 af/y, for a normal year surplus of 12,168 af/y. The proposed project would require approximately 64.34 af/y of PCWA supplies, leaving 12,103.66 af/y in surplus (see **Table 14.7-8**). In addition, PCWA has adequate and reliable water supplies during multiple dry years and the single driest year to meet demand projected in association with the proposed project, as shown in **Table 14.7-8** below.

TABLE 14.7-8
PCWA AND PROJECT WATER DEMAND VS. SUPPLY

	Normal Year	Multi-Dry Years	Single Driest Year
PCWA Supplies (in af/y)	322,234	291,049	265,224
PCWA Demand (in af/y)	310,066	290,066	264,485
Water Supply Surplus (in af/y)	12,168	983	739
Water Supply Demand of Proposed Project (in af/y)	64.34	64.34	64.34
Remaining PCWA Surplus	**12,103.66**	**918.66**	**674.66**

During drought years, PCWA would be required to pump additional groundwater to reliably meet demand. In both multiple dry years and the single driest year, PCWA anticipated that 10,000 af/y of groundwater would need to be pumped. The proposed project could require that additional groundwater be pumped during drought years. PCWA anticipates that groundwater pumping exceeding the safe yield during dry periods is feasible as long as the long-term (multiple years) average does not exceed the safe yield of 95,000 af/y.

Therefore, as the PCWA has adequate water supplies from existing supplies to serve the proposed project in both normal and drought years, water supply impacts would be **less than significant** and no further mitigation is required.

IMPACT 14.7-2: Water System Facilities

Implementation of the project would require extension of the PCWA water distribution system to serve the project site. In addition, implementation of the proposed project would increase demand for water treatment and storage within the PCWA system. These impacts are considered **potentially significant**.

As discussed under **Impact 14.7-1** above, the project would result in increased demand for water supply from the PCWA. This increase in demand for water supply would also place additional demands on PCWA water system facilities, including water treatment, conveyance, and storage facilities within the PCWA system. Future infrastructure needs for the PCWA water system are currently included in PCWA's Capital Improvement Program and fees paid by new development go toward funding water infrastructure improvements. Implementation of the proposed project would also require extension of the PCWA water distribution system to serve the project site. The PCWA has indicated that the proposed project could connect to an existing 20-inch water line east of the intersection of Sierra College Boulevard and Night Watch Drive and west of the entry driveway to the project site via three separate water lines (a 4-inch, 8-inch and 12-inch line). On-site water lines would range from 4-inches in diameter to 12-inches and would provide both potable water and water for fire suppression.

However, PCWA also indicated that the proposed project site and surrounding area can be subject to low water system pressures due to its relatively high elevation coupled with area demands. Therefore, implementation of the proposed project could result in inadequate water system pressure. Furthermore, the existing well on-site would need a backflow prevention device to protect the PCWA water supply.

Mitigation Measure 14.7-2a Enter into a Facilities Agreement

Prior to issuance of building permits for the project, the project applicant shall enter into a facilities agreement with the PCWA to provide any on-site or off-site pipelines or other facilities needed to supply water for domestic or fire protection services.

Mitigation Measure 14.7-2b Pay All Applicable Fees

Prior to issuance of building permits for the project, the project applicant shall pay all applicable fees and charges required by the PCWA.

Mitigation Measure 14.7-2c Install PCWA approved Backflow Prevention Device

Prior to issuance of building permits for the project, the project applicant shall install a PCWA-approved backflow prevention device on the existing on-site well.

Implementation of mitigation measures **MM 14.7-2a** through **14,7-2c** would ensure that the project applicant would enter into a facilities agreement with the PCWA to provide any on-site or off-site pipelines or other facilities needed to supply water for domestic or fire protection services. This would include any facilities necessary to ensure adequate water system pressures. Therefore, the project's impacts to water system facilities would be reduced to a less than significant impact.

14.8 WASTEWATER SERVICE

14.8.1 Environmental Setting

14.8.1.1 Wastewater Service Providers

South Placer Municipal Utility District (SPMUD)

South Placer Municipal Utility District (SPMUD) provides sewer collection and maintenance service to an approximately 26 square mile service area that consists of the entire City of Rocklin, a major portion of the Town of Loomis, and certain unincorporated areas in southern Placer County that include the communities of Penryn and Rodgersdale. Currently, the SPMUD has 18,636 sewer connections, representing 27,666 Equivalent Dwelling Units[1] (EDU's) (http://www.spmud.ca.gov/, 2008). The proposed project would be required to annex to the Placer County Sewer Maintenance District #2 (discussed below) and connect to the SPMUD public sewer collection system (King Engineering, 2009).

The SPMUD owns, operates, and maintains a sewage collection system that includes over 237 miles of pipe with over 5,000 manholes and 9 pump stations. The sewage is transported via two major pipelines to one of the City of Roseville's two regional wastewater treatment plants - Pleasant Grove Wastewater Treatment Plant (WWTP) and Dry Creek WWTP - for treatment and disposal. Capacity in these regional facilities is available to SPMUD on a first come, first served basis. In addition to sewer main lines, SPMUD owns and maintains the service sewer which is the pipe from the SPMUD's main line to individual properties or property line cleanouts (http://www.spmud.ca.gov/, 2008). SPMUD updated its Master Plan in 1986 to identify the main infrastructure needs to serve the areas in the SPMUD as they developed.

In 2007, the average dry weather flow from the entire SPMUD service area was 4.9 million gallons per day (mgd).

South Placer Wastewater Authority (SPWA)

Initially, the SPMUD provided sewage treatment in several sewer treatment lagoon systems, at various sites within the service area. These lagoons were decommissioned in 1974, when the Roseville Trunk Sewer was built to convey the sewage to Roseville's Dry Creek Wastewater Treatment Plant (WWTP). At that time, the SPMUD entered into a service agreement with the City of Roseville for the treatment of the SPMUD sewage, while continuing to provide for the administration, financing, engineering and construction functions, and the operation and maintenance of the sewer collection system. In October 2000, the South Placer Wastewater Authority (SPWA) was created by the City of Roseville, Placer County, and SPMUD. These partner agencies entered into a series of Funding and Operations Agreements to finance regional wastewater and recycled water facilities in southwestern Placer County. Currently, the regional facilities funded by the SPWA include recycled water facilities, trunk sewer lines, the Roseville Dry Creek WWTP, and an additional WWTP – the Pleasant Grove WWTP located in the northwestern portion of Roseville on West Park Drive. In the event the regional facilities near capacity, the agreements contain mechanisms, terms, and conditions that provide for the expansion of the facilities to serve the needs of the parties. It should be noted that capacity and

[1] Equivalent Dwelling Unit (EDU) is a measure where one unit is equivalent to the wastewater effluent from one home.

usage in the Dry Creek Interceptor pipeline that serves the "South" part of the SPMUD service area is provided for under a separate, non-regional agreement between SPMUD and the City of Roseville. Under this agreement, Roseville is preserving and saving 24.6 mgd peak daily flow capacity for the benefit of the SPMUD (Stein, 2008). SMD # 2 also has a treatment contract with the City of Roseville (King Engineering, 2009).

Placer County Sewer Maintenance District #2

The Placer County Department of Facility Services operates and maintains ten separate sanitary sewer systems within the County. Nine of the ten are either Sewer Maintenance Districts or County Service Areas which derive their operating revenue from sewer user fees within each district. Funds do not co-mingle between districts and County general funds are not allowed to be used. The Placer County Board of Supervisors is the governing board of each district or service area.

In 1959 the Placer County Board of Supervisors formed Placer County Sewer Assessment District No. 2, which sold bonds to pay for design and construction of a Granite Bay sewer system and a wastewater treatment plant located off Barton Road. By 1961, both the sewer system and treatment plant (located on Seven Cedars Road) were complete and Placer County Sewer Maintenance District No. 2 (SMD #2) was formed to provide maintenance and operation of the collection system and treatment plant. In the early 1980s, studies on the wastewater treatment plant determined that it was more economical to abandon the plant and connect to the City of Roseville Regional Treatment Plant in order to meet new discharge requirements. By 1986, seventeen miles of trunk sewer was constructed through the City of Roseville and SMD #2 was connected to the regional treatment plant. As of July 2008, SMD No. 2 had 118 miles of sewer pipe in the ground, 7,016 EDU connections, and maintained 57 Septic Tank Effluent Pump (STEP) units (Placer County, 2008). The boundaries of SMD #2 are approximately Folsom Lake on the east, the Sacramento County line on the south, the City of Roseville on the west and on the north, Miners Ravine up to and including the Los Lagos Subdivision (Placer County, 1989).

14.8.2 Regulatory Framework

14.8.2.1 Federal

Clean Water Act (CWA)

The Clean Water Act (CWA) is the primary Federal legislation governing surface water quality protection. The statute employs a variety of regulatory and nonregulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water." Pollutants regulated under the CWA include "priority" pollutants, including various toxic pollutants; "conventional" pollutants, such as biochemical oxygen demand (BOD), total suspended solids (TSS), fecal coliform, oil and grease, and pH; and "non-conventional" pollutants, including any pollutant not identified as either conventional or priority. The CWA regulates both direct and indirect discharges (http://www.epa.gov/, 2009).

National Pollutant Discharge Elimination System (NPDES)

The National Pollutant Discharge Elimination System (NPDES) program, Section 402 of the CWA, controls direct discharges into navigable waters. Direct discharges or "point source" discharges are from sources such as pipes and sewers. NPDES permits, issued by either EPA or an authorized state/tribe contain industry-specific, technology-based and/or water-quality-based limits, and establish pollutant monitoring and reporting requirements. (EPA has authorized 40 states to administer the NPDES program.) A facility that intends to discharge into the nation's waters must obtain a permit before initiating a discharge. A permit applicant must provide quantitative analytical data identifying the types of pollutants present in the facility's effluent and the permit will then set forth the conditions and effluent limitations under which a facility may make a discharge (http://www.epa.gov/, 2009).

General Pretreatment Regulations

Another type of discharge that is regulated by the CWA is discharge that goes to a publicly owned treatment works (POTW). POTWs collect wastewater from homes, commercial buildings, and industrial facilities and transport it via a collection system to the treatment plant. Here, the POTW removes harmful organisms and other contaminants from the sewage so it can be discharged safely into the receiving stream. Generally, POTWs are designed to treat domestic sewage only. However, POTWs also receive wastewater from industrial (non-domestic) users. The General Pretreatment Regulations establish responsibilities of Federal, State, and local government, industry and the public to implement Pretreatment Standards to protect municipal wastewater treatment plants from damage that may occur when hazardous, toxic, or other wastes are discharged into a sewer system and to protect the quality of sludge generated by these plants. Discharges to a POTW are regulated primarily by the POTW itself, rather than the state/tribe or EPA (http://www.epa.gov/, 2009).

14.8.2.2 State

Porter-Cologne Water Quality Act

In 1969, the California Legislature enacted the Porter-Cologne Water Quality Control Act to preserve, enhance, and restore the quality of the state's water resources. The act established the State Water Resources Control Board and nine Regional Water Quality Control Boards as the principal state agencies with the responsibility for controlling water quality in California. Under the act, water quality policy is established, water quality standards are enforced for both surface water and groundwater, and the discharges of pollutants from point and nonpoint sources are regulated. The act authorizes the State Control Board to establish water quality principles and guidelines for long-range resource planning including groundwater and surface water management programs and control and use of recycled water (U.S. Department of Energy, 2009).

State Water Resources Control Board

Created by the State Legislature in 1967, the five-member State Water Resources Control Board (SWRCB) allocates water rights, adjudicates water right disputes, develops statewide water protection plans, establishes water quality standards, and guides the nine regional water quality control boards located in the major watersheds of the state. The joint authority of water allocation and water quality protection enables the State Water Board to provide comprehensive protection for California's waters (**http://www.waterboards.ca.gov/**, 2009).

The SWRCB is responsible for implementing the CWA and issues NPDES permits to cities and counties through Regional Water Quality Control Boards (RWQCBs). The Planning Area is located within a portion of the State that is regulated by the RWQCB's Central Valley Region.

Waste Discharge Requirements Program

In general, the Waste Discharge Requirements (WDRs) Program (sometimes also referred to as the "Non Chapter 15 (Non 15) Program") regulates point discharges that are exempt pursuant to Subsection 20090 of Title 27 and not subject to the Federal Water Pollution Control Act. Exemptions from Title 27 may be granted for nine categories of discharges (e.g., sewage, wastewater, etc.) that meet, and continue to meet, the preconditions listed for each specific exemption. The scope of the WDRs Program also includes the discharge of wastes classified as inert, pursuant to section 20230 of Title 27. Several SWRCB programs are administered under the WDRs Program, including the Sanitary Sewer Order and recycled water programs (http://www.swrcb.ca.gov, 2009).

Sanitary Sewer Overflow Program

A sanitary sewer overflow (SSO) is any overflow, spill, release, discharge or diversion of untreated or partially treated wastewater from a sanitary sewer system. SSOs often contain high levels of suspended solids, pathogenic organisms, toxic pollutants, nutrients, oil, and grease and can pollute surface and ground waters, threaten public health, adversely affect aquatic life, and impair the recreational use and aesthetic enjoyment of surface waters. To provide a consistent, statewide regulatory approach to address SSOs, the SWRCB adopted Statewide General Waste Discharge Requirements (WDRs) for Sanitary Sewer Systems, Water Quality Order No. 2006-0003 (Sanitary Sewer Order) on May 2, 2006. The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans and report all SSOs to the State Water Board's online SSO database. All public agencies that own or operate a sanitary sewer system that is comprised of more than one mile of pipes or sewer lines which conveys wastewater to a publicly owned treatment facility must apply for coverage under the Sanitary Sewer Order (http://www.waterboards.ca.gov/, 2009).

Recycled Water Policy

To establish uniform requirements for the use of recycled water, the SWRCB adopted a statewide Recycled Water Policy on February 3, 2009. The regulatory provisions of the Policy will go into effect only after approval by the Office of Administrative Law. The purpose of the Policy is to increase the use of recycled water from municipal wastewater sources that meets the definition in Water Code Section 13050(n), in a manner that implements state and federal water quality laws. The Policy describes permitting criteria that are intended to streamline the permitting of the vast majority of recycled water projects. The intent of this streamlined permit process is to expedite the implementation of recycled water projects in a manner that implements state and federal water quality laws while allowing the Regional Water Boards to focus on projects that require substantial regulatory review due to unique site-specific conditions (http://www.waterboards.ca.gov/, 2009).

Statewide General Permit for Landscape Irrigation Uses of Recycled Water

The SWRCB is also developing a statewide general permit for landscape irrigation uses of recycled water (General Permit). The intent of the new law is to develop a uniform interpretation of state standards to ensure the safe, reliable use of recycled water for landscape irrigation uses,

consistent with state and federal water quality law, and for which the California Department of Public Health has established uniform statewide standards. The new law is also intended to reduce costs to producers and users of recycled water by streamlining the permitting process for using recycled water for landscape irrigation.

Department of Public Health

The California Department of Public Health (formerly Department of Health Services) is responsible for establishing criteria to protect pubic health in association with recycled water use. The criteria issued by DHS are found in the California Code of Regulations, Title 22, Division 4, Chapter 3, entitled *Water Recycling Criteria*. Commonly referred to as Title 22 Criteria, the criteria contain treatment and effluent quality requirements that vary based on the proposed type of water reuse. Title 22 sets bacteriological water quality standards on the basis of the expected degree of public contact with recycled water. For water reuse applications with a high potential for the public to come into contact with the reclaimed water, Title 22 requires disinfected tertiary treatment. For applications with a lower potential for public contact, Title 22 requires three levels of secondary treatment, basically differing by the amount of disinfectant required (http://www.sanjoseca.gov/sbwr/regulation.htm, 2009).

Title 22 also specifies the reliability and redundancy for each recycled water treatment and use operation. Treatment plant design must allow for efficiency and convenience in operation and maintenance and provide the highest possible degree of treatment under varying circumstances. For recycled water piping, DHS has requirements for preventing backflow of recycled water into the public water system and for avoiding cross-connection between the recycled and potable water systems (http://www.sanjoseca.gov/sbwr/regulation.htm, 2009).

DHS does not have enforcement authority for the Title 22 criteria; instead the RWQCBs enforce them through enforcement of their permits containing the applicable criteria (CRWTF, 2003, p. 17).

14.8.2.3 Regional

Regional Water Quality Control Board, Central Valley Region

The Central Valley RWQCB provides planning, monitoring, and enforcement techniques for surface and groundwater quality in the Central Valley region, including the Planning Area. The primary duty of the Regional Board is to protect the quality of the waters within the Region for all beneficial uses. This duty is implemented by formulating and adopting water quality plans for specific ground or surface water basins and by prescribing and enforcing requirements on all agricultural, domestic and industrial waste discharges (http://www.swrcb.ca.gov/, 2009).

Water Reuse Requirements (Permits)

The Central Valley RWQCB issues water reuse requirements (permits) for projects that reuse treated wastewater. These permits include water quality protections as well as public health protections by incorporating criteria established by DHS in Title 22. The Central Valley RWQCB may also incorporate requirements into the permit in addition to those specified in Title 22. These typically include periodic inspection of recycled water systems, periodic cross-connection testing, periodic training of personnel that operate recycled water systems, maintaining a database and/or permitting individual use sites, periodic monitoring of recycled water and groundwater quality, and periodic reporting.

Waste Discharge Requirements

The Central Valley RWQCB typically requires a Waste Discharge Requirement (WDR) permit for any facility or person discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system. Those discharging pollutants (or proposing to discharge pollutants) into surface waters, must obtain an NPDES permit from the Central Valley RWQCB. The NPDES permit serves as the WDR permit. For other types of discharges, such as those affecting groundwater or in a diffused manner (e.g., erosion from soil disturbance or waste discharges to land) a Report of Waste Discharge must be filed with the Central Valley RWQCB in order to obtain a WDR permit. For specific situations, the Central Valley RWQCB may waive the requirement to obtain a WDR permit for discharges to land or may determine that a proposed discharge can be permitted more effectively through enrollment in a general NPDES permit or general WDR permit (http://www.swrcb.ca.gov/, 2009).

14.8.2.4 Local

Placer County General Plan

The Placer County General Plan Public Facilities and Services Element addresses wastewater services for the County. **Table 14.8-1** analyzes the project's consistency with the Placer County General Plan policies pertaining to wastewater services. While this Draft EIR analyzes the project's consistency with the Placer County General Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this General Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with General Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.8-1
PROJECT CONSISTENCY WITH PLACER COUNTY GENERAL PLAN POLICIES

Placer County General Plan Policies	Consistency with General Plan	Analysis
4.D.2. The County shall require proponents of new development within a sewer service area to provide written certification from the service provider that either existing services are available or needed improvements will be made prior to occupancy.	Consistent	SPMUD has stated in a letter, dated July 7, 2009, that there is adequate collection sewer capacity for this project.
4.D.4. The County shall promote efficient water use and reduced wastewater system demand by: a. Requiring water-conserving design and equipment in new construction; b. Encouraging retrofitting with water-conserving devices; and c. Designing wastewater systems to minimize inflow and infiltration to the extent economically feasible.	Consistent	Mitigation measure MM 14.8.4 requires the proposed project to conform to all design criteria and mitigation included in the project's sewer study. The sewer study includes measures to ensure that the on-site system would be efficient consistent with this policy.
4.D.6. The County shall promote functional consolidation of wastewater facilities.	Consistent	The project proposes to connect to the existing STEP (septic tank effluent pumped) pressure sewer system in the Cavitt Ranch Subdivision 900 feet to the west of the project site.
4.D.7. The County shall permit on-site sewage treatment and disposal on parcels where all current regulations can be met and where parcels have the area, soils, and other characteristics that permit such disposal facilities without threatening surface or groundwater quality or posing any other health hazards.	Consistent	Mitigation measure MM 14.8.4 requires the proposed project to conform to all design criteria and mitigation included in the project's sewer study to ensure that the on-site system would provide adequate wastewater facilities
4.D.8. The County shall require that the on-site treatment, development, operation, and maintenance of disposal systems complies with the requirements and standards of the County Division of Environmental Health.	Consistent	Mitigation measure 14.8.5 requires the on-site wastewater system to comply with all requirements and standards of the County Division of Environmental Health

Granite Bay Community Plan

The Granite Bay Community Plan addresses wastewater services within the community. **Table 14.8-2** analyzes the project's consistency with the Granite Bay Community Plan policies pertaining to wastewater services. While this Draft EIR analyzes the project's consistency with the Granite Bay Community Plan pursuant to State CEQA Guidelines Section 15125(d), the determination of the project's consistency with this Plan rests with the Placer County Board of Supervisors. Environmental impacts associated with inconsistency with Community Plan policies are addressed under the impact discussions of this EIR.

TABLE 14.8-2
PROJECT CONSISTENCY GRANITE BAY COMMUNITY PLAN POLICIES

Granite Bay Community Plan Policies	Consistency with Community Plan	Analysis
Land Use Policy 18: The rate of development and location of projects shall not exceed the capacity of the community, special districts and utility companies to provide all needed services and facilities in an orderly and economic manner.	Consistent	As discussed in Impacts 14.8.1 and 14.8.2 below, both the SPMUD and the SPWA have adequate capacity to serve the proposed project.
Land Use Policy 19: Allow the increase of commercial and residential development only when all public services can be provided in an adequate and timely manner.	Consistent	See response under Land Use Policy 18 above.
1. Through Placer County Sewer Maintenance District #2 (SMD #2), provide public sewer service to all residential, commercial and public projects within the district based on the permitted densities of the 1989 Granite Bay Community Plan/Land Use Element.	Consistent	The project site is designated by the Granite Bay Community Plan as Rural Estate (RE) with 4.6- to 20-acre minimum parcel size. According to the permitted zoning districts for this land use designation, houses of worship are considered accessory uses requiring a minor use permit (MUP). The proposed project includes an application for a MUP. Should the project be approved by the County, the MUP would be issued and the project would be consistent with the Granite Bay Community Plan. In addition, mitigation measure MM 14.8.1 requires the proposed project to annex into SMD #2.
2. To permit onsite sewage disposal on rural parcels where all current regulations can be met and where parcels have the area, soils, and other characteristics which permit such disposal facilities without threatening surface or groundwater quality or present any other health hazards.	Consistent	Mitigation measure MM 14.8.4 requires the proposed project to conform to all design criteria and mitigation included in the project's sewer study to ensure that the on-site system would provide adequate wastewater facilities.

14.8.3 Impacts

14.8.3.1 Standards of Significance

The impact analysis provided below is based on State CEQA Guidelines Appendix G thresholds of significance. A wastewater service impact is considered significant if implementation of the project would:

1) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;

2) 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; or

3) 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.

Methodology

Evaluation of potential wastewater service impacts was based on information from sewer study prepared for the proposed project by King Engineering (**Appendix 14-1**). A detailed list of resources used to complete this evaluation can be found in the References subsection located at the end of this section. The impact evaluation considered existing wastewater service conditions and whether or not the proposed project exceeds RWQCB treatment requirements, can be served by the SPWA, and whether new facilities are needed, the construction of which could cause significant environmental effects.

14.8.3.2 Project Level Impacts and Mitigation Measures

IMPACT 14.8-1: Wastewater Treatment Impacts

The proposed project would generate an average dry weather flow (ADWF)between 3,420 and 6,978 gpd that would require treatment at SPWA facilities in Roseville.

The sewer study prepared for the proposed project by King Engineering used two methods for projecting the proposed project's ADWF. **Table 14.8-3** below shows the first projection, which uses prorated land use based on building sizes multiplied by frequency of use per week and flow factors to derive an ADWF.

TABLE 14.8-3
ADWF PROJECTIONS BASED ON LAND USE

Land Use	Percent of Project Size	Frequency of Use	Flow Factor	Projected ADWF
Commercial (96,000 sf of publishing use)	11.1%	4/7 days per week	850 gpd/acre	4,043 gpd
Light Industrial (11,220 sf of warehouse use)	1.3%	4/7 days per week	850 gpd/acre	474 gpd
Church (98,810 sf of church use)	11.6%	3/7 days per week	660 gpd/acre	2,461 gpd
Open Space (56 acres)	76%		0 gpd/acre	
Totals	100%			6,978 gpd

Source: King Engineering, 2009, p. 5.

Table 14.8-4 below shows the second projection, which uses EDUs equal to SPWA DU's and Placer County's EDU's to show ADWF by phase for the project.

TABLE 14.8-4
ADWF PROJECTIONS BASED ON LAND USE

Project Phase	Average DUs	Unit ADWF per DU	Projected ADWF
1	14	190 gpd/DU	2,660 gpd
2	2	190 gpd/DU	380 gpd
3	2	190 gpd/DU	380 gpd
All 3 Phases Total	18	190 gpd/DU	3,420 gpd

Source: King Engineering, 2009, p. 7.

As shown in **Tables 14.8-3** and **14.8-4** above, the proposed project would generate an ADWF between 3,420 and 6,978 gpd. Wastewater treatment would be provided by the City of Roseville pursuant to the SPWA Operations Agreement for properties within the SPWA service area boundary (SAB). The proposed project site is not within the SPWA SAB, but is within the Placer Urban Growth Area (UGA) adjacent to the SAB. The SPWA's 2007 *South Placer Regional Wastewater and Recycled Water Systems Evaluation* (Systems Evaluation), which identifies treatment system expansions, improvements and upgrades necessary to meet anticipated wastewater treatment requirements at buildout of the SAB. For the Placer UGA, the Systems Evaluation assumed an average dry weather flow (ADWF) of 10,000 gallons per day (gpd). This project (all phases) will produce between 3,420 and 6978 gpd ADWF and is therefore consistent with and does not exceed the assumed flows for the project site contained in the Systems Evaluation model. Therefore, the SPWA would have adequate wastewater treatment capacity to serve the proposed project. However, the SAB would need to be modified to include the proposed project.

In addition, the proposed project proposes to connect to the existing STEP (septic tank effluent pumped) pressure sewer system in Cavitt Ranch Subdivision 900 feet to the west of the project site. The effluent from STEP services has lower biochemical oxygen demand (BOD) and suspended solids (SS) compared to that from a gravity sewer system. The benefit of these lower constituents may be partially offset by the need for the wastewater treatment plant (WWTP) to periodically take pumped septic tank effluent from this project's septic tank. There is an existing chemical building at King Ranch Place that is able to mitigate odors from the STEP sewer lines, if needed. Placer County would require the 3" meter that controls chemical injection to be upsized to a 4" meter (King Engineering, 2009, p. 15). This would be a **potentially significant** impact.

Mitigation Measure 14.8-1a Obtain Approval from SPWA

Prior to issuance of building permits for the project, the project applicant shall obtain an approval action from the SPWA for the modification of the SAB to include the project site. The project shall obtain Placer County Board of Supervisor's approval for annexation into SMD # 2 after approval by SPWA for modification of the SAB. In addition, modification of the agreement between SPMUD and Placer County is required.

Mitigation Measure 14.8-1b Review Existing Chemical Building Dosing Capacity

The existing chemical building dosing capacity shall be reviewed to determine if it is sufficient for the proposed increased flows.

Mitigation Measure 14.8-1c Maintain Existing Septic and Grease Trap Tanks

The project's septic and grease trap tanks shall be maintained to minimize pump screen plugging and to minimize solids from being pumped into the STEP system. These tanks' bottom solids levels and top scum thicknesses shall be periodically checked and the contents pumped in accordance with the requirements of the Placer County Facilities Services Environmental Engineering Division. Typically the grease trap tank contents will be sent to a licensed grease rendering facility.

Implementation of mitigation measures **MM 14-8-1a** through **14.8-1c** would ensure that the proposed project would apply for modification of the SAB to include the project site and that adequate wastewater treatment would be provided to the project site. Impacts would be reduced to a less than significant level.

IMPACT 14.8-2: Wastewater Collection and Conveyance Impacts

Implementation of the proposed project would require construction of wastewater collection and conveyance infrastructure on-site, as well as additional capacity in SPMUD infrastructure.

This proposed project would connect to the existing STEP (septic tank effluent pumped) pressure sewer system in the Cavitt Ranch Subdivision 900 feet to the west of the project site. That existing STEP system connects to the SPMUD gravity sewer manhole number RKLN 01 at Scarborough Drive. The proposed project would install an on site septic tank with pump tank and triplex alternating submersible, screened high head effluent pumps.

According to the sewer study prepared by King Engineering for the proposed project, peak average flow rate over for the proposed project after implementation of all phases would be 97 gallons per minute (King Engineering, 2009, p. 9). The gravity sewer collection system is operated and maintained by the SPMUD. Unless there is sufficient hydraulic capacity in the existing gravity sewer system, the additional wastewater peak flow from the proposed project could result in inadequate wastewater. SPMUD has stated in a letter, dated July 7, 2009, that there is adequate collection sewer capacity for this project (**Appendix 14-2**).

With the proposed project connecting to the existing STEP sewer system and no pipe upsizing provided, there would be an increase in the design hydraulic grade for the existing STEP system. This could result in adverse effects to the existing pumps unless mitigated. The sewer study prepared for the proposed project models the STEP sewer hydraulics with peak flows and sets forth design criteria and mitigation to ensure adequate wastewater facilities would be available to serve all phases of the project. This impact is considered **potentially significant**.

Mitigation Measure 14.8-2a Comply with Mitigation Identified in the Low Pressure (STEP) Sewer System Design Report for Amazing Facts Church with Annexation to Placer County SMD #2 (King Engineering; June 11, 2009) (Recommended)

The project shall demonstrate conformance with all design criteria and mitigation identified in King Engineering report entitled *Low Pressure (STEP) Sewer System Design Report for Amazing Facts Church with Annexation to Placer County SMD #2* and dated June 11, 2009.

Mitigation Measure 14.8-2b Existing Wastewater System to Comply with County DEH Standards (Recommended)

The on-site wastewater system shall comply with all requirements and standards of the County Division of Environmental Health.

Implementation of mitigation measures **MM 14.8-2a** and **14.8-2b** would ensure that adequate wastewater infrastructure would be available to serve all phases of the project. In addition, the SPMUD has confirmed it has adequate capacity to treat effluent generated by development of the project. Therefore, impacts would be considered **less than significant.**

15.0
HAZARDS AND HUMAN HEALTH

15.0 HAZARDOUS MATERIALS AND HAZARDS

This section of the Draft Environmental Impact Report (Draft EIR or DEIR) describes the existing hazards and hazardous materials sites in the vicinity of the project site, lists the applicable regulations, analyzes the potential impacts of the proposed project on hazards and hazardous materials, and provides mitigation measures to reduce potentially significant impacts, where necessary. The analysis focuses on the use, storage and transport of hazardous materials on the project site, the potential for wildland fire, and health hazards associated with mosquitoes. This section is based primarily on a Phase I Environmental Site Assessment prepared for the project site by Holdrege and Kull in June 2007 (see **Appendix 15**). See Section 13.0, *Hydrology and Water Quality*, for a discussion of hazards associated with flooding. See Section 9.0, *Traffic and Circulation*, for a discussion of traffic related hazards.

15.1 ENVIRONMENTAL SETTING

15.1.1 Hazardous Materials Defined

Under Title 22 of the California Code of Regulations (CCR), the term *hazardous substance* refers to both hazardous materials and hazardous wastes. Both of these are classified according to four properties: toxicity, ignitability, corrosiveness, and reactivity (CCR Title 22, Chapter 11, Article 3). A hazardous material is defined as a substance or combination of substances that may cause or significantly contribute to an increase in serious, irreversible, or incapacitating illness, or may pose a substantial presence or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly (CCR Title 22, Chapter 11, Article 2, Section 66261.10). Soil that is excavated from a site containing hazardous materials is a hazardous waste if it exceeds specific CCR Title 22 criteria. While hazardous substances are regulated by multiple agencies, as described below in Section 15.2, Regulatory Framework, cleanup requirements of hazardous wastes are determined on a case-by-case basis according to the agency with lead jurisdiction over the project.

Public health is potentially at risk whenever hazardous materials are, or will be, used. It is necessary to differentiate between the “hazard” of these materials and the acceptability of the “risk” they pose to human health and the environment. A hazard is any situation that has the potential to cause damage to human health and the environment. The risk to health and public safety is determined by the probability of exposure, in addition to the inherent toxicity of a material (DTSC, 2009).

Factors that can influence the health effects when human beings are exposed to hazardous materials include the dose the person is exposed to, the frequency of exposure, the duration of exposure, the exposure pathway (route by which a chemical enters a person’s body), and the individual’s unique biological susceptibility.

15.1.2 Environmental Site Assessment

A Phase I Environmental Site Assessment (ESA) is a report prepared for a real estate holding which identifies existing and potential environmental contamination liabilities. The analysis contained in a Phase I ESA typically addresses both the underlying land and the physical improvements to the property, and includes examination of potential soil contamination, groundwater quality, surface water quality, and indoor air quality. The assessment of a site

typically includes a records review and personal interviews to determine past uses of the property, the age of structures on the property, and hazardous substances that may have been used on the property. The assessment may also include a field inspection to look for signs of soil and/or water contamination, identify possible asbestos-containing building materials and lead paints, inventory hazardous substances currently stored or used onsite, and identify potential signs of mold and mildew.

A Phase I ESA is generally considered the first step in the process of environmental due diligence and does not include the actual sampling of soil, air, groundwater, and/or building materials. If the Phase I ESA determines that a site may be contaminated, a Phase II ESA may be conducted. This is a more detailed investigation involving chemical analysis for hazardous substances and/or petroleum hydrocarbons and may include recommendations for remediation of the site, if necessary.

A Phase I ESA was conducted for the project site by Holdrege and Kull in June 2007 (see **Appendix 15**). The contents of this report are summarized throughout this section of the DEIR.

15.1.3 Regional Setting

The project site is located in an unincorporated portion of southeastern Placer County near the city limits of Rocklin and Loomis. The site is located in the southwest quarter of Section 28, Township 11 North, Range 7 East of the Rocklin quadrangle map (Holdrege and Kull, 2007) (see **Figure 3-2**).

15.1.4 Existing Project Site Conditions

The project site consists of two parcels totaling approximately 75 acres and is located southeast of the intersection of Sierra College Boulevard and Nightwatch Drive in southeastern Placer County near the City of Rocklin and the community of Granite Bay. Ground elevations range from approximately 310 feet above mean sea level (msl) in the southwestern corner of the project site to approximately 525 feet in the northeastern corner (Holdrege and Kull, 2007a). The topography of the site is characterized by relatively flat-lying areas in the northern and southern thirds of the site, separated by a moderately steep slope. The northern portion of the site is over 200 feet higher in elevation than the southern portion. A north-south-trending drainage swale cuts across the northern half of the site and discharges to a man-made pond in the central portion of the site (see **Figure 15-2**) (Holdrege and Kull, 2007a).

Existing Site Uses/Operations

The project site is currently unoccupied containing only fencing at the property boundaries and three unpaved roads. Two of the roads are accessed from Sierra College Boulevard, one of which leads to San Juan Water District property adjacent to the northeastern property corner. A third road leads from Oak Hill Lane near the southwestern property corner to a pond in the central portion of the site (see **Figure 3-2**). The site is primarily naturally vegetated with grasses, forbs, California buckeye, oak, and gray pines as well as some ornamental species northwest of the pond including shrubs, orange trees, and grapevines (Holdrege and Kull, 2007a).

Adjacent Uses/Operations

The project site is bordered by San Juan Water District property at the northeastern corner and by rural residential property to the east and south. Several large homes were recently constructed to

the west of the project site. The site is bordered by Sierra College Boulevard to the north; across Sierra College Boulevard are Sierra View Office Park and a residential subdivision (Holdrege and Kull, 2007a).

There are two schools located within one mile of the project site. The nearest is the Sierra Elementary School located at 6811 Camborne Way in Rocklin, less than one quarter mile west of the project site. Sierra Community College is also located less than one mile north of the project site, at 5000 Rocklin Road in Rocklin (Google, 2009).

Hazardous Material Records Review

As part of the Phase I ESA prepared for the project site by Holdredge and Kull in June 2007, Environmental Data Resources, Inc. (EDR) performed a search of standard sources of environmental records on hazardous materials, including both federal and state lists as well as local sources of information, to determine previously identified hazardous materials on or around the project site (Holdrege and Kull, 2007a). In addition, Holdrege and Kull performed a search of Placer County records for hazardous materials on and around the site. A complete list of the specific databases searched can be found in **Appendix 15**.

The EDR report did not identify any recorded hazardous materials sites on or within one mile of the project site. Similarly, the County departments contacted did not have any records on file of the project site with regard to hazardous materials, hazardous waste generation, or underground storage tanks (Holdrege and Kull, 2007a).

Observed Site Features

During a site visit performed as part of the Phase I ESA, the following surface conditions were observed and recorded.

Several areas of ground disturbance in the north third of the site were observed. Exploratory trenching was performed in this area in early May 2007 as part of the project's geotechnical investigation and likely explains most of these disturbances. However, vegetation was beginning to become established on some areas of ground disturbance, indicating that the disturbance had taken place prior to trenching. Several survey stakes with decaying survey tape as well as metal tree survey tags were observed in the northern portion of the project site. An area surrounding two trees, approximately 25 feet in diameter, at the northern edge of the slope had been charred. Minor vegetation had become established in the charred area.

Abandoned ornamental shrubs, grapevines, and orange trees were located at the perimeter of the flat-lying area, while a functioning water spigot, surrounded by a stack of three automobile tires, was located nearby. This water spigot is presumed to be supplied by the groundwater well on the site that was identified in Placer County Environmental Health Services records (see Section 13.0, *Hydrology and Water Quality*.

A segment of abandoned power lines was observed that led to a flat-lying area approximately 200 feet northwest of the pond located in the southern portion of the site. Near the eastern shore of the pond, an empty, rusted, crushed storage tank was observed measuring approximately 4 feet long and 3 feet in diameter with a spigot on one end. No evidence of spills or staining of the ground surface was observed in the vicinity of the tank. Remnants of a wooden bridge were located across the outfall of the pond. Farther downstream were the concrete and wooden remains of a

possible spillway structure. No water was observed flowing from the pond (Holdrege and Kull, 2007a).

Summary of Prior Uses

Aerial Photography Review

Based on a review of aerial photographs of the project site taken in 1952, 1961, 1984, 1993, and 1999, the site has never been developed and has continuously been naturally vegetated. The 1952 aerial photo shows signs of livestock trails in the southern and northern portions of the site, possibly indicating past grazing. The first unpaved road on the site appears in the 1961 photo. Sierra College Boulevard, the on-site pond, and additional unpaved roads appear in the 1984 photo. Significant residential development to the north of the site appears in the 1993 and 1999 photos (Holdrege and Kull, 2007a).

Interviews

As part of the Phase I ESA, interviews were conducted with the site owner, a local engineer who has been involved with past surveys of the project site, and the local fire marshal to identify any past uses or incidents on the project site that might be relevant to this section. According to the site owner, a house that previously occupied the site burned down at some point. According to the local engineer, a tree survey, archaeological survey, and subsurface investigation may have been conducted on the site as part of a past development proposal that was never implemented. According to Fire Marshal Bob Richardson of the South Placer Fire Department, the county has no record of any incidents for any of the parcels at the project site (Holdrege and Kull, 2007a).

Hazardous Materials Transport, Use, and Storage

The transportation of hazardous materials within the State of California is subject to various federal, state, and local regulations. It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery or the loading of such materials (California Vehicle Code Sections 31602(b), 32104(a)). The California Highway Patrol (CHP) designates through routes to be used for the transportation of hazardous materials. Transportation of hazardous materials is restricted to these routes except in cases where additional travel is required from that route to deliver or receive hazardous materials to and from users. The CHP has identified a number of routes in the county that may be used for the transportation of hazardous materials. These include Interstate 80 (I-80) and State Routes (SR) 20, 65, and 193, none of which are located in close proximity to the project site. Information on CHP requirements and regulatory authority is provided in Section 15.2, Regulatory Framework.

Hazardous Materials Incident Response

A hazardous materials incident involves the uncontrolled release of a hazardous substance during storage or use from a fixed facility or mobile transport. The Placer County Office of Emergency Services (OES) coordinates the Placer County Hazardous Materials Response Program comprising the City of Roseville Hazmat Team and two multi-agency Hazmat teams based in the cities of Auburn and Truckee. In the event of a hazardous materials incident, OES staff evaluates the threat to the community and the environment, serves as the point of contact, and coordinates the Hazmat teams, promoting quick containment and cleanup. The OES is also responsible for

preparing and maintaining numerous emergency plans including the Placer County Multi-Hazard Mitigation Plan (Placer County, 2009b).

Other Hazards

Airport Operations

The project site is not located in close proximity to any public or private airports or airstrips. The nearest public airport is the Mather Airport located nearly 10 miles from the project site (Placer County, 2006; Google, 2009).

Railroad Operations

The project site is not located is close proximity to any railroads. The nearest railroad line is the Union Pacific Railroad located west of Interstate 80 about 2 miles west of the project site (Google, 2009).

Wildland Fire Hazards

According to the California Department of Forestry and Fire Protection, the project site is not located within a fire hazard area (CalFire, 2007). However, the project site is located at the fringe of an urban area and is adjacent to naturally vegetated land. In addition, the project site has some relatively steep slopes that are conducive to the rapid spread of wildland fires.

Health Hazards Associated with Mosquitoes

West Nile virus (WNV) is a mosquito-borne virus initially found in Africa, Asia, and the Middle East. WNV was first discovered in the United States in 1999 and is an emerging disease that can cause serious illness. WNV is transmitted to people and animals through the bite of an infected mosquito. Mosquitoes require water for the immature stages to develop and any source of standing water, big or small, can produce mosquitoes. As previously described, the project site contains a man-made pond near its center that could potentially serve as breeding habitat for mosquitoes.

In 2008, Placer County recorded six human cases of WNV and 43 other WNV cases involving animals or mosquito samples. The county has had no recorded cases of WNV so far in 2009. However, mosquito and health experts consider WNV to be a significant threat. Confirmed WNV infections are expected to rise in summer months as local mosquito activity increases through the summer (State of California, 2009).

Radon

Radon is a colorless, tasteless radioactive gas that can cause lung cancer and other health problems. The U.S. Environmental Protection Agency (USEPA) recommends that buildings with radon levels of 4.0 picocuries per liter (pCi/L) or more be repaired. Radon gas has a very short half-life of 3.8 days. The health risk potential of radon is associated with its rate of accumulation within confined areas, particularly confined areas near to the ground, where vapors can readily transfer to indoor air from the ground through foundation cracks or other pathways. Large, adequately ventilated rooms generally present limited risk for radon exposure.

A review of the California Statewide Radon Survey indicated that in zip code 95746, in which the project site is located, three tests were conducted as part of the survey. Of the three tests, none had greater radon levels than 4.0 pCi/L. The project site is located in Zone 2, which by USEPA standards is considered "Moderate Potential," with levels of radon greater than 2.0 pCi/L but less than 4.0 pCi/L (Holdrege and Kull, 2007a; USEPA, 2008a).

Lead-Containing Paint

Concern for lead-containing paint is primarily related to structure surfaces with lead-containing paint applied prior to 1978. Lead-containing paint is recognized as a potential health risk due to the known toxic effects of lead exposure, primarily through ingestion, on the central nervous system, kidneys, and blood system. The risk of lead toxicity in lead-based paint varies, based upon the condition of the paint and the year of its application. The project site does not currently contain any structures and there is no risk of exposure to lead-containing paints (USEPA, 2008b).

Naturally-Occurring Asbestos

Asbestos is a term used for several types of naturally-occurring fibrous minerals found in many parts of California. Asbestos is commonly found in ultramafic rock, including serpentine, and near fault zones. Asbestos is released from ultramafic and serpentine rock when it is broken or crushed through land grading, quarrying operations, or other disturbances. Once released from the rock, asbestos can become airborne and may stay in the air for long periods of time. All types of asbestos are hazardous and may cause lung disease and cancer (CARB, 2002).

According to the California Air Resources Board (CARB), the nearest mapped occurrence of these ultramafic rock units is the Foothill Metamorphic Belt along the western Sierra Nevada foothills, over 60 miles east of the project site. At this distance, naturally-occurring asbestos is not expected to influence site development. Furthermore, a preliminary review of the sites subsurface soil and rock conditions (see **Appendix 15**) determined that the rocks underlying the project site are primarily andesitic which are not associated with naturally-occurring asbestos (CARB, 2000; Holdrege and Kull, 2007b).

PCB Hazards

In 1976, Congress enacted the Toxic Substances Control Act (TSCA), which gave USEPA the ability to track all industrial chemicals imported into and used in the United States. USEPA screens these chemicals and can ban the manufacture and import of those chemicals that pose an unreasonable risk. The TSCA directed USEPA to ban the manufacture of polychlorinated biphenyls (PCBs) and regulated their use and disposal. USEPA accomplished this by the issuance of regulations in 1978.

Primary sources of PCBs include fluorescent light ballast and electrical transformers. USEPA maintains the PCB Activity Database (PADS) that identifies generators, transporters, commercial storers, and brokers and disposers of PCBs. Electrical facilities developed after 1979 are unlikely to be associated with PCB-containing transformers. The actual levels of PCBs in specific equipment can only be confirmed by sampling and analysis of the mineral oil coolant within the actual pieces of equipment under consideration.

Pacific Gas and Energy Company (PG&E) provides electrical service to the project site. PG&E is responsible for all transformers within its service area boundaries and is subject to USEPA

regulations regarding PCB transformers. In addition, electricity providers are required to notify USEPA of any activities or incidents involving PCBs (PG&E, 2009).

Asbestos-Containing Building Materials

Structures constructed or remodeled between 1930 and 1981 have the potential to contain asbestos-containing building materials (ACBM). These materials may include, but are not limited to, floor coverings, drywall joint compounds, acoustic-ceiling tiles, piping insulation, electrical insulation, and fireproofing materials. Asbestos is a general name for a group of naturally-occurring minerals composed of small fibers. It is common in many building materials. Various diseases have been associated with exposure to asbestos fibers, and the extensive use of asbestos in building materials has raised some concern about exposure in non-industrial settings. Health hazards associated with ACBMs include increased risks of cancer and respiratory related illnesses and diseases. The presence of asbestos in a building does not mean that the health of building occupants is endangered. As long as asbestos-containing materials remain in good condition and are not disturbed or damaged, exposure is unlikely. On the other hand, damaged, deteriorated, or disturbed asbestos-containing materials can lead to fiber release (exposure), and unauthorized removal or disturbance of asbestos materials could result in adverse health effects. The potential safety hazards resulting from ACBMs are greatest during demolition activities.

Electromagnetic Fields

Electromagnetic fields (EMF) are invisible lines of force surrounding any electrical wire or device. They have two components — the electric field resulting from voltage and the magnetic field resulting from current flow. Ordinary use of electricity produces magnetic and electric fields. These 60 Hertz fields (fields that go back and forth 60 times a second) are associated with electrical appliances, power lines, and wiring in buildings. EMF health and safety issues from power lines are preempted by the Public Utilities Commission (PUC) and therefore are typically not addressed in EIRs.

Although a point of concern, the evidence that EMF from high voltage power lines can be hazardous to human health is not quantifiable and remains unresolved. Federal agencies working on establishing limits and health standards related to EMF include the National Institute for Occupational Safety and Health (NIOSH), U.S. Environmental Protection Agency (USEPA), Federal Communications Commission (FCC), Occupational Safety and Health Administration (OSHA), National Telecommunications and Information Administration (NTIA), and National Institutes of Health (NIH).

Septic Tanks

On the lower portion of the parcel adjacent to Cavitt-Stallman Road, there was a house located near the old stock pond. That dwelling was served by an on-site sewage disposal system as indicated in County Environmental Health Services records. There is no indication in the County records that the septic tank has been properly destroyed via permit (Holdrege and Kull, 2007a).

15.2 REGULATORY FRAMEWORK

Federal, state, and local regulatory agencies that oversee hazardous materials handling and a summary of significant hazardous waste management, including the statutes and regulations these agencies administer, are listed in **Table 15-1** below.

TABLE 15-1
SUMMARY OF HAZARDOUS MATERIALS REGULATORY AUTHORITY

Regulatory Agency	Authority
Federal Agencies	
Department of Transportation (DOT)	Hazardous Materials Transport Act - Code of Federal Regulations (CFR) 49
Environmental Protection Agency (USEPA)	Federal Water Pollution Control Act Clean Air Act Clean Water Act Resource Conservation and Recovery Act (RCRA) Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) Superfund Amendments and Reauthorization Act (SARA) Federal Insecticide, Fungicide and Rodenticide Act
Occupational Safety and Health Administration (OSHA)	Occupational Safety and Health Act and CFR 29
State Agencies	
Department of Toxic Substances Control (DTSC)	California Code of Regulations
Department of Industrial Relations (CAL-OSHA)	California Occupational Safety and Health Act, CCR Title 8
State Water Resources Control Board and Regional Water Quality Control Board	Porter-Cologne Water Quality Act Underground Storage Tank Law
Health and Welfare Agency	Safe Drinking Water and Toxic Enforcement Act
Air Resources Board and Air Pollution Control District	Air Resources Act
Office of Emergency Services	Hazardous Materials Release Response Plans/Inventory Law
Department of Food and Agriculture	Food and Agriculture Code
State Fire Marshal	Uniform Fire Code, CR Title 19

15.2.1 Federal

Environmental Protection Agency

The Environmental Protection Agency (USEPA) provides leadership in the nation's environmental science, research, education, and assessment efforts. USEPA works closely with other federal agencies, state and local governments, and Native American tribes to develop and enforce regulations under existing environmental laws. USEPA is responsible for researching and setting national standards for a variety of environmental programs, and delegates to states and tribes responsibility for issuing permits and monitoring and enforcing compliance.

Prior to August 1992, the principal agency at the federal level regulating the generation, transport and disposal of hazardous waste was USEPA, under the authority of the Resource Conservation and Recovery Act (RCRA). As of August 1, 1992, however, the California Department of Toxic Substance Control (DTSC) was authorized to implement the State's hazardous waste management program for USEPA. The federal EPA continues to regulate hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act.

Other Federal Agencies

Other federal agencies that regulate hazardous materials include the Department of Transportation (DOT) and the National Institute of Health. The following federal laws and guidelines govern hazardous materials.

- Federal Water Pollution Control Act
- Clean Air Act
- Federal Insecticide, Fungicide, and Rodenticide Act
- Guidelines for Carcinogens and Biohazards
- Superfund Amendments and Reauthorization Act Title III
- Resource Conservation and Recovery Act
- Safe Drinking Water Act
- Toxic Substances Control Act

15.2.2 State

California Environmental Protection Agency

The California Environmental Protection Agency (Cal-EPA) and the State Water Resources Control Board establish rules governing the use of hazardous materials and the management of hazardous waste. Applicable state and local laws include the following:

- Public Safety/Fire Regulations/Building Codes;
- Hazardous Waste Control Law;
- Hazardous Substances Information and Training Act;
- Air Toxics Hot Spots and Emissions Inventory Law;
- Underground Storage of Hazardous Substances Act; and
- Porter-Cologne Water Quality Control Act.

Department of Toxic Substances Control

Within Cal-EPA, DTSC has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the state agency, for the management of hazardous materials and the generation, transport, and disposal of hazardous waste under the authority of the Hazardous Waste Control Law (HWCL). In addition, DTSC is frequently involved with the cleanup of abandoned mine sites.

California Highway Patrol (CHP)

A valid Hazardous Materials Transportation License, issued by the CHP, is required by the laws and regulations of the State of California Vehicle Code Section 3200.5 for transportation of either:

- Hazardous materials shipments for which the display of placards is required by state regulations; or
- Hazardous materials shipments of more than 500 pounds, which would require placards if shipping in greater amounts in the same manner.

Additional requirements on the transportation of explosives, inhalation hazards, and radioactive materials are enforced by CHP under the authority of the California Vehicle Code. Transportation of explosives generally requires consistency with additional rules and regulations for routing, safe stopping distances, and inspection stops (Title 14, California Code of Regulations, Chapter 6, Article 1, Sections 1150–1152.10). Inhalation hazards face similarly more restrictive rules and regulations (Title 13, California Code of Regulations, Chapter 6, Article 2.5, Sections 1157–1157.8). Radioactive materials are strictly restricted to specific safe routes for transportation of such materials.

California Emergency Response Plan

California has developed an Emergency Response Plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of this plan. The plan is managed by the State Office of Emergency Services (OES), which coordinates the responses of other agencies including Cal-EPA, the California Highway Patrol, California Department of Fish and Game, the Regional Water Quality Control Board, Placer County Sheriff's Department, Placer County Office of Emergency Services, and the South Placer Fire District.

California Board of Forestry Fire Safe Regulations

In the early 1980s, the California legislature adopted "Fire Safe" regulations in response to devastating fires on California's wildlands. These regulations apply to properties within a State Responsibility Area (SRA) where the California Department of Forestry has primary responsibility for wildfire protection. The intent of the Fire Safe program is to minimize the loss of structures, lives, and resources due to uncontrolled wildfires. Fire Safe combines the philosophy of self-protection with the concept of defensible space. Self-protection places some of the burden of fire protection on the homeowner, builder, or developer, incorporating basic fire protection measures into the home or development as it is built. The concept of defensible space provides a reasonably safe location from which firefighters can protect a structure, with a greater potential of saving the structure. Each home, subdivision, and development in the State Responsibility Area should have built into its design adequate emergency equipment access, building and street identification, and a reasonable water supply for fire suppression needs.

Although the project site is not located with an SRA, the Placer County Zoning Ordinance requires parcels greater than one acre in size to comply with the minimum setback requirements of the Fire Safe Regulations (Section 17.52.040).

15.2.3 Local

Placer County General Plan

The Placer County General Plan Policy Document was adopted by the Placer County Board of Supervisors in 1994. **Table 15-2** lists the General Plan policies that relate to hazards and hazardous materials and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 15-2
GENERAL PLAN CONSISTENCY ANALYSIS – HAZARDS AND HAZARDOUS MATERIALS

General Plan Goals and Policies	Consistency Determination	Analysis
Health and Safety Element		
Policy 8.G.1: The County shall ensure that the use and disposal of hazardous materials in the County complies with local, state, and federal safety standards.	Consistent	The proposed project would not involve the use or disposal of hazardous materials and will in no way conflict with local, state, or federal safety standards.
Policy 8.G.2: The County shall discourage the development of residences or schools near known hazardous waste disposal or handling facilities.	Consistent	The proposed project does not include the development of any residences or schools. Furthermore, there are no known hazardous waste disposal or handling facilities within one mile of the project site.
Policy 8.G.3: The County shall review all proposed development projects that manufacture, use, or transport hazardous materials for compliance with the County's Hazardous Waste Management Plan (CHWMP).	Consistent	The proposed project would not involve the manufacturing, use, or transport of any hazardous materials.
Policy 8.C.1: The County shall ensure that development in high-fire-hazard areas is designed and constructed in a manner that minimizes the risk from fire hazards and meets all applicable state and County fire standards.	Consistent	The project site is not in a designated high-fire-hazard area; however, the site is located adjacent to undeveloped, naturally vegetated land and contains steep slopes that can increase the risk of fire. The proposed project would be developed to meet all applicable state and local fire standards. Furthermore, the County and local fire district will review the proposed project to ensure that the fire hazards are minimized to the greatest extent feasible at the project site. See Impact 15-2.
Policy 8.C.2: The County shall require that discretionary permits for new development in fire hazard areas be conditioned to include requirements for fire-resistant vegetation, cleared fire breaks, or a long-term comprehensive fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.	Consistent	The project site is not in a designated fire hazard area; however, the site is located adjacent to undeveloped, naturally vegetated land and contains steep slopes that can increase the risk off fire. The proposed project would be developed to meet all applicable state and local fire standards. Furthermore, the County and local fire district will review the proposed project to ensure that the fire hazards are minimized to the greatest extent feasible at the project site. See Impact 15-2.

Policy 8.C.3: The County shall require that new development meets state, County, and local fire district standards for fire protection.	Consistent	The proposed project will be reviewed by the County and all appropriate fire districts to ensure that it meets all applicable state, county, and local fire district standards for fire safety and protection. See Impact 15-2.
Policy 8.C.4: The County shall refer development proposals in the unincorporated County to the appropriate local fire agencies for review for compliance with fire safety standards. If dual responsibility exists, then both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall be applied.	Consistent	The proposed project will be reviewed by the County and all appropriate fire districts to ensure that it meets all applicable state and local fire district standards for fire safety and protection. See Impact 15-2.
Policy 8.C.5: The County shall ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce the potential loss of life and property in accordance with state and local codes and ordinances.	Consistent	The proposed project will be designed and constructed in accordance with all applicable state and local fire safety standards. Furthermore, the County and local fire district will review the proposed project to ensure that fire hazards are minimized to the greatest extent feasible at the project site. See Impact 15-2.
Policy 8.C.10: The County shall continue to implement state fire safety standards through enforcement of the applicable standards contained in the Placer County Land Development Manual.	Consistent	The proposed project will be designed and constructed in accordance with all applicable state and local fire safety standards, including those contained in the Placer County Land Development Manual. Furthermore, the County and local fire district will review the proposed project to ensure that fire hazards are minimized to the greatest extent feasible at the project site. See Impact 15-2.
Policy 8.I.2: The County shall endeavor to identify and control important diseases transmitted by environmental factors in the Western Placer County.	Consistent	The project proponent will coordinate with the County where necessary to ensure that no conditions on the project site would promote disease transmittal. See Impact 15-3.

Granite Bay Community Plan

The Granite Bay Community Plan was adopted by the Placer County Board of Supervisors in 1989 and comprehensively updated in 2005 (Resolution #2005-149). **Table 15-3** lists the Community Plan goals and policies that relate to hazards and hazardous materials and the proposed project and provides an analysis of the project's consistency with these goals and policies.

TABLE 15-3
COMMUNITY PLAN CONSISTENCY ANALYSIS – HAZARDS AND HAZARDOUS MATERIALS

General Plan Goals and Policies	Consistency Determination	Analysis
Health and Safety – Fire Protection		
Policy 1: Ensure that all proposed developments are reviewed for fire safety standards by local fire agencies responsible for protection, including providing adequate water supplies and ingress and egress.	Consistent	The proposed project will be reviewed by the County and all appropriate fire districts to ensure that it meets all applicable state and local fire district standards for fire safety and protection. See Impact 15-2.
Policy 2: Maintain strict enforcement of the Uniform Building Code and the Uniform Fire Code.	Consistent	The proposed project will be designed and constructed in accordance with all applicable state and local building and fire safety standards, including the Uniform Building Code and the Uniform Fire Code.

Placer County Hazardous Waste Programs

Placer County implements various hazardous waste programs to protect the public health and the environment from exposure to hazardous wastes through the regulation of businesses and industries that generate hazardous waste. This is accomplished through a comprehensive program of inspection, enforcement, public education, and complaint investigation.

Placer County Hazardous Waste Management Plan

Section 25135 of the California Health and Safety Code requires that each county prepare a Hazardous Waste Management Plan. The Hazardous Waste Management Plan must include the following:

- An analysis of the hazardous waste stream generated in the county, including an accounting of the volumes of hazardous wastes produced in the county, by type of waste, and estimates of the expected rates of hazardous waste production until 1994, by type of waste.
- A description of the existing hazardous waste facilities which treat, handle, recycle, and dispose of the hazardous wastes produced in the county, including a determination of the existing capacity of each facility.
- An analysis of the potential in the county for recycling hazardous waste and for reducing the volume and hazard of hazardous waste at the source of generation.
- A consideration of the need to manage the small volumes of hazardous waste produced by businesses and households.
- A determination of the need for additional hazardous waste facilities to properly manage the volumes of hazardous wastes currently produced or that are expected to be produced during the planning period.
- An identification of those hazardous waste facilities that can be expanded to accommodate projected needs and an identification of general areas for new hazardous waste facilities

determined to be needed. In lieu of this facility and area identification, the plan may instead include siting criteria to be utilized in selecting sites for new hazardous waste facilities. If siting criteria are included in the county hazardous waste management plan, the plan shall also designate general areas where the criteria might be applicable.

- A statement of goals, objectives, and policies for the siting of hazardous waste facilities and the general management of hazardous wastes through the year 2000.
- A schedule which describes county and city actions necessary to implement the hazardous waste management plan through the year 2000, including the assigning of dates for carrying out the actions.

The County's Plan, submitted to the California Department of Health Services (DHS), was rejected because of its reference to limiting the size of facilities to "fair share" capacity. Most of the plans submitted by counties were rejected. While some counties have adopted their plans without the approval of DHS, Placer County has taken no action pending the outcome of a challenge to the DHS assessment by the Supervisors Association of California.

Placer County Multi-Hazard Mitigation Plan

The current version of the Placer County Multi-Hazard Mitigation Plan was prepared by the Placer County Office of Emergency Services in January 2005 to meet the requirements of the Disaster Mitigation Act of 2000. The plan applies to unincorporated Placer County as well as to the incorporated communities of Auburn, Colfax, Lincoln, Loomis, and Rocklin. The purpose of the plan is to reduce or eliminate long-term risk to people and property from natural hazards and their effects. The plan identifies and assesses the risks of all potential natural hazards that could impact the county including severe weather, floods, dam failure, landslides, avalanches, wildfires, earthquakes, volcanoes, agricultural hazards, hazardous materials incidents, aircraft accidents, acts of terrorism, and natural health hazards including West Nile virus. The plan also includes a review of the County's current capabilities with regard to reducing hazard impacts and provides recommended additional action items for the County and applicable cities to reduce their vulnerability to potential disasters (Placer County, 2005).

Placer Mosquito and Vector Control District

The Placer Mosquito and Vector Control District was created by the Board of Supervisors several years ago, but election attempts to raise funding were unsuccessful until 2000 when a mail-in ballot election provided funds to set up the district. The district's mission is to control mosquitoes in order to increase the quality of life and decrease the risk of disease transmission in the county. The district conducts surveillance to identify mosquito breeding sources and treats with insecticides or natural control methods to eliminate them. The district also conducts testing to detect the local transmission of mosquito-borne diseases such as the West Nile virus (WNV) (Placer County, 2009a).

15.3 IMPACTS

This section identifies and discusses the environmental impacts resulting from the proposed project and suggests mitigation measures to reduce the levels of impact. A detailed discussion of mitigation measures is included in Section 15.4.

15.3.1 Standards of Significance

Based on Appendix G of the California Environmental Quality Act Guidelines and Placer County's established significance criteria, the proposed project would result in a significant impact related to hazards and hazardous materials if it would:

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

2) 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.

3) Emit hazardous emissions, substances, or waste within one-quarter mile of an existing or proposed school.

4) 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, create a significant hazard to the public or the environment.

5) 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, result in a safety hazard for people residing or working in the project area.

6) For a project within the vicinity of a private airstrip, result in a safety hazard for people residing in the project area.

7) 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.

8) Create any health hazard or potential health hazard.

9) Expose people to existing sources of potential health hazards.

Methodology

The following evaluation of the proposed project's potential to create hazards to the public or expose the public to existing hazardous conditions is based primarily on the project description, the Phase I ESA prepared for the project site (**Appendix 15**), a review of existing applicable regulations, and information obtained from public agencies such as the U.S. Environmental Protection Agency, the California Air Resources Board, and Placer County.

Since the project site is not located within an airport land use plan or within two miles of a public airport or public use airport, the project will not result in safety hazards for people residing or working in the project area. Therefore this impact is not discussed further under Section 15.3.1.

15.3.1 Project-Level Impacts and Mitigation Measures

IMPACT 15-1: Public Exposure to Hazardous Materials from Transport or Accidental Release of Hazardous Materials

Implementation of the proposed project would not result in the transport, use, or disposal of hazardous materials and would therefore have no potential to result in the accidental release of hazardous materials.

The proposed project is a church facility which would include event space, offices, classrooms, a chapel, storage space, a kitchen, and parking facilities. None of these uses would be expected to require the transport, use, or disposal of any hazardous materials. In addition, the project site is not located near any of the major routes for hazardous material transport through Placer County (I-80, SR 20, SR 65, and SR 193).

According to the public records review conducted as part of the Phase I ESA prepared for the project site, there are no recorded hazardous materials sites on or within one mile of the project site. Furthermore, there is no evidence that the project site has been used for industrial, agricultural, waste disposal, or other uses that would have involved the regular use of hazardous materials. As such, there would be no risk of accidental release or public exposure to hazardous materials on the project site.

Furthermore, the use, storage, transport, and disposal of hazardous materials is thoroughly regulated at the federal, state, and local levels to ensure public and environmental health and protection. Placer County implements a comprehensive hazardous materials program that includes the regulation of facilities that generate and use hazardous materials within the county and the coordination of a Hazardous Materials Response Team.

Therefore, implementation of the proposed project would not result in public exposure to hazardous materials and **no impact** has been identified and no mitigation is required.

IMPACT 15-2: Wildland Fire Hazards

The project site is slightly at risk of wildland fire though sufficient existing regulations are in place at the state and local level to minimize such risks. As discussed previously, the project site is not classified by CalFire as being within a fire hazard area. However, the site is located within a naturally vegetated area and has some relatively steep slopes that could increase the risk of wildland fire. Though implementation of the proposed project would eliminate much of the natural vegetation on the northern portion of the site, approximately 58 acres of the southern portion of the site and surrounding area to the south and southwest would remain largely undeveloped and at risk for wildland fire.

The proposed project would be designed and constructed in accordance with all applicable fire safety standards including the Uniform Fire Code, the Placer County Land Development Manual, and per the Placer County Zoning Ordinance, the California Board of Forestry Fire Safe Regulations. In addition, the proposed project plans and designs will be reviewed by the County and the appropriate fire protection agency to ensure that the project will comply with all applicable standards as well as the County's policies requiring fire-resistant vegetation, cleared fire breaks, and/or a long-term comprehensive fuel management program for the project. Compliance with existing regulations would ensure that this impact is reduced to a **less than significant** level and no further mitigation is required.

IMPACT 15-3: Mosquitoes and West Nile Virus**:**

The project site contains a small, man-made pond that is proposed to remain in place for use as a detention basin as part of the overall drainage system for the project. The pond will therefore be inundated with water periodically throughout the year following storm events. This pond could provide breeding habitat for mosquitoes which act as vectors for the West Nile virus. Any source of standing water regardless of size can provide breeding habitat for mosquitoes in the area. Mosquitoes are known to carry the West Nile virus which can infect humans as well as birds, horses, and other animals and can be potentially deadly. Therefore, the pond will need to be treated to prevent mosquito breeding. This impact is potentially significant.

Mitigation Measure 15-3a Placer Mosquito Abatement and Vector Control District for vector control

The project applicant shall coordinate with the Placer County Mosquito and Vector Control District and pay for all treatments to ensure regular treatment of the on-site detention pond to eliminate mosquito breeding habitat. Frequency and timing of treatment shall be determined by the Placer County Mosquito and Vector Control District. The treatment shall include the application of larvicides and insecticides or the stocking of the pond with mosquito fish (Gambusia affinis) and shall continue throughout project construction and operation.

Mitigation Measure 15-3b Avoid occurrence of standing water during construction

During construction, all grading shall be performed in a manner to prevent the occurrence of standing water or other areas suitable for breeding of mosquitoes and other disease vectors. Direct pumping and/or ditching will be used to reduce to the amount of standing water or reduce the length of time water can stand in low areas following rainfall events. The target holding period is 72 hours, which is consistent with guidelines being developed by the Placer County Mosquito Abatement and Vector Control District.

Implementation of mitigation measures **MM 15-3a** and **MM 15-3b** would ensure that the on-site detention pond will not create or continue as a mosquito breeding habitat, nor would any standing water be allowed on the project site during construction, thereby reducing the potential for spreading vector-borne diseases such as West Nile virus. Therefore, this impact would be reduced to a less than significant level.

IMPACT 15-4: Temporary Construction Impacts**:**

The construction phase of the proposed project would likely include the use of hazardous materials for the operation and maintenance of construction equipment, during the application of architectural coatings, and for other construction activities. Hazardous materials may be transported to and used on the project site during the construction phase of the proposed project, potentially resulting in contamination and/or public exposure. However, the use of these materials would be minimal and temporary. Hazardous materials would be transported, stored, and used in compliance with all applicable regulations. This impact is **less than significant** and no further mitigation is required.

IMPACT 15-5: Potential Health Hazards

As previously discussed, the project site contains an on-site sewage disposal system located in the lower portion of the parcel adjacent to Cavitt-Stallman Road. There is no indication in the County records that the septic tank has been properly destroyed via permit. Furthermore, an existing well served the house which was located near the stock pond on the project site. The well was never properly abandoned. Both the well and the septic tank could pose potential health hazards via contamination of groundwater or onsite soils and this is a **potentially significant** impact.

Mitigation Measure 15-5 Septic Tank Removal

A permit for removal of the septic tank associated with the old single-family dwelling on the lower portion of the parcel adjacent to Cavitt-Stallman Road shall be obtained from the Placer County Environmental Health Services Department and the septic tank shall be located, pumped, and properly destroyed prior to issuance of a building permit.

Mitigation measure **MM 15-5** requires that the septic tank be destroyed in accordance with a County permit, while mitigation measure **MM 13-1a** requires the proper destruction of the well in accordance with a County permit prior to approval of the project's improvement plans. These mitigation measures would ensure that the well and the septic tank would be removed properly and would reduce potential health hazards associated with health hazards to a **less than significant** level.

15.4 MITIGATION MEASURES

This section discusses mitigation measures that will be implemented to reduce project-related impacts due to hazards and hazardous materials. Mitigation measures are separately identified as those "Proposed" by the applicant and those "Recommended" by County staff.

Mitigation Measure 15-1 Septic Tank Removal (Recommended)

A permit for removal of the septic tank associated with the old single-family dwelling on the lower portion of the parcel adjacent to Cavitt-Stallman Road shall be obtained from the Placer County Environmental Health Services Department and the septic tank shall be located, pumped, and properly destroyed prior to issuance of a building permit.

16.0
CLIMATE CHANGE

16.0 GREENHOUSE GAS AND CLIMATE CHANGE

This section of the Draft Environmental Impact Report ("Draft EIR"; "DEIR") provides a discussion on the project's effect on Greenhouse Gases and Climate Change. CEQA requires that lead agencies consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. The reader is referred to Section 10.0, Air Quality, for a discussion of project impacts associated with air quality.

16.1 ENVIRONMENTAL SETTING

16.1.1 Existing Climate Setting

To fully understand global climate change it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHG) that contribute to this phenomenon. The temperature on Earth is regulated by this greenhouse effect, which is so named because the Earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

GHG are naturally occurring gases such as water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that absorb heat radiated from the Earth's surface. Greenhouse gases – carbon dioxide, methane, nitrous oxide, and others – are transparent to certain wavelengths of the sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to the Earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the sun) before releasing it back toward space as infrared radiation. GHG and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near Earth's surface where it warms the lower atmosphere. If this natural barrier of atmospheric gases were not present, the heat would escape into space, and Earth's average global temperatures could be as much as 61 degrees Fahrenheit cooler (NASA, 2007).

In addition to natural sources, human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (natural gas, coal, gasoline, etc.) has substantially increased atmospheric levels of greenhouse gases. Measured atmospheric levels of certain GHG such as carbon dioxide, methane, and nitrous oxide have risen substantially in recent decades (Miller, 2000). This increase in atmospheric levels of GHG unnaturally enhances the greenhouse effect by trapping more infrared radiation as it rebounds from the Earth's surface and thus trapping more heat near the Earth's surface. Prominent GHGs contributing to the greenhouse effect and climate change include carbon dioxide (CO_2), methane (CH_4), ozone, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). Emissions of these gases are attributable to human activities associated with the industrial/manufacturing, utilities, transportation, residential, and agricultural sectors (California Energy Commission, 2006a).

According to the U.S. Environmental Protection Agency (EPA), the Earth's average surface temperature has increased by about 1.2 to 1.4ºF since 1900. The warmest global average temperatures on record have all occurred within the past 15 years, with the warmest two years being 1998 and 2005. Eleven of the last 13 years rank among the hottest years on record (since 1850, when reliable worldwide temperature measurements

began) (IPCC, 2007). Most of the warming in recent decades is likely the result of human activities. Other aspects of the climate are also changing such as rainfall patterns, snow and ice cover, and sea level.

16.1.2 Global Implications

Recognizing the problem of global climate change, the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP) established the Intergovernmental Panel on Climate Change (IPCC) in 1988. It is open to all members of the United Nations and WMO. The role of the IPCC is to assess on a comprehensive, objective, open, and transparent basis the scientific, technical, and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation. According to climate models, the IPCC projects that the Earth's average surface temperature should rise 1.8–6.3 ºF before the year 2100. If the atmospheric concentration of CO_2 doubles from its late 1700s level of 280 parts per million to 560 parts per million, the most likely rise in temperature would be about 3.6 ºF. This may not seem like a significant increase, yet even at the lowest projected increase of 1.8 ºF, the Earth would be warmer than it has been for 10,000 years (Miller, 2000).

The IPCC Fourth Assessment Report's Working Group I Summary for Policymakers (Report) synthesizes current scientific understanding of global climate change and projects future climate change using the most comprehensive set of well-established global climate models. The Report incorporates findings of the current effects of global climate change. These findings include:

1) The intensity of tropical cyclones (hurricanes) in the North Atlantic has increased over the past 30 years, which correlates with increases in tropical sea surface temperatures.

2) Droughts have become longer and more intense and have affected larger areas since the 1970s, especially in the tropics and subtropics.

3) Since 1900 the Northern Hemisphere has lost 7 percent of the maximum area covered by seasonally frozen ground.

4) Mountain glaciers and snow cover have declined worldwide.

5) Satellite data since 1978 show that the extent of Arctic sea ice during the summer has shrunk by more than 20 percent.

6) Since 1961, the world's oceans have been absorbing more than 80 percent of the heat added to the climate, causing ocean water to expand and contributing to rising sea levels. Between 1993 and 2003, ocean expansion was the largest contributor to sea level rise.

7) Melting glaciers and losses from the Greenland and Antarctic ice sheets have also contributed to recent sea level rise.

An enhanced greenhouse effect will generate new patterns of microclimate and will have significant impacts on the economy, environment, and transportation infrastructure and

operations due to increased temperatures, intensity of storms, sea level rise, and changes in precipitation. Impacts may include flooding of tunnels, coastal highways, runways, and railways, buckling of highways and railroad tracks, submersion of dock facilities, and a shift in agriculture to areas that are now cooler. Such prospects will have strategic security as well as transportation implications.

Climate change affects public health and the environment. Increased smog and emissions, respiratory disease, reduction in the state's water supply, extensive coastal damage, and changes in vegetation and crop patterns have been identified as effects of climate change. The impacts of climate change are broad-ranging and interact with other market failures and economic dynamics, giving rise to many complex policy problems. The findings are the latest in a string of reports warning that the rate of carbon dioxide accumulating in the atmosphere is increasing at an alarming pace.

16.1.3 California Implications

Climate change is a global problem, and GHGs are global pollutants, unlike criteria air pollutants, which are pollutants of regional and local concern. Worldwide, California is the 12th to 16th largest emitter of CO_2 and is responsible for approximately two percent of the world's CO_2 emissions (CEC, 2006a, 2006b). In 2004, California produced 492 million gross metric tons of carbon dioxide-equivalent (CEC, 2006a).

Increased ocean temperature could result in increased moisture flux into the state; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential for and severity of flood events, placing more pressure on California's flood control system. Sea level has risen approximately 7 inches during the last century and, according to the CEC report, it is predicted to rise an additional 22–35 inches by 2100, depending on the future GHG emissions levels (CEC, 2006c). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (CEC, 2006c). As the existing climate throughout California changes over time, this could also result in mass migration of species, or worse, failure of species to migrate in time to adapt to the perturbations in climate.

According to the California Environmental Protection Agency, the climate changes for global warming could affect agriculture, the fishing industry, California's coastline, forests, and ecosystems, increase air pollution, and energy production (CalEPA, 2002).

Agriculture

Potential impacts, such as reduced water supply, more severe droughts, more winter floods, and drier growing seasons will affect California's agriculture. Many farms, especially in the fruit and nut business, require long-term investments, making fast adaptation difficult, and could thus experience serious losses if decisions continue to be made with no regard to expected climate changes.

Fishing

Studies found that as a result of changes in ocean conditions, the distribution and abundance of major fish stocks will change substantially. Changes to fisheries that occurred during the El Niño/Southern Oscillation illustrate how climate directly impacts

marine fisheries on a short-term scale. Higher sea surface temperatures in 1997–1998 during the El Niño had a great impact on market squid, California's largest fishery by volume. The California Regional Assessment reports that landings fell to less than 1,000 metric tons in that season, down from 110,000 tons in the 1996–1997 season. Other unusual events also occurred such as poor salmon returns, a series of plankton blooms, and seabird die-offs.

Coastline

With climate changes, recreational facilities and developed coastlines will also be more vulnerable to hurricanes, storm surges, and flooding. Increasing population growth in coastal areas is a reason for further concern, since these areas could be more vulnerable to climate change impacts. Impacts of expected sea level rise and increased storm surges are numerous. Beachfront homes and harbors as well as wetlands may flood. Sewage systems may be overwhelmed by storm runoff and high tides. Jetties and seawalls may have to be raised and strengthened to protect harbors which are used for shipping, recreation, and tourism.

Forests

The California Regional Assessment notes an increase in the number and extent of areas burned by wildfires in recent years, and modeling results under changing climate conditions suggest that fires may be hotter, move faster, and be more difficult to contain under future climate conditions. The factors which contribute to the risk of catastrophic fires (fuel loads, high temperatures, dry conditions, and wind) are typically present already in summer and fall seasons in California, but can exist at other times of the year, especially in drought conditions. Public safety is an issue as more home and tourist developments occur on coastal hills and mountains, and the foothills and higher elevations in the Sierra Nevada are highly susceptible to catastrophic wildfires.

Ecosystems

The current distribution, abundance, and vitality of species and habitats are strongly dependent on climatic (and microclimatic) conditions. Climate change is expected to result in warmer temperatures year-round, accompanied by substantially wetter winters. Rising sea level will significantly affect coastal wetlands because they are mostly within a few feet of sea level. As the sea rises, these wetlands will move inland. The overall acreage of wetlands will be reduced due to constraints posed by existing urban development and steeper slopes immediately inland of existing wetlands. Tidal rivers, estuaries, and relatively flat shoreline habitats will be more subject to damage by flooding and erosion. More severe storm surges from the ocean, due to higher sea levels, combined with higher river runoff could significantly increase flood levels by more than the rise in sea level alone. Erosion of beaches would decrease habitat for beach-dependent species, such as seals, shorebirds, and endangered species (for example, snowy plover and least tern).

The timing and amounts of water released from reservoirs and diverted from streams are constrained by their effects on various native fish, especially those that are listed under the federal and state endangered species acts as threatened or endangered. Several potential hydrological changes associated with global climate change could influence the ecology of aquatic life in California and have several negative effects on cold-water fish

(Department of Water Resources [hereafter "DWR"] 2006). For example, if climate change raises air temperature by just a few degrees Celsius, this change could be enough to raise the water temperatures above the tolerance of salmon and trout in many streams, favoring instead non-native fishes such as sunfish and carp (DWR 2006). Unsuitable summer temperatures would be particularly problematic for many of the threatened and endangered fish that spend summers in cold-water streams, either as adults, juveniles, or both (DWR 2006). In short, climate change could significantly affect threatened and endangered fish in California. It could also cause non-threatened and non-endangered fish to reach the point where they become designated as such (DWR 2006).

Changes in temperature and precipitation patterns would also shift California's current climate zones, and thus habitats associated with these zones, northward by approximately 100–400 miles, as well as upwards in elevation by 500–1,500 feet. Global climate change would alter the composition, structure, and arrangement of the vegetation cover of the state (forest and wildland). Species distribution would move geographically as the climate changes, with forest stands, woodlands, and grassland species predicted to move northward and higher in elevation. The entire vegetative community may be affected if non-native invasive species occupy sites and replace native plants. Outbreaks of insects and diseases could compromise forest health and the capability of the forest stands to reproduce and to store carbon on a landscape basis. Forest fires are likely to become more frequent and severe if soils become drier. Changes in pest populations could further increase the stress on forests.

Air Quality

Projected climate changes will impact the quality of California's air, public health, and environment. Higher temperatures increase the formation of ground-level ozone and particulate matter, making it more difficult to meet the health-base air quality standards for these pollutants. Ground-level ozone has been shown to aggravate existing respiratory illnesses such as asthma, reduce lung function, and induce respiratory inflammation. Ambient ozone also reduces agricultural crop yields and impairs ecosystem health.

The particulate matter of most concern – PM_{10} – has a diameter smaller than 10 micrometers and can easily pass into the lungs, contributing to the development of lung tissue damage. PM_{10} has been implicated in exacerbation of cardiovascular disease, asthma, and other respiratory diseases and associated with increased mortality. Air pollution is also made worse by increases in natural hydrocarbon emissions and evaporative emissions of fuels and solvents which lead to higher levels of ozone and PM_{10} during hot weather. Warmer temperatures that cause increased use of air conditioners can cause increased air pollutants from power plants and from vehicle operation. In addition, warming, drying, and increased winds could mean hotter, harder-to-control wildfires. These wildfires could result in increased levels of fine particulate matter that could also exceed state and federal standards and harm public health.

Electricity Generation

California's electricity generation is currently relatively efficient when it comes to emissions of greenhouse gases. The national average for the electricity generation share of total greenhouse gas emissions is approximately 40 percent, while California electricity accounts for only 16 percent of statewide emissions. This is in part due to

California's significant amount of imported electricity, mild climate, and lack of energy-intensive industry. Over the past two decades, California has developed one of the largest and most diverse renewable electricity generation industries in the world. However, changes in climate of the magnitude predicted by the Intergovernmental Panel of Climate Change would substantially affect electricity generation throughout California and the entire western states grid, particularly for hydroelectric facilities.

Less snowpack would result in lower levels of hydro-generation in the summer and fall seasons due to reduced runoff in those seasons. Additional hydropower may be available during the winter and the spring. However, on balance hydropower is more useful and valuable within the grid mix of generation sources when it is available throughout the peak summer and fall seasons. Flooding could also impact pipelines, wells, and related petroleum extraction equipment. Warmer weather would result in an increased demand for electricity for cooling appliances in homes and businesses.

Water Supply

While most climate model simulations project relatively moderate changes in precipitation over this century, rising global temperatures are expected to result in reductions in snowpack for the Sierra Nevada Mountains (i.e., precipitation changing in the form of rain from snow). By the 2035 to 2064 period, the Sierra Nevada snowpack could decrease from 12% to 40% as compared to historic levels (depending on the climate scenario) (Cal/EPA, 2006). The Sierra Nevada Mountains snowpack currently acts as a natural water storage (equal to approximately half of the storage capacity of California's major human-made reservoirs) by holding the winter precipitation and releasing it during the spring and early summer months as the snow melts. The reduction of this natural water storage during the winter could mean water shortages in the future and would require the alteration of the management of existing reservoirs (while not losing flood control capacity or hydropower generation capacity) and/or the construction of additional human-made reservoirs to compensate for this storage loss.

Potential impacts of climate change on water supply and availability could directly and indirectly affect a wide range of institutional, economic, and societal factors (Gleick 1997). Much uncertainty remains, however, with respect to the overall impact of global climate change on future water supplies. For example, models that predict drier conditions (i.e.., parallel climate model [PCM]) suggest decreased reservoir inflows and storage and decreased river flows, relative to current conditions. By comparison, models that predict wetter conditions (i.e., HadCM2) project increased reservoir inflows and storage, and increased river flows (Brekke 2004). Both projections are equally probable based on which model is chosen for the analyses. Much uncertainty also exists with respect to how climate change will affect future demand of water supply (DWR 2006). Still, changes in water supply are expected to occur and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows (Kiparsky and Gleick 2003; see also Cayan et al. 2006a).

Minimal research has been conducted on the effects of climate change on specific groundwater basins, groundwater quality, or groundwater recharge characteristics. Changes in rainfall and changes in the timing of the groundwater recharge season would result in changes in recharge. Warmer temperatures could lead to higher evaporation as well as prolonged drought periods that would reduce the amount of water entering the

ground that could further limit deficient water supply conditions. However, warmer and wetter winters could increase the amount of runoff available for groundwater recharge. Additional winter runoff, however, could be occurring at a time when groundwater basins are being recharged at their maximum capacity. However, the extent to which climate will change and the impact of that change on groundwater are both unknown at this time.

Increased Flooding

Currently, there is no information to accurately assess the impact of climate change for flood frequency or severity, because of the absence of detailed regional precipitation information from climate models and because water-management choices can substantially influence overall flood risk. However, increased amounts of winter runoff could be accompanied by increases in flood event severity and warrant additional dedication of wet season storage space for flood control as opposed to water supply storage. This need to manage water storage facilities to handle increased runoff could in turn lead to water shortages during high water demand. It is recognized that these impacts would result in increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply.

Sudden Climate Change

Most global climate models project that anthropogenic climate change will be a continuous and fairly gradual process through the end of this century (DWR 2006). California is expected to be able to adapt to the water supply challenges posed by climate change, even at some of the warmer and dryer projections for change. Sudden and unexpected changes in climate, however, could leave water managers unprepared and could, in extreme situations, have significant implications for California and its water supplies. For example, there is speculation that some of the recent droughts that occurred in California and the western United States could have been due, at least in part, to oscillating oceanic conditions resulting from climatic changes. The exact causes of these events are, however, unknown, and evidence suggests such events have occurred during at least the past 2000 years (DWR 2006).

16.2 REGULATORY FRAMEWORK

16.2.1 Federal

Greenhouse Gases

The U.S. Environmental Protection Agency (EPA) is the federal agency responsible for implementing the Federal Clean Air Act (CAA). Previous to 2007, the EPA did not have regulations addressing GHGs. The U.S. Supreme Court ruled on April 2, 2007 that CO_2 is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions applicable at the time of writing.

16.2.2 State

Assembly Bill 1493

Assembly Bill (AB) 1493 required that the California Air Resources Board (ARB) develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty truck and other vehicles determined by the ARB to be vehicles whose primary use is noncommercial personal transportation in the state."

Assembly Bill 32, the California Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Proposed Scoping Plan

In October of 2008, ARB published its *Climate Change Proposed Scoping Plan* (*Proposed Scoping Plan*), which is the State's plan to achieve GHG reductions in California required by AB 32 (ARB 2009f). The *Proposed Scoping Plan* contains the main strategies California will implement to achieve reduction of 169 million metric tons (MMT) of CO_2e, or approximately 30% from the state's projected 2020 emission level of 596 MMT of CO_2e under a business-as-usual scenario (this is a reduction of 42 MMT CO_2e, or almost 10%, from 2002-2004 average emissions). The *Proposed Scoping Plan* also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emission standards for light-duty vehicles (estimated reductions of 31.7 MMT CO_2e), implementation of the Low-Carbon Fuel Standard (15.0 MMT CO_2e), energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO_2e), and a renewable portfolio standard for electricity production (21.3 MMT CO_2e). ARB has not yet determined what amount of GHG reductions it recommends from local government operations; however, the *Proposed Scoping Plan* does state that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have

primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, ARB is also developing an additional protocol for community emissions.) ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The *Proposed Scoping Plan* states that the ultimate GHG reduction assignment to local government operations is to be determined (ARB 2009f). With regard to land use planning, the *Proposed Scoping Plan* expects approximately 5.0 MMT CO_2e will be achieved associated with implementation of SB 375, which is discussed further below. The *Proposed Scoping Plan* was approved by ARB on December 11, 2008.

Senate Bill 1368

SB 1368 is the companion bill of AB 32. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a greenhouse gas emission performance standard for baseload generation from investor owned utilities by February 1, 2007. The California Energy Commission (CEC) must establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the greenhouse gas emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and CEC.

California Climate Action Registry

The California Climate Action Registry (CCAR) was established in 2000 by Senate Bill 1771 and modified in 2001 by Senate Bill 527 as a nonprofit voluntary registry for GHG emissions. (See Stats. 2000, ch. 1018 (enacting Health & Safety Code, Sections 42800–42870 and Pub. Resources Code, § 25730) and Stats. 2001, ch. 769 (amending Health and Safety Code, Sections 42810, 42821–42824, 42840–42843, 42860, and 42870.) The purpose of CCAR is to help companies and organizations with operations in the state to establish GHG emissions baselines against which any future GHG emissions reduction requirements may be applied. CCAR has developed a general protocol and additional industry-specific protocols that provide guidance on how to inventory GHG emissions for participation in the registry.

Senate Bill 97

Senate Bill (SB) 97, signed August 2007, acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. (Stats. 2007, ch. 185 (enacting Pub. Resources Code, Sections 21083.05 and 21097.) This bill directs the State Office of Planning and Research (OPR) to prepare, develop, and transmit to the Resources Agency guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA by July 1, 2009. The Resources Agency is required to certify and adopt those guidelines by January 1, 2010. This bill also removes, both retroactively and prospectively, as legitimate litigation causes of action any claim of inadequate CEQA analysis of effects of GHG emissions associated with environmental review for projects funded by the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or the Disaster Preparedness and Flood Protection Bond Act of 2006 (Proposition 1B or 1E). This provision will be repealed by operation of law on January 1, 2010, at which time such projects, if any remain unapproved, will no longer

enjoy the protection against litigation claims based on failure to adequately address climate change issues.

Senate Bill 1078

SB 1078 addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20% of their supply from renewable sources by 2017. SB 1078 changed the target date of this bill's implementation to 2010. This Senate bill would affect statewide GHG emissions associated with electricity generation.

Senate Bill 375

SB 375, signed in September 2008, aligns regional transportation planning efforts, regional GHG reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO's) to adopt a Sustainable Communities Strategy (SCS) or Alternative Planning Strategy (APS), which will prescribe land use allocation in that MPO's Regional Transportation Plan (RTP). ARB, in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, transportation projects would not be eligible for funding programmed after January 1, 2012.

This bill also extends the minimum time period for the Regional Housing Needs Allocation (RNHA) cycle from 5 years to 8 years for local governments located within an MPO that meets certain requirements. City or County land use policies (including General Plans) are not required to be consistent with the RTP (and associated SCS or APS). However, new provisions of CEQA would provide incentives qualified projects that are consistent with an approved SCS or APS, categorized as "transit priority projects."

Executive Order S-3-05

Executive Order S-3-05 proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the Secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The Secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the Secretary of the CalEPA created a Climate Action Team (CAT) made up of members from various state agencies and commission. CAT released its first report in March

2006. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Executive Order S-13-08: The Climate Adaptation and Sea Level Rise Planning Directive[1]

On November 14, 2008, Governor Arnold Schwarzenegger issued Executive Order (EO) S-13-08 in order to reduce and assess California vulnerability to climate change and sea level rise. The EO initiated four major actions:

1) Initiate California's first statewide climate change adaptation strategy that will assess the state's expected climate change impacts, identify where California is most vulnerable and recommend climate adaptation policies by early 2009;

2) Request the National Academy of Science establish an expert panel to report on sea level rise impacts in California to inform state planning and development efforts;

3) Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects; and

4) Initiate a report on critical existing and planned infrastructure projects vulnerable to sea level rise.

5) The EO will provide consistency and clarify to state agencies on how to address sea level rise in current planning efforts.

16.2.3 Local

There are no local regulations or law pertaining to Climate Change and Greenhouse Gas emissions. However, the County generally requires that EIRs include a discussion regarding Climate Change within the cumulative impacts chapter for projects less than 1,000 residential units and/or less than 200,000 square feet of commercial space, and within a separate chapter if over 1,000 units and/or over 200,000 square feet of commercial space.

16.2 IMPACTS

16.3.1 Standards of Significance

With regard to climate change impacts, no air district in California, including the Placer County Air Pollution Control District, has identified a significance threshold for GHG emissions or a methodology for analyzing air quality impacts related to greenhouse gas emissions. The state has identified 1990 emission levels as a goal through adoption of AB 32. To meet this goal, California would need to generate lower levels of GHG emissions than current levels. However, no standards have yet been adopted quantifying 1990 emission targets. Consumption of fossil fuels in the transportation sector accounted

[1] California Climate Change Portal, "California Climate Adaptation Strategy", http://www.climatechange.ca.gov/adaptation/index.html

for over 15 to 25 percent of the total GHG emissions in California. Current standards for reducing vehicle emissions considered under AB 1493 call for "the maximum feasible reduction of greenhouse gases emitted by passenger vehicles and light-duty trucks and other vehicles," and do not provide a quantified target for GHG emissions reductions for vehicles.

For this analysis, the project's incremental contribution to global climate change would be considered significant if it would:

1) Be inconsistent with AB 32's goal of reducing 2020 greenhouse gas emissions to 1990 levels from sources associated with projected growth (i.e., motor vehicles, direct energy use, waste-related activities); or

2) Expose persons to significant risks associated with the effects of global climate change.

Methodology

The methodology utilized for the following analysis is based on a Technical Advisory released by the Governor's Office of Planning and Research (OPR) on June 19, 2008 titled *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review*.

GHG emissions associated with the project were estimated for the GHGs that the Air Resources Board finds are generated from indirect sources like the proposed project, such as CO_2, N_2O, and CH_4. Calculations of GHG emissions typically focus on CO_2 because it is the most commonly produced GHG in terms of number of sources and volume generated, and because it is among the easiest GHGs to measure. This analysis augments the state of the practice by assessing N_2O and CH_4 emissions for other primary source categories of emissions (e.g., motor vehicles and energy use associated with long-term operation of the project), where possible. It is important to note that while other GHGs, such as HFCs, have a higher global warming potential than CO_2, they emit negligible emissions from land use developments like the proposed project under typical operations.

URBEMIS 2007 was utilized to estimate the project's CO_2 emissions from both mobile (vehicle) and area (energy use) sources. Building square footage and trip rates used in the model were consistent with the traffic impact study prepared for the project. Project CO_2 emissions were also estimated from energy use including electricity and natural gas. Where possible, N_2O and CH_4 emissions were analyzed using the Draft Local Government Operations Protocol issued by California Air Resources Board, California Climate Action Registry, ICLEI - Local Governments for Sustainability, and the Climate Registry (June 2008).

16.3.2 Project level Impacts and Mitigation Measures

IMPACT 16-1: Greenhouse Gas Emissions and Global Climate Change

Long-term operations of the project would emit CO_2e from mobile and area sources, potentially contributing to global climate change and the associated consequences of climate change. This impact is **potentially significant**.

The cumulative increase in GHG concentrations in the atmosphere has resulted in and will continue to result in increases in global average temperatures and associated shifts in climatic and environmental conditions. Multiple adverse environmental effects are attributable to global climate change, such as sea level rise, increased incidence and intensity of severe weather events (e.g., heavy rainfall, droughts), and extirpation or extinction of plant and wildlife species. Given the significant adverse environmental effects linked to global climate change induced by GHGs, a substantial increase in the emission of GHGs is considered a significant impact.

The proposed project has the potential to result in an increase in the emission of GHGs from construction activities, generation of vehicle traffic, energy use, and the use of gasoline-powered landscaping equipment. The project's estimated emissions of carbon dioxide equivalents (CO_2e) during the construction period are illustrated in **Table 16-1** below. Construction activities would emit GHGs as a result of vehicle activity (gas powered construction vehicles and equipment) associated with various phases of construction.

As shown in **Table 16-2**, the long-term operations of the project could produce 1,256 metric tons of CO_2e annually, primarily from motor vehicles that travel to and from the site. This would contribute to a net increase in GHGs from the proposed project.

TABLE 16-1
ESTIMATED PROJECT GREENHOUSE GAS EMISSIONS PER PHASE – CONSTRUCTION PHASES (METRIC TONS PER YEAR)

Phase	Carbon Dioxide (CO2)	Methane (CH4)	Nitrous Oxide (N2O)	Hydrofluorocarbons (HFCs)	Perfluorocarbons (PFCs)	Sulfur Hexafluoride (SF6)
Phase 1	245	Negl.	Negl.	Negl.	Negl.	Negl.
Phase 2	205	Negl.	Negl.	Negl.	Negl.	Negl.
Phase 3	64	Negl.	Negl.	Negl.	Negl.	Negl.

Negl. - Emissions of this GHG would be negligible from this source category (less than 0.01 metric tons per year)

Source: URBEMIS Version 9.2.4; Draft Local Government Operations Protocol issued by California Air Resources Board, California

TABLE 16-2
ESTIMATED PROJECT GREENHOUSE GAS EMISSIONS – PROJECT OPERATION (CO2E METRIC TONS PER YEAR)

Emission Source	Carbon Dioxide (CO_2)	Methane (CH4)	Nitrous Oxide (N2O)	Hydrofluorocarbons (HFCs)	Perfluorocarbons (PFCs)	Sulfur Hexafluoride (SF6)
Mobile Source	826	2	32	Negl.	Negl.	Negl.
Area Source	396	Negl.	Negl.	Negl.	Negl.	Negl.
Total Emissions	1,222	2	32	Negl.	Negl.	Negl.

Negl. - Emissions of this GHG would be negligible from this source category (less than 0.01 tons per year).
Mobile source emissions were based on the assumption that Saturday and Sunday would have 2540 ADT each day, and that weekdays would have an ADT of 50, reflecting worker trips. This is based on the assumption that there are
Source: URBEMIS Version 9.2.4; CEC 2002; Draft Local Government Operations Protocol issued by California Air Resources Board.

It should be noted that there will be some additional GHGs from sources such as waste, electricity, and water use, though transportation represents the largest portion of GHG emissions.

MM 16-1a Reduce Vehicle Emissions

The project applicant shall:

1) Provide shade tree planting in parking lots to reduce evaporative emissions from parked vehicles. Tree plantings for parking lots shall be in compliance with the Placer County Design Guidelines Manual.

2) Implement on-site circulation design elements in parking lots such as no parking areas in front of the main church facility; limiting passenger loading and unloading zones to a maximum of three (3) minutes; providing for adequate pedestrian cross-walks and walkways between the parking lot areas and the church facilities, to reduce vehicle queuing and improve the pedestrian environment

MM 16-1b Reduce VMT

The project shall include on and off-site pedestrian and bicycle improvements to encourage non-motorized forms of transportation, secure bike storage at parks and recreation areas and retail facilities, new bicycle lanes.

MM 16-1c Energy Efficient Building Design

The project applicant shall:

1) Design buildings to be energy efficient. Site buildings to take advantage of shade, prevailing winds, landscaping and sun screens to reduce energy use.

2) Install efficient lighting and lighting control systems. Use daylight as an integral part of lighting systems in buildings.

3) Install light colored "cool" roofs, cool pavements, and strategically placed shade trees.

4) Install energy efficient heating and cooling systems, appliances including low-flow plumbing fixtures and waterless urinals and equipment and control systems, double-paned windows.

5) Install door sweeps and weather stripping if more efficient doors and windows are not available.

6) Use low-energy parking lot and streetlights (i.e. sodium).

MM 16-1d Reduce waste flows

The project shall provide interior and/or exterior storage areas where appropriate for recyclables and green waste and adequate recycling containers located in public areas if such recycling programs are available.

MM 16-1e Implement water-wise operations

The project shall:

1) Install high-efficiency fixtures and equipment to reduce energy and water usage, including Energy Star equipment

2) Create water-efficient landscapes

3) Install water-efficient irrigation systems and devices such as soil moisture-based irrigation controls.

4) Restrict watering methods (e.g., prohibit systems that apply water to non-vegetated surfaces) and control runoff.

The project would result in net increases in greenhouse gases and CO_2e emissions. Given the recommended guidance from the Attorney General and Office of Planning and Research, this project should consider all feasible measures that could reduce GHG emissions**. Mitigation Measures MM 16-1a** through **MM 16-1e** summarizes the overall design features and/or mitigation measures for the project that could reduce GHG emissions from motor vehicles, energy use, water consumption, or construction activities.

These measures would reduce the project's carbon footprint and therefore this impact to a less than significant level.

IMPACT 16-2: Exposure of Persons to Substantial Impacts from Global Climate Change

The proposed project would potentially attract new workers and patrons thus resulting in potential risks associated with global climate change. However, the project would not result in exposure to substantial impacts based on available information. This is considered to be a **less than significant impact**.

Emitting CO_2 into the atmosphere is not itself an adverse environmental effect. It is the increased concentration of CO_2 in the atmosphere resulting in global climate change and the associated consequence of climate change that results in adverse environmental affects, which could affect the project in direct and indirect ways:

1) Extreme heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent;

2) An increase in heat-related human deaths and infectious diseases and a higher risk of respiratory problems caused by deteriorating air quality;

3) Reduce snow pack and stream flow in the Sierra Nevada mountains, affecting water supplies and winter recreation;

4) Potential increase in the severity of winter storms, affecting peak stream flows and flooding;

5) Changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield; and

6) Changes in distribution of plant and wildlife species due to changes in temperature, competition of colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

The proposed project would potentially add approximately 20 volunteer workers and a congregation of up to 1,300 people during Phase 1, and 2,000 during Phase 2. This could expose these persons to potentially more frequent and adverse heat-related conditions, along with changes to natural resources from altered water supplies and increased temperatures. However, gauging the significance of exposure for these persons from increased heat events is speculative in that it can not be measured with any degree of precision.

17.0
ALTERNATIVES

17.0 ALTERNATIVES TO THE PROJECT

STATUTORY REQUIREMENTS

The purpose of the EIR alternatives analysis is to describe a range of reasonable alternatives to the proposed project that could feasibly obtain most of the basic objectives of the project, and to evaluate the comparative merits of the alternatives (State CEQA Guidelines, Section 15126.6[a]). An EIR need not consider every conceivable alternative to a project, nor is it required to consider alternatives that are infeasible. State CEQA Guidelines requires that the discussion be focused on those alternatives that are capable of avoiding or substantially lessening any significant effects of the project, even if they impede the attainment of the project objectives to some degree or would be more costly (CEQA Guidelines Section 15126.6[b]).

CEQA requires an EIR to identify project alternatives and to indicate the manner in which a project's significant effects may be mitigated or avoided. However, it does not mandate that the EIR itself contain an analysis of the feasibility of the various project alternatives or mitigation measures that it identifies (Public Resources Code, Sections 21002.1, subd (a): 21100 and subd (b)4, 2004). As the lead agency, Placer County bears the responsibility for the decisions that have to be made before the project can go forward. These decisions include but are not limited to the determinations of feasibility and whether the benefits of the project outweigh its significant effects on the environment (Public Resources Code Sections 21002.1, subd (b) and (c); Section 21082).

According to the State CEQA Guidelines, an EIR need only examine in detail those alternatives that could feasibly meet most of the basic objectives of the project. When addressing feasibility, CEQA states that "among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, jurisdictional boundaries, and whether the applicant can reasonably acquire, control or otherwise have access to alternative sites" (State CEQA Guidelines Section 15126.6). The State CEQA Guidelines also specify that the alternatives discussion should not be remote and speculative; however, they need not be presented in the same level of detail as the assessment of the proposed project.

State CEQA Guidelines indicate that several factors need to be considered in determining the range of alternatives to be analyzed in an EIR and the level of analytical detail that should be provided for each alternative. These factors include: (1) the nature of the significant impacts of the proposed project; (2) ability of alternatives to avoid or lessen the significant impacts associated with the project; (3) the ability of the alternatives to meet the objectives of the project; and, (4) the feasibility of the alternatives. These factors should be unique for each project.

The significant environmental impacts of the proposed project that the alternatives will seek to eliminate or reduce were determined and based upon the findings contained within each technical section evaluated in Sections 17.0 through 17.0 of this DEIR.

PROJECT OBJECTIVES

So that alternatives could be evaluated effectively, the project objectives were used to determine the reasonableness and feasibility of each alternative. Objectives (as presented in Section 3.0) considered for the purpose of alternative formulation are as follows:

- .To develop Amazing Facts worship facility and offices to accommodate the multi-faceted ministry that supports their local and worldwide mission.
- Develop a church facility to serve the surrounding community.
- Provide a consistent style of architecture to ensure that development is compatible and complementary with the existing visual character in the region;
- Create an efficient circulation pattern for vehicles, pedestrians, and bicyclists;
- Provide adequate infrastructure and public services to support the proposed development;
- Identify and incorporate natural resources into the proposed development area as feasible; and
- Provide for the orderly and systematic development in a method consistent with the Placer County Zoning Ordinance.

Alternatives are evaluated for their potential to eliminate significant impacts associated with the proposed project, reduce them to a level that is less than significant, increase their magnitude, or result in additional significant impacts beyond those associated with the proposed project. The mitigation measures identified for proposed project impacts would apply to the alternatives analyzed, where impacts are similar in nature and the mitigation measure would reduce the impact of an alternative to a less-than significant level.

APPROACH TO ALTERNATIVES ANALYSIS

In accordance with the alternatives analysis requirement of CEQA, two alternative projects and a No Project Alternative were identified and analyzed. These alternatives represent viable options for development of the site, with varying types and degrees of development. Each alternative was chosen as a way to potentially reduce one or more environmental impacts, while still achieving some or all of the Project objectives. The rationale for the selection of these particular alternatives is explained in the following paragraphs.

For many projects, alternate sites for development are evaluated. However, for this Project, only alternatives located on the proposed project site were considered. An offsite alternative would be described as the construction of a church and associated facilities comparable to size, scale and function of the proposed project (**Figure 17-1**), but located at another site within the Granite Bay Community Plan Area in Placer County. The objective of an offsite alternative would be to evaluate potential sites that would achieve the project objectives of locating a church within the Granite Bay community, providing improved infrastructure and circulation to support the proposed facility. However, upon review of potential sites within the Granite Bay community with Placer County staff, it was determined that there were no comparable sites that could accommodate a church and its accessory uses similar to that of the project. Therefore an offsite alternative was not evaluated in this Draft EIR.

Other than the alternative site, there were no other alternatives considered by the County that were later rejected.

In accordance with the requirements of the CEQA Guidelines and relevant case law, the presentation and analysis of alternatives is not as detailed as that of the Project. The presentation and analysis of alternatives, however, is designed to provide enough information to the public and decision makers to allow for a reasoned, meaningful discussion of the relative merits of the alternatives versus the Project. Normally, alternatives analyses in CEQA documents do not include any diagrammatic representation of alternatives. The illustrations in this section are intended to clarify the concepts presented in the alternatives and encourage a meaningful deliberation on the merits. The illustrations, however, *are conceptual drawings* and do not represent a Project that could be approved based on this EIR. Though the analysis comparing the alternatives is sound and thorough enough for comparative purposes, additional information and analysis would be recommended before approving any of the alternatives as projects using this EIR. The alternative concepts, however, are feasible, and, in general, could accommodate any relevant mitigation measures included within this EIR – perhaps in some slightly altered form.

The following section lists the design characteristics of each alternative, and provides explanations of deviations from the original Project design. Impacts associated with each alternative, comparisons between alternatives, and a discussion of whether the alternative meets Project objectives are also provided.

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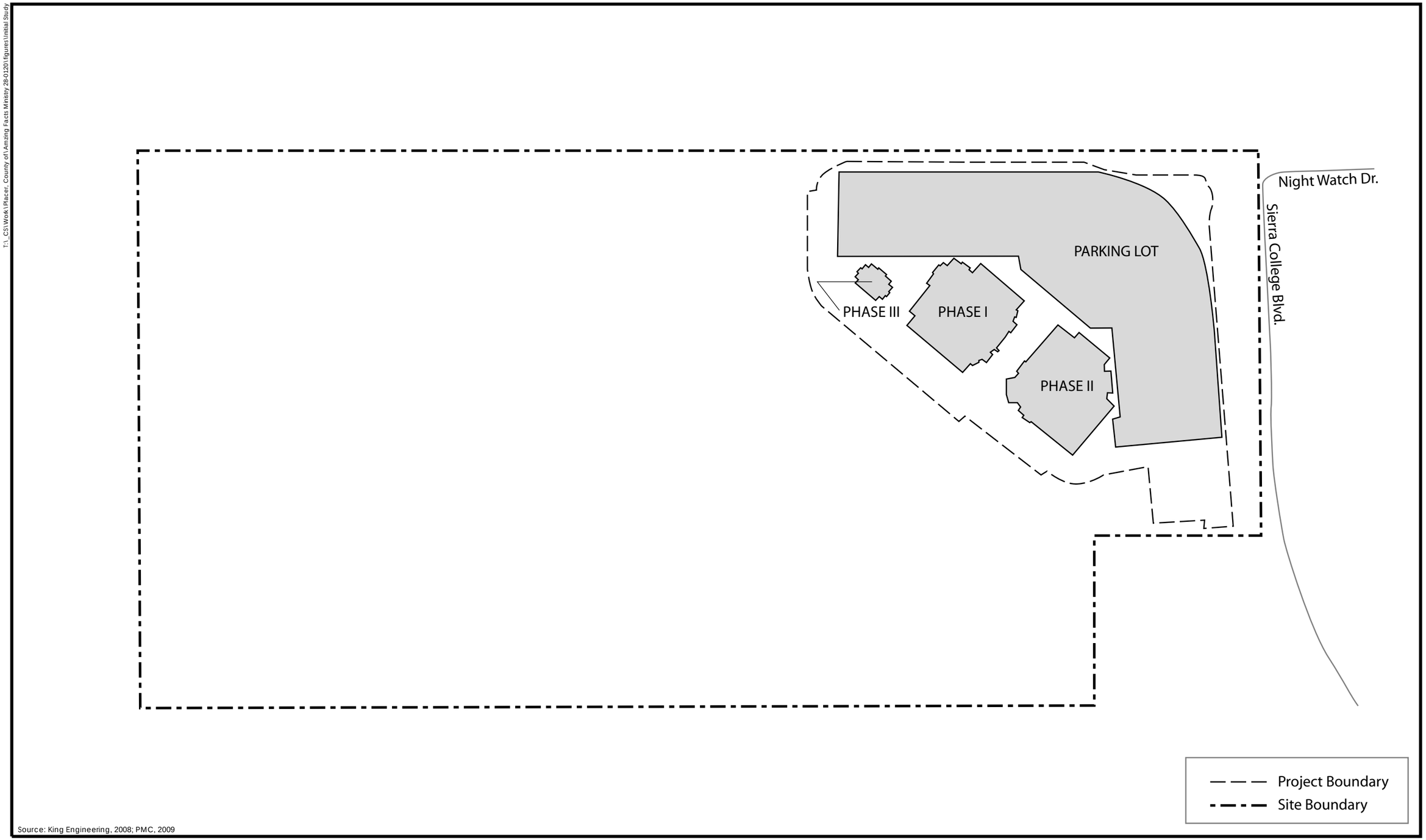

Figure 17-1
Proposed Project

IDENTIFICATION OF PROJECT ALTERNATIVES

NO PROJECT - ALTERNATIVE 1

Alternative 1 is the "No Project" alternative for the Amazing Facts Ministries project. Evaluation of the "No Project" alternative is required by CEQA. By definition, the No Project alternative assumes that no development would occur on the project site. None of the project impacts would occur with implementation of the "No Project" alternative. The site is assumed to remain in its existing condition as a vacant parcel of undeveloped land.

Under the "No Project" alternative, environmental conditions on the site would remain unchanged. Impacts predicted to occur as a result of the proposed project would not occur including increased traffic on nearby roadways and intersections. Cumulative development would occur as described in this EIR, but the "No Project" alternative would not contribute to these effects. As shown in Table 17-1, the "No Project" alternative would not contribute to these effects. As shown in Table 17-1, the "No Project" alternative would cause the fewest environmental impacts of any alternative. However the "No Project" alternative would not achieve any of the objectives of the proposed project.

DEVELOPMENT UNDER EXISTING ZONING - ALTERNATIVE 2

Alternative 2 would involve development of the same 17 acres of the total project site consistent with the existing general plan land use designation of Rural Estate 4.6 acre to 20 acre minimum and zoning of F-B-X 20 acre minimum (farm, combining a minimum building site size of 20 acres). This current zoning allows creation of lots no smaller than 20 acres in size. Therefore, implementation of Alternative would allow the creation of 1 lot (minimum of 20 acres) on the 17 acre portion of project site that can be developed; the existing constraints on the remaining 58 acre portion of the total site would remain (**Figure 17-2**). However, should the entire 75 acre project site be developed according to the base zoning for this property, there could be a maximum of 3 lots and 3 houses on the entire project site.

REDUCED SCALE CHURCH - ALTERNATIVE 3

Alternative 3 would involve construction of just Phase I of the proposed project. This includes the approximately 100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and a total of 624 parking spaces (**Figure 17-3**). Access to the site is anticipated to remain the same for this Alternative.

Since Alternative 3 includes the largest portion of development proposed for the project, it would meet the majority of the project objectives.

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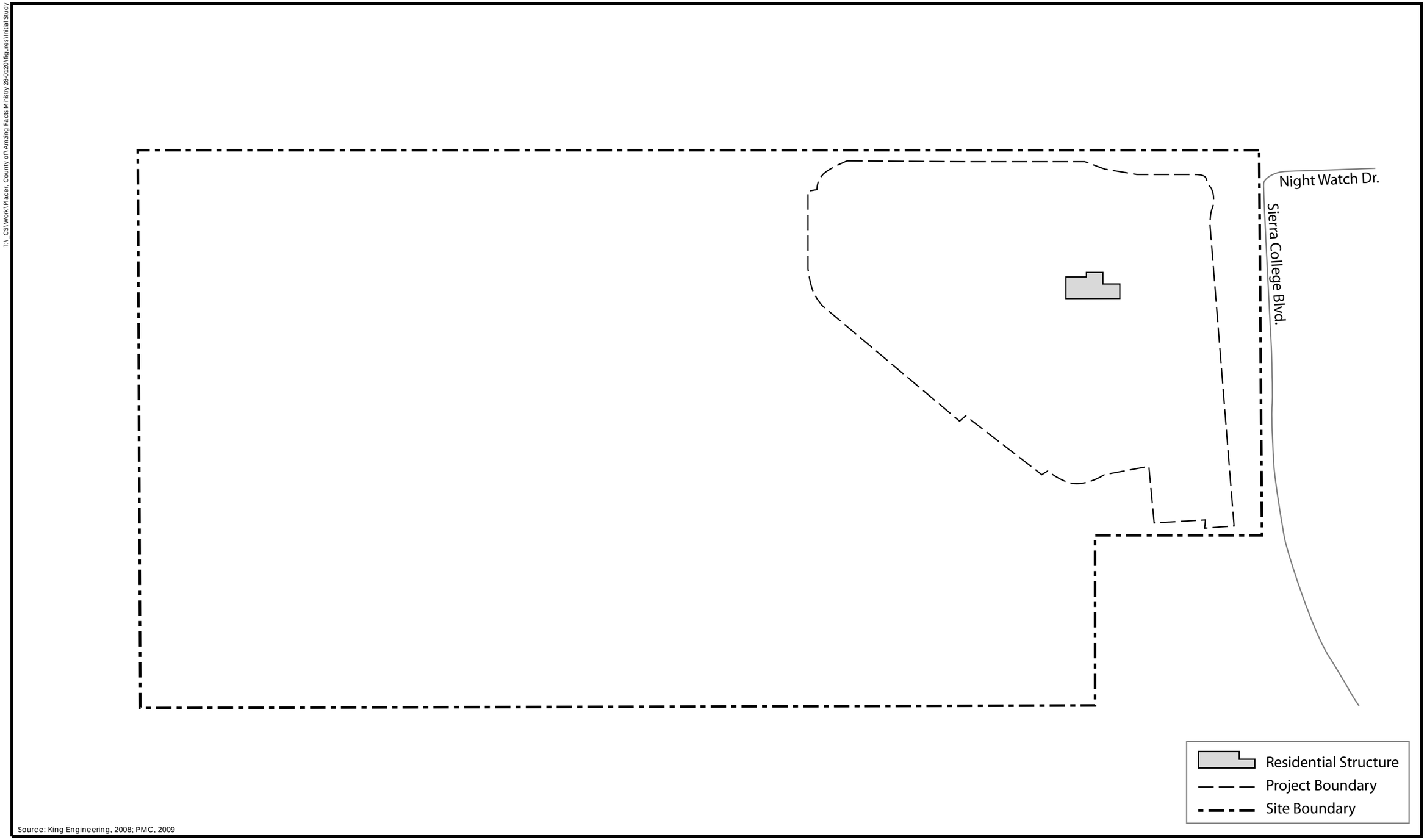

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Figure 17-2
Alternative 2

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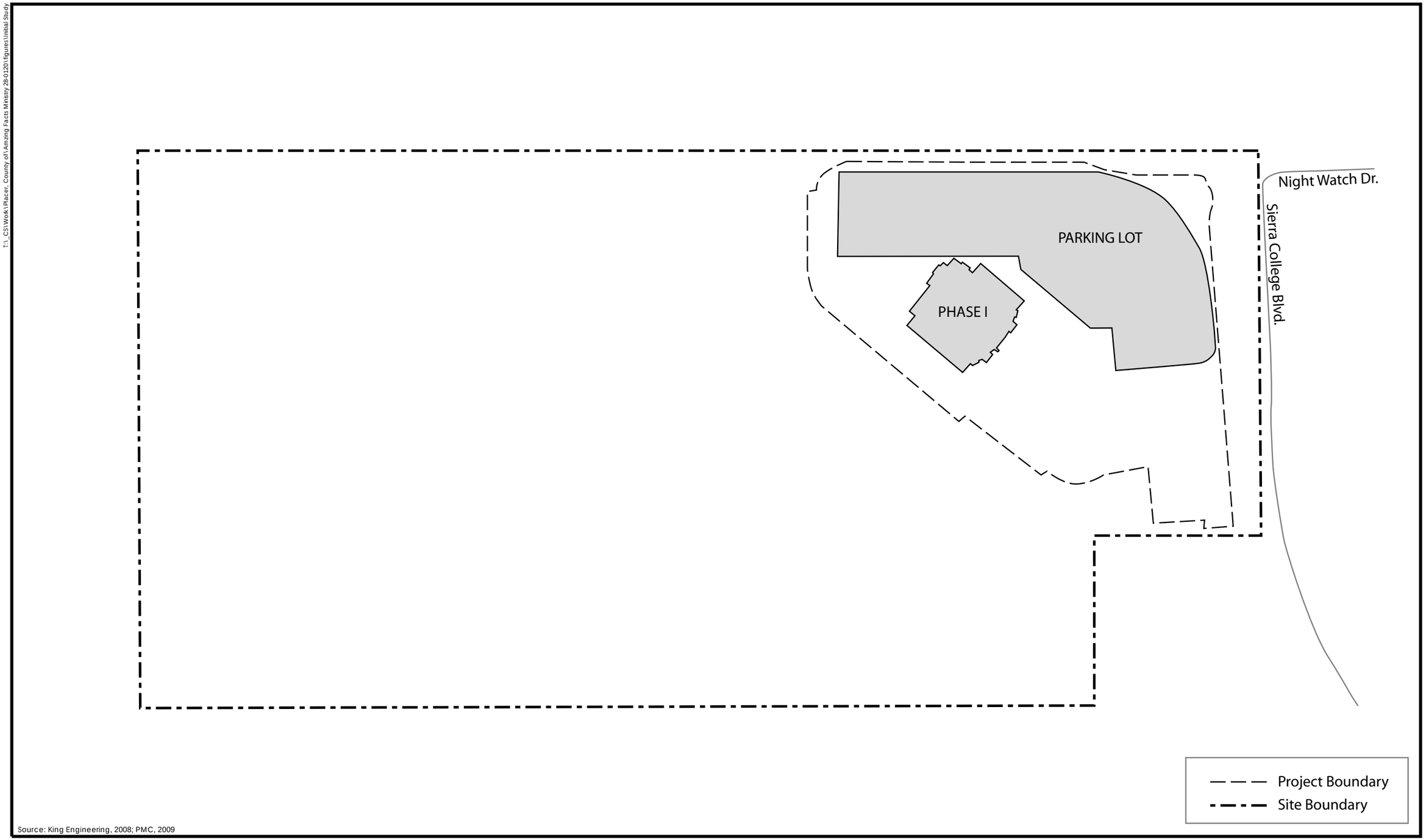

Figure 17-3
Alternative 3: Reduced Size Alternative

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COMPARISON OF ALTERNATIVES

The following section provides a comparison of the environmental impacts associated with each of the Project alternatives. The impacts of each of the alternatives are compared among the various environmental topic areas (air quality, biological resources, etc.) with the proposed project (discussed in Section 3.0, Project Description, of this DEIR). Significant effects that would be caused by the choice of an alternative are discussed to the extent that the effects are different from the Project as proposed. As previously mentioned, the significant environmental impacts of the proposed project that the alternatives will seek to eliminate or reduce were determined and based upon the findings contained within each technical section evaluated in Sections 4.0 through 16.0 of this DEIR.

The section concludes with the designation of the environmentally superior alternative.

ALTERNATIVE 1: NO PROJECT

Characteristics of Alternative

Under the No Project Alternative, it is assumed that the Project site would remain vacant, with no improvements to the site or its surroundings. Existing habitat would be maintained and no substantial change to existing site conditions would occur.

Environmental Considerations

Land Use and Agriculture: Alternative 1 would produce no changes on the project site. The site would remain in its existing condition. There would be no conversion of existing land use designated Rural Estate to Urban land uses. There would be no permanent loss of farmland, which would eliminate a significant impact that would occur under the proposed project. Compatibility of the Plan Area with adjacent uses would not change. Under this alternative, the proposed Amazing Facts Ministry project would not be built, and there would be no land use impacts. No General Plan or Community Plan amendments would be required. Land use and agriculture impacts under the Alternative 1 would be better than those under the proposed project.

Population, Housing and Employment: The proposed project consists of the construction and operation of a church facility with no residential uses and thus no population or housing growth. Similarly, Alternative 1 would produce no changes on the project site and thus no growth in population and housing on the site. Therefore, population, housing, and employment impacts are similar under both Alternative 1 and the proposed project.

Biological Resources: Implementation of the proposed project would result in development on the project site that would substantially and adversely impact, either directly or through habitat modifications, special-status plant and animal species. Alternative 1 would not result in any development or ground disturbance on the proposed project site. Therefore, existing biological communities on the project site would be entirely preserved disturbance and/or removal of special status plant and animal species, jurisdictional waters including wetlands, protected trees, and sensitive biological communities would not occur. Therefore, impacts to biological resources would be better under Alternative 1 than under the proposed project.

Cultural Resources: Neither Alternative 1 nor the proposed project would affect any historical buildings or sites, as the project site is vacant and none have been identified nearby. However, the proposed project includes construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements. The potential exists for previously undiscovered archaeological and paleontological resources to be uncovered during construction activities. In comparison, Alternative 1 would not result in any development or ground disturbance on the proposed project site. Therefore, Alternative 1 would not result in the potential to adversely impact undiscovered archaeological and paleontological resources on the project site during construction activities. Therefore, impacts to undiscovered archaeological and paleontological resources would be better under Alternative 1 than under the proposed project.

Visual Resources: The project site sits at the top of a hillside providing extensive views of rural and open space areas below the project site to the south and east. These views extend for many miles, generally include natural vegetation and scattered residential development, and are considered an important component of the area's visual character. Due to the proposed locations and heights of the buildings, construction of the proposed project would partially block scenic views from the residential and office uses located north and west of the project site as well as views from Sierra College Boulevard. Alternative 1 would produce no changes on the project site. Therefore, existing views would be preserved and impacts to visual resources would be better under Alternative 1 than under the proposed project.

Traffic and Circulation: Alternative 1 would have no impact on traffic as no development would be placed on the site. Site access would not be necessary and no increase in parking demand would occur since the site would remain in its existing, undeveloped state. In comparison, implementation of the proposed project would generate additional vehicle trips resulting in unacceptable levels of service at multiple study area intersections. Furthermore, the proposed project site plan and roadway improvements could result in traffic congestion at site access points potentially resulting in unsafe conditions. Therefore, impacts to traffic and circulation would be better under Alternative 2 than under the proposed project.

Air Quality: Alternative 1 would not result in any short-term construction emissions or long-term emissions associated with motor vehicles and stationary sources (i.e., heating, cooling) as no development would be placed on the site. Construction and operation of the proposed project would result in would result in increases in air pollutant emissions. These emissions could contribute to new exceedances of attainment pollutants or continued exceedances of ozone and PM_{10} standards. Therefore, impacts to air quality would be better under Alternative 1 than under the proposed project.

Noise: Implementation of the proposed project would generate noise associated with large HVAC units, parking lots and traffic, and construction activities. In comparison, Alternative 1 would produce no changes on the project site and the site would remain in its existing condition. Therefore, existing noise conditions on the site would remain unchanged under Alternative 1 and noise impacts resulting from implementation of Alternative 1 would be better than under the proposed project.

Geology and Soils: Alternative 1 would not result in impacts relative to exposure to seismic impacts, unstable geologic units, and expansive soils as no changes would occur on the project site and the site would remain in its existing condition. Similarly, Alternative 1 would result in no clearing, grading, and excavation activities that would remove vegetative cover from project site

soils and expose soils to erosion potential from wind, rain, and surface flow as a result of construction activities. The proposed project includes construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements that would involves significant ground disturbance and potential for erosion. Therefore, geology and soil impacts under Alternative 1 would be better than under the proposed project.

Hydrology and Water Quality: Construction and operation of the proposed project would increase impervious surfaces on the project site and introduce sediments and other contaminants into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. In addition, development of the proposed project would increase stormwater runoff rates and volumes when compared with existing conditions due to the increase in impervious surfaces. Alternative 1 would not increase impervious surfaces on the site and would not result in any changes to water quality or drainage patterns. Therefore, impacts associated with hydrology and water quality are considered better under Alternative 1 than under the proposed project.

Public Services: Alternative 1 would produce no changes on the project site. As no increase in population or housing would occur under Alternative 1, there would be no increase in demand for fire protection and emergency medical services, law enforcement, public schools, electrical, gas, cable, and telecommunication services, parks and recreation, solid waste service, water service and wastewater service. Likewise, the proposed project would not substantially impact public schools or parks and recreation services because the proposed project does not include a residential component and would not generate students or park users. However, the proposed project would increase demand for fire protection and emergency medical services, law enforcement, electrical, gas, cable, and telecommunication services, solid waste service, water service and wastewater service. Therefore, overall impacts to public services resulting from implementation of Alternative 1 would be better than under the proposed project.

Hazards and Hazardous Materials: Neither Alternative 1, which includes no development, nor the proposed project, which includes a church and parking facilities, would require the transport, use, or disposal of any hazardous materials. In addition, the project site is not located near any of the major routes for hazardous material transport through Placer County and there are no recorded hazardous materials sites on or within one mile of the project site. Therefore, impacts associated with hazards and hazardous materials would be similar for both Alternative 1 and the proposed project.

Climate Change: The proposed project has the potential to result in an increase in the emission of greenhouse gas emissions (GHGs) from construction activities, generation of vehicle traffic, energy use, and the use of gasoline-powered landscaping equipment. In comparison, GHGs and global climate change would not be impacted by Alternative 1 because no construction would occur and no increase in traffic or energy use would occur. Therefore, climate change impacts resulting from Alternative 1 would be better than under the proposed project.

ALTERNATIVE 2: DEVELOPMENT UNDER EXISTING ZONING

Characteristics of Alternative

This alternative would allow the creation of one lot (minimum of 20 acres) with one residential unit on the 17 acre portion of project site that can be developed; the existing constraints on the

remaining 58 acre portion of the total site would remain (**Figure 17-2**). However, should the entire 75 acre project site be developed according to the base zoning for this property, there could be a maximum of 3 lots and 3 houses on the entire project site.

Since this Alternative does not include any of the components of the proposed project, it would not meet any of the objectives of the proposed project.

Environmental Considerations

Land Use and Agriculture: Alternative 2 would result in conversion of vacant land to one lot (minimum of 20 acres) with one residential unit on the 17 acre portion of project site that can be developed. This intensity of development would be substantially less than proposed project. In addition, Alternative 2 would allow for agricultural uses on the site per the F-B-X 20 zoning and permanent substantial loss of important farmland would not occur. Therefore, impacts to land use and agriculture would be better under Alternative 2 than the proposed project.

Population, Housing and Employment: The proposed project consists of the construction and operation of a church facility with no residential uses and thus no population or housing growth. In comparison, development of one lot (minimum of 20 acres) with one residential unit on the 17 acre portion of project site that can be developed, as would occur under Alternative 2, would result in a small amount of growth in population and housing on the site. The average household size in Placer County is 2.564 persons per household. Therefore, Alternative 2 would be expected to result in an increase of approximately 3 persons and one housing unit on the project site. This increase is negligible in the context of the County's overall 2009 population of 339,577. Therefore, population, housing, and employment impacts are similar under both Alternative 2 and the proposed project.

Biological Resources: Alternative 2 would result in substantially less development and ground disturbance on the proposed project site than the proposed project (**see Figure 17-2**). A large portion of the 17 acres of developable land would remain vacant and undisturbed under Alternative 2, thus resulting in preservation of more of the existing biological community. Depending on the placement of the residential structure and any associated landscaping under Alternative 2, disturbance and/or removal of special status plant species, jurisdictional waters including wetlands, protected trees, and sensitive biological communities could be avoided and impacts significantly reduced. Therefore, impacts to biological resources would be better under Alternative 2 than under the proposed project.

Cultural Resources: Similar to the proposed project, Alternative 2 would not affect any historical buildings or sites, as the project site is vacant and none have been identified nearby. However, Alternative 2 would result in substantially less development and ground disturbance on the project site than the proposed project (**see Figure 17-2**) and therefore less potential to adversely impact undiscovered paleontologic resources on the project site during construction activities. Therefore, impacts to undiscovered archaeological and paleontological resources would be better under Alternative 2 than under the proposed project.

Visual Resources: The project site sits at the top of a hillside providing extensive views of rural and open space areas below the project site to the south and east. These views extend for many miles, generally include natural vegetation and scattered residential development, and are considered an important component of the area's visual character. Due to the proposed locations

and heights of the buildings, construction of the proposed project would partially block scenic views from the residential and office uses located north and west of the project site as well as views from Sierra College Boulevard. The single residential unit that would be constructed under Alternative 2 would be substantially smaller in scale and reduced in height compared to the buildings included in the proposed project. In addition, single residential unit would result in significantly less daytime glare and nighttime lighting in comparison to the proposed project as a residential unit would not require parking lot or security lighting. Therefore, impacts to visual resources would be better under Alternative 2 than under the proposed project.

Traffic and Circulation: Alternative 2 would have very little impact on traffic and circulation as only one residential unit on one lot would be constructed on the site. Alternative 2 would not result in unacceptable levels of service at study area intersections and on study area roadways. In comparison, implementation of the proposed project would generate additional vehicle trips resulting in unacceptable levels of service at multiple study area intersections. Furthermore, the proposed project site plan and roadway improvements could result in traffic congestion at site access points potentially resulting in unsafe conditions. Therefore, impacts to traffic and circulation would be better under Alternative 2 than under the proposed project.

Air Quality: Alternative 2 would result in short-term emissions associated with construction of the one residential unit. In addition, Alternative 2 would result in long-term emissions associated with motor vehicles and stationary sources (i.e., heating, cooling). This could contribute to new exceedances of attainment pollutants or continued exceedances of ozone and PM_{10} standards. However, both long-term and short-term emissions under Alternative 2 would be minimal considering the site would only be expected to develop with one residential unit. Furthermore, emissions under Alternative 2 would be far less than would occur if the proposed project were constructed as the proposed project includes more and longer construction, more stationary sources (large HVAC units), and more traffic. Therefore, impacts to air quality would be better under Alternative 2 than under the proposed project.

Noise: Implementation of Alternative 2 would generate some noise associated with construction of the one residential unit on the project site, as well as a minimal increase in traffic noise associated with motor vehicles traveling to and from the residence. However, noise associated with construction and operation of Alternative 2 would be substantially less than under the proposed project as the proposed project includes large HVAC units, substantial parking lot and traffic noise, and more substantial construction activities occurring for a longer duration. Therefore, noise impacts resulting from implementation of Alternative 2 would be better than under the proposed project.

Geology and Soils: Impacts relative to exposure to seismic impacts, unstable geologic units, and expansive soils would be similar for both Alternative 2 and the proposed project as both would allow for development in the same 17-acre developable portion of the site and neither would allow for substantial population or housing growth. Furthermore, clearing, grading, and excavation activities under both the proposed project and Alternative 2 would remove vegetative cover from project site soils and expose soils to erosion potential from wind, rain, and surface flow as a result of construction activities. However, the proposed project involves significantly more ground disturbance than Alternative 2 as the proposed project includes construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements while Alternative 2 would include construction of a single residential

unit. Therefore, erosion impacts under Alternative 2 would be better than under the proposed project.

Hydrology and Water Quality: Construction and operation of the proposed project would increase impervious surfaces on the project site and introduce sediments and other contaminants into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. In addition, development of the proposed project would increase stormwater runoff rates and volumes when compared with existing conditions due to the increase in impervious surfaces. Alternative 2 would also increase impervious surfaces on the site. However, Alternative 2 includes only construction of a single residential unit while the proposed project includes construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements. Therefore, Alternative 2 would result in significantly less impervious surface area on the project site than the proposed project and impacts associated with hydrology and water quality are considered better under Alternative 2 than under the proposed project.

Public Services: Alternative 2 would result in one residential unit on the project site which would require fire protection and emergency medical services, law enforcement, public schools, electrical, gas, cable, and telecommunication services, parks and recreation, solid waste service, water service and wastewater service. These public services would not be substantially impacted by Alternative 2 because only one residential unit would be constructed. Likewise, the proposed project would not substantially impact public schools or parks and recreation services because the proposed project does not include a residential component and would not generate students or park users. However, the proposed project would impact fire protection and emergency medical services, law enforcement, electrical, gas, cable, and telecommunication services, solid waste service, water service and wastewater service to a greater degree than Alternative 2 as the proposed project is significantly larger in scale. Therefore, overall impacts to public services resulting from implementation of Alternative 2 would be better than under the proposed project.

Hazards and Hazardous Materials: Neither Alternative 2, which includes one residential unit, nor the proposed project, which includes a church and parking facilities, would be expected to require the transport, use, or disposal of any hazardous materials. In addition, the project site is not located near any of the major routes for hazardous material transport through Placer County and there are no recorded hazardous materials sites on or within one mile of the project site. Therefore, impacts associated with hazards and hazardous materials would be similar for both Alternative 2 and the proposed project.

Climate Change: The proposed project has the potential to result in an increase in the emission of greenhouse gas emissions (GHGs) from construction activities, generation of vehicle traffic, energy use, and the use of gasoline-powered landscaping equipment. In comparison, GHGs and global climate change would be minimally impacted by Alternative 2 because it would result in construction and occupancy of only one residential unit on the 17 developable acres of the project site. Therefore, climate change impacts resulting from Alternative 2 would be better than under the proposed project.

ALTERNATIVE 3: REDUCED SCALE CHURCH

Characteristics of Alternative

Alternative 3 would involve construction of just Phase I of the proposed project. This includes the approximately 100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and a total of 624 parking spaces (**Figure 17-3**).

Environmental Considerations

Land Use and Agriculture: Alternative 3 would involve construction of just Phase I of the proposed project (100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and a total of 624 parking spaces). Although this intensity of development would be less than proposed project, the conversion of existing land use designated Rural Estate to Urban land uses would still occur and General Plan or Community Plan amendments would still be required. In addition, Alternative 3 would still result in a permanent loss of farmland. Therefore, land use and agriculture impacts under Alternative 3 would be similar to those under the proposed project.

Population, Housing and Employment: Similar to the proposed project, Alternative 3 would not generate an increase in population or housing as no new housing would be constructed. Therefore, population, housing, and employment impacts are similar under both Alternative 3 and the proposed project.

Biological Resources: Alternative 3 would result in substantially less development and ground disturbance on the proposed project site than the proposed project (**see Figure 17-3**). A large portion of the 17 acres of developable land would remain vacant and undisturbed under Alternative 3, thus resulting in preservation of more of the existing biological community. Under Alternative 3, disturbance and/or removal of special status plant species, jurisdictional waters including wetlands, protected trees, and sensitive biological communities could be avoided to a greater degree as more of the site would remain vacant and undisturbed. Therefore, impacts to biological resources would be better under Alternative 3 than under the proposed project.

Cultural Resources: Similar to the proposed project, Alternative 3 would not affect any historical buildings or sites, as the project site is vacant and none have been identified nearby. However, Alternative 3 would result in substantially less development and ground disturbance on the project site than the proposed project (**see Figure 17-3**) and therefore less potential to adversely impact undiscovered paleontologic resources on the project site during construction activities. Therefore, impacts to undiscovered archaeological and paleontological resources would be better under Alternative 3 than under the proposed project.

Visual Resources: The project site sits at the top of a hillside providing extensive views of rural and open space areas below the project site to the south and east. These views extend for many miles, generally include natural vegetation and scattered residential development, and are considered an important component of the area's visual character. Due to the proposed locations and heights of the buildings, construction of the proposed project would partially block scenic views from the residential and office uses located north and west of the project site as well as views from Sierra College Boulevard. Alternative 3 would include a three-level, multi-use building consisting of 96,000 square feet. Only the ground and upper levels would be visible

from the north, east and west. The lower level would be below grade and would only be visible from the south. These buildings would be clearly visible from the west and north, as well as from both west- and eastbound Sierra College Boulevard. In addition, Alternative 3 would require parking lot and security lighting. Therefore, impacts to visual resources would be similar under Alternative 3 and the proposed project.

Traffic and Circulation: The addition of traffic associated with Alternative 3 would result in conditions within adopted minimum standards at most of the study intersections in Roseville and Rocklin, but LOS D conditions would occur at the Sierra College Boulevard/Rocklin Road intersection. In comparison, implementation of the proposed project would result in unacceptable levels of service at multiple study area intersections. Therefore, traffic impacts would be worse under the proposed project. Furthermore, the proposed project site plan and roadway improvements could result in traffic congestion at site access points potentially resulting in unsafe conditions. This congestion would be reduced under Alternative 3 as less traffic would be generated. Therefore, impacts to traffic and circulation would be better under Alternative 3 than under the proposed project.

Air Quality: Alternative 3 would result in short-term emissions associated with construction of the 100,000 square foot multi-use church facility, the 11,000 square foot resource center building, and the 624 parking spaces. In addition, Alternative 3 would result in long-term emissions associated with motor vehicles and stationary sources (i.e., heating, cooling). This could contribute to new exceedances of attainment pollutants or continued exceedances of ozone and PM_{10} standards. However, both long-term and short-term emissions under Alternative 3 would be substantially less than those generated by the proposed project as the proposed project includes more and longer construction, more stationary sources (HVAC units), and more traffic. Therefore, impacts to air quality would be better under Alternative 3 than under the proposed project.

Noise: Implementation of the proposed project would generate noise associated with large HVAC units, parking lots and traffic, and construction activities. Construction and operation of Alternative 3 would generate similar noise; however, noises generated under Alternative 3 would be substantially less than under the proposed project as Alternative 3 is reduced in scale in comparison to the proposed project. Therefore, noise impacts resulting from implementation of Alternative 3 would be better than under the proposed project.

Geology and Soils: Impacts relative to exposure to seismic impacts, unstable geologic units, and expansive soils would be similar for both Alternative 3 and the proposed project as both would allow for development in the same 17-acre developable portion of the site and neither would allow for substantial population or housing growth. Furthermore, clearing, grading, and excavation activities under both the proposed project and Alternative 3 would remove vegetative cover from project site soils and expose soils to erosion potential from wind, rain, and surface flow as a result of construction activities. However, the proposed project involves significantly more ground disturbance than Alternative 3 as the proposed project includes construction of a total combined building square footage of 210,100 square feet, a parking lot, and associated roadway improvements while Alternative 3 would include construction of a 100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and only 624 parking spaces. Therefore, erosion impacts under Alternative 3 would be better than under the proposed project.

Hydrology and Water Quality: Construction and operation of the proposed project would increase impervious surfaces on the project site and introduce sediments and other contaminants into stormwater runoff, potentially resulting in the degradation of downstream surface water and groundwater quality. In addition, development of the proposed project would increase stormwater runoff rates and volumes when compared with existing conditions due to the increase in impervious surfaces. Alternative 3 would also increase impervious surfaces on the site. However, Alternative 3 includes less construction and development on the site. Therefore, Alternative 3 would result in significantly less impervious surface area on the project site than the proposed project and impacts associated with hydrology and water quality are considered better under Alternative 3 than under the proposed project.

Public Services: Alternative 3 would involve construction of just Phase I of the proposed project (100,000 square foot multi-use church facility, an 11,000 square foot resource center building, and a total of 624 parking spaces). Both Alternative 3 and the proposed project would require fire protection and emergency medical services, law enforcement, electrical, gas, cable, and telecommunication services, solid waste service, water service and wastewater service. Likewise, neither Alternative 3 nor the proposed project would substantially impact public schools or parks and recreation services because neither includes a residential component that would generate students or park users. However, the proposed project would impact fire protection and emergency medical services, law enforcement, electrical, gas, cable, and telecommunication services, solid waste service, water service and wastewater service to a greater degree than Alternative 3 as the proposed project is significantly larger in scale. Therefore, overall impacts to public services resulting from implementation of Alternative 3 would be better than under the proposed project.

Hazards and Hazardous Materials: Neither Alternative 3, which includes just Phase I of the proposed project, nor the proposed project would be expected to require the transport, use, or disposal of any hazardous materials. In addition, the project site is not located near any of the major routes for hazardous material transport through Placer County and there are no recorded hazardous materials sites on or within one mile of the project site. Therefore, impacts associated with hazards and hazardous materials would be similar for both Alternative 3 and the proposed project.

Climate Change: The proposed project has the potential to result in an increase in the emission of greenhouse gas emissions (GHGs) from construction activities, generation of vehicle traffic, energy use, and the use of gasoline-powered landscaping equipment. Alternative 3 would also result in construction activities, generation of vehicle traffic, energy use, and the use of gasoline-powered landscaping equipment. However, Alternative 3 would be a reduced scale project and climate change impacts resulting from Alternative 3 would be better than under the proposed project.

COMPARATIVE EVALUATION OF THE PROJECT AND ALTERNATIVES TO SATISFY PROPOSED PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the proposed project's objectives.

1) To develop Amazing Facts worship facility and offices to accommodate the multi-faceted ministry that supports their local and worldwide mission: Neither Alternative 1, the No Project Alternative, nor Alternative 2, the Development Under Existing Zoning Alternative would satisfy this objective. Alternative 3, the Reduced Scale Alternative would achieve this objective in a comparable manner, though amendments to the County General Plan and the Granite Bay Community Plan would not be required.

2) Develop a church facility to serve the surrounding community: Neither Alternative 1, the No Project Alternative, nor Alternative 2, the Development Under Existing Zoning Alternative would satisfy this objective. Alternative 3 would be the only remaining alternative to satisfy this objective.

3) Provide a consistent style of architecture to ensure that development is compatible and complementary with the existing visual character in the region: Alternative 3, the Reduced Scale Alternative would satisfy this objective. However Alternative 1 would leave the site undeveloped and therefore not result in any changes in the visual character of the region. Alternative 2 would alter the visual character by allowing for residential uses on the site but would satisfy this objective as it would allow for development that would be compatible with adjacent residential uses.

4) Create an efficient circulation pattern for vehicles, pedestrians, and bicyclists: Alternative 3, the Reduced Scale Alternative would satisfy this objective. However Alternative 1 would leave the site undeveloped and therefore not result in any circulation pattern on the site. Alternative 2 would require site access by allowing for one residential unit on the site but would not satisfy this objective as it would not provide for pedestrians or bicyclists.

5) Provide adequate infrastructure and public services to support the proposed development: Alternative 3, the Reduced Scale Alternative and Alternative 2, the Development Under Existing Zoning Alternative would satisfy this objective as both would require the provision of adequate public services to the project site. However Alternative 1 would leave the site undeveloped and therefore not result in the provision of any public services on the site.

6) Identify and incorporate natural resources into the proposed development area as feasible: All three Alternatives would satisfy this objective. Alternative 1 would leave the site undeveloped and would not impact the existing natural resources. Alternative 2 would allow for only a rural residential home on the site, which would not significantly impact the existing natural resources on the majority of the site. Alternative 3 would incorporate similar natural resource features as the proposed project.

7) Provide for the orderly and systematic development in a method consistent with the Placer County Zoning Ordinance: All three Alternatives would satisfy this objective as all three alternatives would be consistent with County General Plan and the Granite Bay Community Plan.

COMPARATIVE ENVIRONMENTAL SUPERIORITY

To determine the environmentally superior alternative, all alternatives were evaluated with respect to their ability to avoid or substantially lessen significant environmental effects of the proposed project. Both significant environmental effects that would be caused by each alternative

and significant environmental effects that would be caused by the proposed project were considered. CEQA Guidelines Section 15126.6(e)(2) indicates that an environmentally superior alternative must be identified in an EIR. State CEQA Guidelines Section 15126(d)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives.

Based on the summary of information presented in **Table 17-1**, the environmentally superior alternative to the proposed project is Alternative 1 – The No Project Alternative. Alternative 1 generally has lesser adverse impacts on the environment than the proposed project. As stated above, if the environmentally superior alternative is the No Project Alternative, the EIR must also identify an environmentally superior alternative from among the other alternatives. After the No Project Alternative (Alternative 1), Alternative 2 would be the environmentally superior alternative.

TABLE 17-1
COMPARISON OF PROJECT WITH ALTERNATIVE PLANS

Environmental Topic	Alternative 1 No Project	Alternative 2 Development Under Existing Zoning	Alternative 3 Reduced Scale Church
Land Use and Agriculture	B	B	S
Population and Housing	S	S	S
Biological Resources	B	B	B
Cultural Resources	B	B	B
Visual Resources	B	B	S
Traffic and Circulation	B	B	B
Air Quality	B	B	B
Noise	B	B	B
Geology and Soils	B	B	B
Hydrology and Water Quality	B	B	B
Public Services	B	B	B
Hazardous Materials and Hazards	S	S	S
Climate Change	B	B	B

18.0
CUMULATIVE, GROWTH- INDUCING, AND IRREVERSIBLE IMPACTS

18.0 CUMULATIVE, GROWTH-INDUCING, AND IRREVERSIBLE IMPACTS

CUMULATIVE IMPACTS

Section 15130(a) of the CEQA Guidelines requires a discussion of the cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." Cumulatively considerable, as defined in Section 15065(c), "means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects."

CEQA Guidelines Section 15355 defines cumulative impact as "an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts." The Guidelines further state that "an EIR should not discuss impacts which do not result in part from the evaluated project."

CUMULATIVE IMPACT APPROACH

The cumulative setting for this proposed project includes all past, present and probable future development as identified in the Placer County General Plan Update EIR (Placer County, 1994), and the Granite Bay Community Plan EIR (Placer County, 2004). In addition, Table 18-1 below provides the status of large-scale development projects in the county, including other incorporated cities within the county. This list of projects was utilized in the development and analysis of the cumulative settings for the project.

TABLE 18-1
PROPOSED AND APPROVED PROJECTS IN THE VICINITY OF THE PROPOSED PROJECT

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
America's Tire Company	Retail		6,800	HWY 49 & WILLOW CREEK, AUBURN	Planning Commission Hearing approved 4/23/09; Notice of Determination filed 4/24/09; CEQA process complete
Atwood 80 Subdivision	Residential	61		NORTHSIDE OF ATWOOD ROAD, .5 MILES WEST OF THE DEWITT CENTER, AUBURN	Additional information required before 1st Administrative Final EIR can be prepared
Auburn Creekside Center	Commercial Retail		85,000	ROCK CREEK ROAD AND HIGHWAY 49, AUBURN AREA	Additional information required before 1st ADEIR can be prepared

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Bohemia Retail Project	Retail		155,000	WEST SIDE OF CANAL STREET, NORTH OF LUTHER ROAD AND EAST OF WISE ROAD	1st Administrative Draft EIR due from consultant 4/8/09
Celebration Community Fellowship	Church		17,900	CORNER OF DRY CREEK RD AND NEILS RD IN THE NORTH AUBURN AREA	Mitigated Negative Declaration public review ended 8/25/08; Zoning Administrator hearing pending
Franz MLD	Residential	3		CHRISTIAN VALLEY, JUST EAST OF WILLIAM DRIVE, AUBURN	County comments sent 4/21/09; Applicant 3rd submittal due 5/21/09
Hidden Creek Subdivision	Residential	18		ATWOOD RD AT WEST END OF JAIL, AUBURN	Planning Commission hearing approved 4/9/09; Notice of Determination filed 4/9/09; CEQA process complete
Lone Wolf Cycle Shop	Retail		2,700	50 FLOOD ROAD, AUBURN	Zoning Administrator Hearing approved 4/16/09; Notice of Determination filed 4/21/09; CEQA process complete
Target Expansion	Retail		42,566	NE CORNER OF BELL AND HWY 49	EIR required letter sent on 1/25/08; Applicant to select EIR consultant
Timberline at Auburn	Residential/Commercial	860	33,500	NORTH OF BELL ROAD AND RICHARDSON DRIVE	Additional informatin required before 1st ADEIR can be prepared
6731 Tahoe Timeshare	Residential	10		NORTHWEST CORNER OF NORTH LAKE BLVD & ANDERSON ROAD, TAHOE VISTA	County comments sent 4/2/09; Applicant 2nd submittal due 11/2/09
Belcara (Monarch Ridge Vineyards)	Residential	39		18399 FORESTHILL RD, FORESTHILL	Application deemed complete 12/16/08; Initial Study being prepared

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Bunch Creek Rezone	Rezone		612.77 Acres	YANKEE JIM RD, ONE MILE EAST OF CANYON WAY	Mitigated Negative Declaration public review ended 2/7/08; Additional information required before hearing
Caldwell Rezoning Project	Rezone		6.72 Acres	CORNER OF DEER PARK DR & ALPINE MEADOWS RD, SOUTHWEST CORNER	Application deemed complete on 2/19/09; Initial Study being prepared
Chinquapin Lighting Replacement	Lighting Replacement		61.16 acres	3600 NORTH LAKE BLVD, TAHOE CITY	Applicant 2nd submittal received 5/4/09; County comments due 5/9/09
Denny's Trailer Park	Lot Reconfiguration		.49 acres	8679 TROUT AVENUE, KINGS BEACH	County comments sent 4/2/09; Applicant 2nd submittal due 5/1/09
Forest Hill Estates	Residential	8		FORESTHILL ROAD	County comments sent 3/4/09; Applicant resubmittal due 4/2/09
Gondola- North Homesite Project	Residential	25		SUGAR BOWL SKI RESORT - VILLAGE, DONNER PASS ROAD, 3 1/2 MILES SE OF I-80	Additional information required before Initial Study Checklist can be prepared
Homewood Mountain Resort Master Plan	Master Plan		58.14 acres	5145 WEST LAKE BLVD, HOMEWOOD	Additional information required before 1st Administrative Draft EIR can be prepared
Jager Parcel Split	Minor Land Division		3.86 acres	33100 & 33110 MAIN STREET, DUTCH FLAT	County comments sent 4/23/09; Applicant 3rd submittal due 5/22/09
Kings Beach Gas Station	Commercial		2,640	8755 NORTH LAKE BLVD, KINGS BEACH	County comments sent 12/31/08; Applicant 2nd submittal due 6/30/09

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Kings Beach Housing Now-Site #1- Deer St	Residential	.64 acres		DEER STREET BETWEEN GOLDEN AND RAINBOW	Applicant 4th submittal received 4/17/09; County comments due 5/4/09
Kings Beach Housing Now-Site #2	Residential	.32 acres		TROUT STREET, KINGS BEACH	Applicant 4th submittal received 4/17/09; County comments due 5/4/09
Kings Beach Housing Now-Site #3- Fox St	Residential	.43 acres		NEAR INTERSECTION WITH BROOK STREET, KINGS BEACH	Applicant 4th submittal received 4/17/09; County comments due 5/4/09
Kings Beach Housing Now-Site #4-Chipmunk	Residential	3 acres		NEAR INTERSECTION WITH HWY 28, KINGS BEACH	Applicant 4th submittal received 4/17/09; County comments due 5/4/09
Kings Beach Town Center	Commercial/Residential		3,500	BETWEEN COON & FOX STREETS ON NORTH SIDE OF HIGHWAY 28	EIR is required; EIR consultant to be selected
Moses- Meyers Minor Land Dviision	Land Division	2		END OF PINE CONE, OFF MEADOW VISTA	County comments sent 4/28/09; Applicant 2nd submittal due 5/28/09
North Tahoe Fire District Safety Center	Public Services		20,262	221 FAIRWAY DRIVE, TAHOE CITY	County comments sent 4/2/09; Applicant 3rd submittal due 11/2/09
Northstar Overall Mountain Master Plan	Recreational		13854 acres	SIX MILES SOUTHEAST OF TRUCKEE OFF OF NORTHSTAR DRIVE VIA STATE ROUTE 267, IN PLACER COUNTY	EIR contract being routed for signatures
Olson Construction HQ Facility	Industrial		3,100	MID-BLOCK BETWEEN DEER & BEAR, KINGS BEACH	Mitigated Negative Declaration public review ends 1/23/09; Project entitlements due
Rippey Commercial Mixed Use Building	Mixed Use		6,515	140 N LAKE BLVD, TAHOE CITY	Applicant 6th submittal due 3/13/09; Unreasonable Delay letter sent 3/24/09; Project withdrawn 4/14/09

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Sena @ Squaw Valley	Residential	242		OFF SQUAW VALLEY RD	EIR contract routed for signature on 5/1/08
Sugar Pine Ridge	Residential	46		PLACER HILLS ROAD, MEADOW VISTA	EIR required letter sent 3/18/08; EIR consultant to be selected
Vista Village Workforce Housing Project	Residential	155		IDLEWOOD ROAD, TAHOE VISTA	Draft EIR released 4/1/07; Project to be revised and Draft EIR to be recirculated
8640 Auburn Folsom Commercial Building	Commercial		9,777	8640 AUBURN FOLSOM ROAD SOUTH OF DOUGLAS BLVD, GRANITE BAY	County comments sent 3/26/09; Applicant 2nd submittal due 10/26/09
Brennan's Point	Residential	14		BRENNAN ROAD NORTH OF BALMORAL DRIVE, HORSESHOE BAR AREA	County comments sent 11/17/08; Applicant to submit workplan from DTSC when available
Enclave at Granite Bay Senior Housing	Residential	29		NORTH SIDE OF ELMHURST DRIVE, INTERSECTION OF SWAN LAKE DRIVE, GRANITE BAY	Mitigated Negative Declaration public review ends 5/29/09; Project entitlements due
English Colony Estates	Residential	23		NORTHSIDE OF ENGLISH COLONY WAY AT DEL MAR	Additional information required from the applicant before 1st ADEIR can be prepared
Legiti 4-Lot Parcel Map	Residential	4		10125 TERRA DEL LAGO PLACE, NEWCASTLE	County comments sent 9/15/08; Applicant 2nd submittal due 5/8/09
Lifehouse Church	Church		9,225	3131 DEL MAR AVE, LOOMIS	EIR required letter sent 8/7/08; EIR consultant to be selected

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Morgan's Orchard at Secret Ravine	Residential	68		SW CORNER OF I-80 & PENRYN PARKWAY	County comments on Screencheck Draft EIR sent to consultant 6/24/08; Draft EIR being prepared
Orchard at Penryn	Residential	150		PENRYN PARKWAY IN PENRYN	Additional information required before the Notice of Preparation can be prepared
Rancho del Oro Subdivision	Residential	90		OLIVE RANCH ROAD OPPISITE ROLLINWOOD SUBD, 1/4 MI EAST OF CAVITT-STALLMAN RD	Additional information required before 1st Administrative Draft EIR can be prepared
St Joseph Marello Parish	Church		25,000	SOUTHWEST CORNER OF AUBURN FOLSOM & CAVITT STALLMAN ROADS, GRANITE BAY	County comments sent 4/27/09; Applicant 3rd submittal due 5/27/09
Stone Parcel Map	Land Division	2		LAIRD ROAD NORTH OF THE INTERSECTION OF CAVITT STALLMAN AND LAIRD	County comments sent 3/19/09; Applicant 2nd submittal due 10/19/09
American Vineyard Village	Residential	140		SOUTH SIDE OF VINEYARD ROAD, 600 FEET WEST OF THE INTERSECTION OF FOOTHILLS BLVD	Applicant 1st submittal received 4/21/09; County comments due 5/18/09
Bell Road Minor Land Division	Land Division	2			County comments sent 4/29/09; Applicant 2nd submittal due 5/29/09
California Motorcross Park	Recreational		130,000	ATHENS ROAD, ADJACENT TO MRF & LANDFILL	Additional information required from the Applicant before 1st ADEIR can be prepared.

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Eggink MLD	Land Division	3		9401 RAWHIDE LANE, ROSEVILLE	Parcel Review Committee hearing on 4/15/09; Notice of Determination filed 4/16/09; CEQA process complete
Fox Lane Estates	Residential	7		APPROX 850 FEET NW OF THE INTERSECTION OF FOX HILL LANE & UNCLE JOE'S LANE, NEWCASTLE	County comments sent 8/25/08; Applicant 5th submittal pending DTSC's determination
Gibson 2-Way Split	Land Division	10		MCCOURTNEY RD AT GIBSON RD, 1/4 MILE BEFORE THERMALANDS, LINCOLN.	County comments sent 12/2/08; Applicant 2nd submittal due 6/30/09
Gruber Mountain Estates	Residential	11		END OF UNCLE JOES LANE, NEWCASTLE	Mitigated Negative Declaration public review ended 1/5/09; Additional information required before Planning Commission hearing can be scheduled
Hanford Ready Mix Batch Plant	Industrial		2.5 acres	2360 ATHENS AVE, LINCOLN	County comments sent 3/25/09; Applicant 2nd submittal due 4/28/09
Hidden Falls Regional Park	Park		1,182 acres	SOUTH OF BEAR REIVER ALONG COON CREEK BETWEEN NORTH AUBURN AND CITY OF LINCOLN	2nd Administrative EIR received 4/23/09; County comments due 5/4/09
Lands of Roberts	Land Division		13.3 acres	550 PERRY RANCH RD	County comments sent 10/21/08; Applicant 2nd submittal due 5/20/09
Livingstons Concrete Batch Plant	Industrial		3,600	OPHIR ROAD AND GERALDSON ROAD, NEWCASTLE/OPHIR AREA	Final EIR public review period ended 9/26/08; Project entitlement due

Project Title	Use	Dwelling Units	Total Non-Residential Square Footage	Location	Status
Placer Vineyards #3	Specific Plan		600,000	WATT AVENUE AND BASELINE RD WITHIN THE PLACER VINEYARDS SPECIFIC PLAN	Project to be revised before Notice of Preparation can be reviewed
Riolo Vineyards	Specific Plan		525 acres	NORTH OF PFE RD BETWEEN WATT AVE TO THE WEST & WALERGA RD TO THE EAST	Final EIR public review ended 11/5/08; Planning Commission hearing recommended approval 12/18/08; Board of Supervisors hearing scheduled for 5/12/09
Toad Hill Ranch Mitigation Bank	Preserve		1,644.41 acres	NE QUADRANT OF SUNSET BLVD WEST AND BREWER ROAD.	Mitigated Negative Declaration public review ended 1/21/09; Grading Permit to be approved
Turkey Creek Estates	Rezone		590.38 acres	EAST OF TURKEY CREEK GOLF COURSE, LINCOLN	Scope of Work finalized 1/26/09; EIR contract being routed for signatures
Vodopich Split	Land Division	2[AC1]		SOUTH OF GODLEY ROAD AND MT. VERNON INTERSECTION.	County comments sent 3/16/09; Applicant 2nd submittal due 10/15/09
Dry Creek CP Transportation Element	Plan Update			Countywide	1st Administrative Draft EIR received 2/18/09; County comments sent 3/20/09
Dry Creek Greenway EIR	Open Space Plan			Countywide	Final EIR public review from 1/5/09 to 1/14/09; Board of Supervisors Hearing pending
Placer County Conservation Plan Phase 1	Conservation Plan			Countywide	Administrative Draft EIR to be prepared as directed by Board of Supervisors on 9/23/08

Significance thresholds, unless otherwise specified, are the same for cumulative impacts as Project impacts for each environmental topic area.

When considered in relation to other reasonable foreseeable projects, cumulative impacts to some resources would be significant and more severe that those caused by the proposed project alone. The proposed project would contribute to the cumulative impacts to land use, agricultural resources, biological resources, traffic, air quality and climate change, noise, visual resources, hydrology and water quality, geology, hazards, and public services, which are discussed below.

CUMULATIVE LAND USE IMPACT

The project site is located in the unincorporated community of Granite Bay in south Placer County and is adjacent to the Town of Loomis and cities of Rocklin and Roseville. Placer County and the communities it contains is the setting for cumulative land use and agricultural impacts for the proposed project. The cumulative development scenario for this area includes the proposed project as described in Section 3.0 as well as consideration of other development projects that have already been approved or are pending approval by the County or cities, as identified in Section 17.0.

Future proposed and planned development would change the intensity of land uses in the Granite Bay community and surrounding areas. Under cumulative conditions, with all other foreseeable projects that could be approved within the County, the Town of Loomis, and the cities of Rocklin and Roseville, increased development with additional housing, employment, retail, educational, and recreational opportunities would occur.

The cumulative impact analysis below is based on the standards of significance listed under Section 4.1.3 as well as a review of all applicable land use plans and site reconnaissance.

The Placer County General Plan EIR (Placer County, 1994) has concluded that the County General Plan would bring about changes to the existing land use in its unincorporated areas. Similarly the Granite Bay Community Plan (Placer County, 2005) made the assumption that land uses within the Plan Area would continue to change as the area experiences growth and development. While the proposed project, in combination with other regional growth, may contribute to an increase in urban and suburban uses, this increase would be part of the future anticipated growth under the County and surrounding cities' General Plans, and other specific/community plans. Where a proposed development is in conflict with an applicable land use plan, a plan amendment or variance would be required in order to achieve consistency and would be at the discretion of the land use planning authority. The proposed project is consistent with both the Placer County General Plan (Placer County, 1994) and the Granite Bay Community Plan (Placer County, 2005) and would require only a Minor Use Permit to be consistent with the County Zoning Ordinance. The project would also be consistent with the relevant policies of the County General Plan and Community Plan as show in Table 4.1-1 and the corresponding tables in each section of this Draft EIR.

As the cumulative setting area continues to develop it is likely that land use conflicts will occur as residential development is located adjacent to industrial and heavy commercial uses and as any urban development is located adjacent to active agriculture. However, land use conflicts are site specific and generally do not result in cumulative, community-wide impacts. All future development would be subject to the land use designations and zoning, development standards

and design guidelines adopted by the jurisdiction in which it is located. These existing regulations would minimize potential conflicts with adjacent uses by controlling building intensity, massing, height, allowable uses, noise generation, and hours of business among others. The proposed project would be consistent with the existing and planned land uses surrounding the site and no conflicts would be expected to occur.

Therefore this impact is considered to be less than cumulatively considerable. No further mitigation measures are required.

CUMULATIVE POPULATION, HOUSING AND EMPLOYMENT IMPACT

The cumulative setting for population, housing and employment includes the proposed and approved projects listed in Table 18-1, the "Existing Land Use Conditions and Planned Development" under the Granite Bay Community Plan Land Use Element, existing land use conditions, planned and proposed land uses in the communities in southern Placer County near Granite Bay (e.g., Loomis,), and the City of Rocklin. The Granite Bay Community Plan (Placer County, 2005) made the assumption that population and employment within the Plan Area would continue to grow at a moderate rate as the area experiences growth and development. The majority of the major projects proposed in the area are residential in nature, which would increase the customer base and the employment base for the proposed project.

Over time, regional growth pressures throughout the Granite Bay community as well as Placer County will result in increases in population throughout the region. While population growth in and of itself is not considered a significant impact on the environment, the related environmental effects from increases in population may be considered significant. Such effects may include increased traffic, increased noise, loss of open space and other natural resources, impacts to water quality, the expansion of infrastructure and utilities, and increased air quality impacts. While cumulative population growth is anticipated in the region as envisioned by the Placer County General Plan and Granite Bay Community Plan, the proposed project is not anticipated to have a considerable contribution to the greater population growth. As there is no housing proposed as part of the proposed project, and at full buildout the project will not directly lead to the creation of any additional housing within Granite Bay or the surrounding cumulative setting area. Neither would the project result in the extension of roadways or other infrastructure that would indirectly lead to population growth in the region. There is existing housing surrounding the project site, and the project site is bounded to the north by commercial uses. The extension of the limited infrastructure needed to serve the project site would not induce growth in the vicinity of the project.

The proposed project would, however, result in the creation of additional jobs in Granite Bay and surrounding areas, and will increase employment opportunities for existing and future residents within the cumulative setting area, which may indirectly result in population growth from future employees. As discussed under Impact 5-1, the labor force and housing market for the area is currently adequate to accommodate employee demand that would be generated by the project. The Placer County General Plan and Granite Bay Community Plan designate the project site as Rural Residential (RR) and Rural Estate (RE) with 4.6 to 20 acre minimum parcel size, respectively. Although the site and some surrounding parcels are zoned for agricultural uses, the proposed use is permitted with a Minor Use Permit. Implementation of the proposed project would not result in population increases at an intensity beyond that which was envisioned in the Placer County General Plan and Granite Bay Community Plan EIR, and would therefore, not

directly or indirectly induce population growth beyond that which was projected. Therefore, while cumulative population growth from all current and future foreseeable projects throughout the region may be considered a cumulatively significant impact, the proposed project's contribution to this impact would be less than cumulatively considerable. No further mitigation is required.

CUMULATIVE CULTURAL RESOURCES IMPACT

Placer County is known to be rich in cultural and paleontological resources. While many prehistoric and historic sites and resources have been identified, the probability is high that these resources remain undiscovered and should be taken into consideration prior to any grading, excavation, or construction at a project site. The Placer County General Plan provides policies, which are essential to protecting these and other resources from future development. The Placer County General Plan EIR concluded that the cumulative impact of development on these resources is potentially significant. It concludes that no feasible mitigation measures beyond the policies and programs included in the General Plan Policy Document are available that would reduce the possibility of occasional inadvertent exposure of historic, unique archaeological, or paleontological sites to a less than significant level.

Implementation of the proposed along with foreseeable development in the surrounding area could result in the disturbance of cultural and paleontological resources (i.e., prehistoric sites, historic sites, and isolated artifacts and features) and human remains. This contribution is considered cumulatively considerable when combined with other past, present and foreseeable development in the area. Implementation of mitigation measures MM 7-2 and MM 7-3, discussed under Impacts 7-2 and 7-3 would assist in reducing these significant impacts to known and unknown prehistoric and historic resources and human remains. Therefore, cumulative impacts related to prehistoric and historic cultural resources and human remains would be reduced to less than cumulatively considerable.

BIOLOGICAL RESOURCES IMPACT

The Project Study Area (PSA) and the surrounding area of Placer County as a whole was considered for the purpose of evaluating land use conversion issues associated with biological resources on a cumulative level. In particular, the cumulative setting condition includes planned development under the current Land Use Element of the Placer County General Plan (1994), existing land use conditions, planned and proposed land uses in communities near the PSA, as well as consideration of development patterns of communities in the rest of Placer County. These land uses and developments have the potential to adversely affect the biological resources in the region and could contribute to the loss of potential habitat within the region. In addition, the Placer County General Plan EIR identified cumulative significant impacts related to habitat conversion and habitat quality reduction. Future developments would require on- and off-site improvements to provide water, wastewater, storm drainage, solid waste disposal, and other such services at the county's or applicable city's required level of service. Anticipated development, public projects, and related improvements could contribute to the loss of potential habitat within the region.

The implementation of the proposed project would contribute incrementally to the cumulative loss of native plant communities, wildlife habitat values, special-status species and their potential habitat, and wetland resources within the western Placer County region. On a cumulative level,

the change in land uses will contribute to a loss of potential habitat for special-status species including, but not limited to, rare plants, special-status amphibians and reptiles, migratory birds, raptors, and special-status bats that currently inhabit the area or could inhabit the area in the future. In addition to potential direct impacts on biological resources from project implementation, the increased human presence would be anticipated to cause potential indirect impacts. These could disturb breeding and foraging behavior of wildlife, and would result in a significant and unavoidable cumulative impact. Another indirect impact would be stormwater runoff. Each project is required to participate in the NPDES permit program for stormwater runoff, which effectively reduces water quality impacts to below a level of significance. Planned development of the PSA would also create new sources of light and glare. While project specific measures would be undertaken to orient or shield lights to minimize illumination of adjacent lands, the combined effect of all new developments approved or planned in the area would create a significant and unavoidable cumulative impact associated with increased human presence.

The Future Conceptual Development Area within the PSA has several biologically sensitive resources that could be impacted during future implementation of the project. Jurisdictional features that provide suitable habitat for western pond turtle and several special-status plant species could be affected. The blue oak woodland within the PSA provides habitat for special-status raptors and other birds protected by the migratory bird treaty act. In addition, these trees may provide roosting habitat for special-status bat species. One elderberry shrub was also identified within the PSA that could be affected by the Future Conceptual Development Plan.

The proposed project in combination with other reasonably foreseeable projects could result in mortality and loss of habitat for special-status species, wetlands, and waters of the U.S. The vegetation communities/habitats within the proposed PSA represent only a small portion of the communities/habitats available for special-status species within the project vicinity. However, implementation of the proposed project may result in degradation of habitat through a variety of actions which, when combined with other habitat impacts occurring from development within surrounding areas, would result in significant cumulative impacts. Future development within the surrounding vicinity would have an unknown and unquantifiable impact on special-status species, biologically sensitive habitats, and potentially jurisdictional wetlands and waters of the U.S. Furthermore, increased development and disturbance created by human activities (e.g., fires, increased nighttime lighting) would result in direct mortality, habitat loss, and deterioration of habitat suitability. As the proposed project may contribute incrementally to these effects, the impact is considered cumulatively considerable.

Implementation of the mitigation measures included in Section 6.0 Biological Resources, namely MM 6-1a, MM 6-1b, MM 6-3, MM 6-4, MM 6-6, and MM 6-8 would assist in reducing the proposed project's impact to a less than cumulatively considerable level by mitigating the project's contribution to impacts to special-status species and sensitive habitats. As described in Section 3.0 (Project Description), the proposed project would largely be constructed within the annual grassland community adjacent to Sierra College Boulevard. This would not constitute substantial conversion of natural habitat conditions as the majority of the PSA, including the oak woodlands, drainages, and other wetlands, would be avoided.

Implementation of the proposed project could result in the loss of populations or essential habitat for the valley elderberry longhorn beetle. The PSA contains suitable habitat for the valley elderberry longhorn beetle, which consists of one elderberry shrub with a total of eight stems greater than one inch in diameter at ground level. There are five recorded occurrences of this

species within five miles of the PSA (CDFG 2009). Construction and operational activities proposed under Phases 1, 2, and 3 are not expected to impact habitat and/or result in the take of individuals should they be present as these activities will be conducted well over 100 feet from the elderberry shrub. However, construction and operational activities proposed within the future conceptual development areas (see Figure 6-1) may adversely impact this species should these activities take place within 100 feet of the elderberry shrub. Complete avoidance can only be assumed (USFWS 1999) when a 100-foot buffer is established and maintained around the qualifying elderberry shrub (with stems greater than one inch in diameter at ground level). It is not anticipated at this time that proposed activities within the future conceptual development area will result in the direct removal of the elderberry shrub as this shrub is located on the periphery of the development area. However, the USFWS (1999) also considers trimming and/or construction activities within 20 feet of the dripline of a qualifying elderberry shrub to result in direct loss (take) of a valley elderberry longhorn beetle. Indirect impacts may result if there is construction activity within a 100-foot radius of the qualifying elderberry shrub according to USFWS guidelines (1999). During construction of the project, habitat degradation may occur as a result of dust fall and construction noise. During operation of the facilities, there would be an increased human presence in the area, which may result in degradation of the community in which the elderberry shrub is found. These impacts would be considered a cumulatively considerable. Implementation of the mitigation measures identified below will reduce these impacts to a less than cumulatively considerable level.

MITIGATION MEASURES

MM 6-12a Should project implementation result in construction activities within a 100-foot radius of the elderberry shrub, avoidance and minimization efforts for this species shall be coordinated with the USFWS during ESA Section 7 Consultation, and will likely be in accordance with the July 9, 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle developed by the USFWS. Avoidance and minimization measures shall include the following:

During project development the size of the work area limits within 100 feet of the elderberry shrub shall be reduced to the smallest amount feasible.

Impacts from accidental disturbance during construction shall be avoided by installing protective fencing between the shrub identified for preservation and the construction area limits to prevent accidental disturbance during construction. Pursuant to the USFWS conservation guidelines (USFWS 1999), the elderberry shrub area that will not be disturbed (within the 100-foot buffer zone from the edge of project construction) shall be fenced and designated as an avoidance area during project construction. A minimum fence setback of 20 feet from the dripline of the elderberry shrub may be allowed with USFWS approval.

Water trucks shall be used to water areas of exposed dirt to control dust from the project site.

Signs shall be erected along the edge of the elderberry avoidance area noticing construction crews that the area is VELB habitat and must not be disturbed. These signs shall remain for the duration of construction.

A Worker Environmental Awareness Program (WEAP) shall be implemented to educate construction workers about the presence of VELB habitat in and near the project work area, and to instruct them on proper avoidance.

MM 6-12b While the final determination of mitigation requirements and replacement ratios for the elderberry plant removed or adversely affected by the project will occur during consultation with USFWS, it is anticipated that mitigation will be completed as follows. Although it is not anticipated that the shrub will be removed as a part of the proposed project, it may be within 20 feet of the construction activities and considered directly impacted. In accordance with the USFWS (1999) guidelines (see Table 4.9-2 below), the applicant will plant 26 elderberry seedlings (five stems at a 4:1 ratio and three stems at a 2:1 ratio) and 26x associated native plants (one native plant per elderberry seedling). In addition, any trimming of the elderberry plant may result in take of beetles. Therefore, trimming is also subject to the minimization measures as outlined in Table 6-2 below. All transplanting or trimming shall occur in accordance with procedures outlined in the 1999 USFWS guidelines, and shall be protected and monitored according to the guidelines.

TABLE 18-2
MITIGATION RATIOS FOR ELDERBERRY SHRUBS AFFECTED BY THE PROJECT

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Y/N (quantify)[1]	Elderberry Seedling Ratio[2]	Associated Native Plant Ratio[3]
Riparian	Stems > = 1″ & = < 3″	No	2:1	1:1
		Yes	4:1	2:1
Riparian	Stems > 3″ & < 5″	No	3:1	1:1
		Yes	6:1	2:1
Riparian	Stems > = 5″	No	4:1	1:1
		Yes	8:1	2:1

[1] *All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.*

[2] *Ratios in the Elderberry Seedling Ratio column correspond to the number of cuttings or seedlings to be planted per elderberry stem (one inch or greater in diameter at ground level) affected by the project.*

[3] *Ratios in the Associated Native Plant Ratio column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.*

CUMULATIVE AIR QUALITY IMPACT

The setting for this cumulative analysis consists of the Sacramento Valley Air Basin (Basin) and associated growth and development anticipated in the Basin. This includes consideration of attainment efforts for the Basin under development that could potentially result from all existing, proposed, planned, and reasonably foreseeable projects and growth within the region, as development in the region identified in Section 6.5.2 would change the intensity of land uses in

the region. The Placer County General Plan Update EIR identified significant cumulative impacts associated with development, and particularly identified substantial increases in emissions of nitrogen oxide (NOX) and particulate matter (PM10) that would result in violations of ambient air quality standards.

Earthmoving activities related to proposed project construction could result in substantial fugitive dust (PM10) emissions and may generate localized concentrations that exceed the federal and state standards identified in Section 10.2 of this Draft EIR. Construction equipment operation and employee vehicle trips would generate exhaust emissions, including reactive organic gases (ROG), NOX, carbon monoxide (CO), PM10, and sulfur dioxide (SO2). Therefore, development and operation of the proposed project, along with potential development of the surrounding region, would exacerbate existing regional problems with ozone and particulate matter. Even with feasible mitigation measures, the proposed project's contribution to these conditions is considered cumulatively considerable impact.

Placer County is classified as a severe nonattainment area for the federal ozone standards. In order to improve air quality and attain health-based standards, reductions in emissions are necessary within the nonattainment area. The growth in vehicle usage and business activity within the nonattainment area would contribute to cumulative regional air quality impacts. Additionally, implementation of the proposed project may either delay attainment of the standards or require the adoption of additional controls on existing and future air pollution sources to offset project-related emission increases. The Placer County General Plan includes policies aimed at reducing ozone precursor and particulate emissions associated with cumulative development in Placer County. These policies are of particular importance since the portion of Placer County surrounding the proposed project site is currently designated as being in nonattainment for the state and federal 1-hour average ozone standard and the state PM10 standard. The proposed project would result in an increase in regional criteria pollutant emissions. The increases, as compared to the federal and state standards, are identified in Section 7.0 of this Draft EIR. Though mitigation measures included in this Draft EIR would reduce project-related emissions, these mitigation measures would not reduce emissions below the significance thresholds. Even with feasible mitigation measures, the proposed project's incremental contribution to regional criteria pollutant emissions is considered cumulatively considerable and thus a significant and unavoidable impact. No feasible mitigation is available to completely mitigate this impact.

CUMULATIVE VISUAL RESOURCES IMPACT

The cumulative setting for visual resources would include the entire project site and all surrounding areas which have clear views of the project site as well as the Sierra College Boulevard corridor, generally between Scarborough Drive and Ridge Park Drive.

Implementation of the proposed project, in combination with other planned and recently approved projects in the area, would result in a cumulative conversion of undeveloped, naturally vegetated land to urban uses and cumulative light and glare. This impact is cumulatively considerable.

Continued development near the project site and along Sierra College Boulevard in accordance with existing land use designations and zoning would change the overall visual character of the area from rural and undeveloped to suburban and sparsely developed with largely residential uses. Such development could also result in cumulative losses of unblocked scenic vistas of the valley

area south of Sierra College Boulevard. As described under Impacts 8-2 and 8-3, the proposed project would contribute significantly to this loss of scenic views by developing several large structures that could block views beyond the project site. Although the project would not individually result in a significant degradation to the visual character of the project site, it would contribute to this cumulative impact. As described above, development of the project site would introduce new light and glare sources to the area. The project's proposed lighting and use of some of the building materials may reduce nighttime lighting sources and glare. However, the planned, proposed, and conceptual growth in the area would convert other undeveloped land into residential, recreation, and commercial uses contributing to an increase in nighttime lighting and glare.

Some of the potential cumulative impacts on nighttime lighting and glare would be reduced by implementation of mitigation measures MM 8.5a through MM 8.5c, as well as existing County ordinances and regulations. However, cumulative development would introduce substantial light and glare into the area and the project's contribution to this impact would remain cumulatively considerable significant and unavoidable.

CUMULATIVE NOISE IMPACT

The geographic extent of the cumulative setting for noise includes neighboring parcels located in the vicinity of the proposed project site, as well as roadways affected by the proposed development, which includes Sierra College Blvd. Cumulative development conditions for which the proposed project would contribute would primarily result from increased vehicular traffic on area roadways.

Implementation of the proposed project, in combination with existing, approved, proposed, and reasonably foreseeable development, would not result in a substantial contribution to cumulative noise levels. The project's contribution to future cumulative noise levels would be primarily associated with potential increases in vehicle traffic noise along area roadways. The area roadway primarily affected by the proposed project is Sierra College Blvd. Predicted future cumulative traffic noise levels with implementation of the proposed project are summarized in Table 8-14. As depicted, the predicted exterior traffic noise level at the proposed outdoor plaza area associated with implementation of the proposed project would comply with the County's 60 dB Ldn exterior noise level standard for church uses. Additionally, interior noise levels are also predicted to comply with the County's 40 dB Leq interior noise levels standard applied to interior spaces of church uses. Therefore, the project's contribution to noise increases in the cumulative setting area is considered less than cumulatively considerable. No further mitigation is required.

CUMULATIVE TRAFFIC AND CIRCULATION IMPACT

The impacts of developing the proposed project were considered within the context of future traffic conditions within the study area. Two cumulative scenarios were considered at various intersections based on the guidelines followed by each agency. The "Short Term Future" scenario assumes completion of approved and pending projects identified by the City of Rocklin. This scenario was employed to investigate impacts to intersections in the Rocklin city limits but was not requested by the City of Roseville. Two different scenarios were investigated to address "Long Term Future" cumulative conditions. In Roseville, the cumulative analysis addressed Year 2020 conditions as identified under the Roseville CIP traffic model. This scenario assumes implementation of circulation system improvements already included in that city's CIP. For

locations in Rocklin, the cumulative analysis accounts for future regional traffic growth and development as projected by the Year 2025 City of Rocklin regional travel demand forecasting model (KD Anderson & Associates, 2008).

SHORT TERM FUTURE SCENARIO SETTING

Background Traffic Volumes

The City of Rocklin maintains a list of approved projects and notes their development status. This information was used to create the short term future traffic conditions presented in the Draft Rocklin Crossing Traffic Study1, the most recent traffic study completed in this area at the time the Traffic Impact Analysis for the proposed project was prepared. Because that study includes a Saturday analysis scenario, it was possible to identify the traffic growth increment identified in that report under "Short Term plus Rocklin Crossing" condition and apply it for this analysis. However, two additional local projects were added based on input from City of Rocklin staff. These are the Sierra College Center retail/office project at the Sierra College Boulevard/Rocklin Road intersections and the Vista Oaks – Highlands Parcel A residential projects.

Other development outside of Rocklin may also occur that will affect short term traffic conditions. The Stoneridge development area of Roseville abuts the Rocklin City limits and could directly add traffic to Scarborough Drive and to the balance of the study area street system. The current City of Roseville development report suggests that 449 single family and 345 multifamily approved dwelling units remain to be completed in that area. The amount of Saturday peak hour traffic associated with this development level was identified, and 15 percent of that total was assumed to use Sierra College Blvd north through the study area.

Together, the Saturday traffic increment identified in the Rocklin Crossing traffic study and the trips distributed from other identified projects were superimposed onto current volumes to create the background "Existing plus Approved Projects (EPAP)" condition shown in Figure 9-5.

Background Improvements

Various circulation system improvements can be expected to be completed under the short term horizon. In the near term, Sierra College Boulevard is to be widened to provide two through lanes in each direction from the El Don Drive intersection north to Interstate 80. At the Rocklin Rd/Sierra College Blvd intersection identified development will be accompanied by intersection improvements that include dual left turn lanes on the northbound and westbound approaches. However, under the base condition, no improvements have been assumed along Sierra College Blvd in the area of the proposed project.

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[1] *Traffic Impact Analysis prepared by LSA Associates, Inc., September 2006*

YEAR 2020 CUMULATIVE TRAFFIC CONDITIONS (CITY OF ROSEVILLE)

Traffic Volume Forecasts

The City of Roseville evaluates long term traffic impacts based on information developed from the traffic model maintained for the City's 2020 CIP. The City maintains traffic volume forecasts on a weekday p.m. peak hour basis and is able to identify intersection specific improvements assumed to be in place by the year 2020.

The approach taken to evaluate Saturday conditions in the year 2020 makes use of the City's weekday p.m. peak hour forecasts. Baseline year 2008 and year 2020 weekday peak hour traffic volumes were obtained for the three study area intersections located in Roseville. The volume of traffic on each intersection approach was identified, and the resulting 2008-2020 growth factor on each approach was identified. These growth factors were assumed to be applicable for Saturday conditions, and these growth factors were applied to existing peak hour intersection turning movement traffic volumes to create year 2020 intersection turning movements.

The development of future year intersection turning movement traffic volumes requires that the turning movements at each intersection "balance." To achieve the balance, inbound traffic volumes must equal the outbound traffic volumes, and the volumes must be distributed among the various left-turn, through, and right-turn movements at each intersection. The "balancing" of future year intersection turning movement traffic volumes was conducted using methods described in the Transportation Research Board's (TRB's) National Cooperative Highway Research Program (NCHRP) Report 255, Highway Traffic Data for Urbanized Area Project Planning and Design. The NCHRP 255 method applies the desired peak hour directional volumes to the intersection turning movement volumes, using an iterative process to balance and adjust the resulting forecasts to match the desired peak hour directional volumes. Figure 9-6 presents background long term (Year 2020) cumulative background traffic volumes at study intersections within the City of Roseville.

Future Improvements

The Roseville CIP identifies improvements to intersections on Sierra College Blvd within the City of Roseville. At the Douglas Blvd/Sierra College Blvd intersection it is assumed that dual left turn lanes will be developed on both Douglas Blvd approaches and that a separate southbound right turn lane will be installed.

YEAR 2025 CUMULATIVE TRAFFIC CONDITIONS

Traffic Volume Forecasts

The City of Rocklin maintains a long term travel demand forecasting model. That model was the basis for long term cumulative Saturday peak hour traffic volume forecasts contained in the Draft Rocklin Crossing traffic study. Because the balance of the land in Rocklin south of Rocklin Road is built out, it is possible to use the growth increment derived from the Rocklin Crossing forecasts to estimate traffic volumes at study area intersections using the NCHRP 255 techniques described above. Figure 9-7 presents background long term cumulative (Year 2025) traffic volumes at study intersections within the City of Rocklin.

Future Improvements

The long term plan for Sierra College Boulevard is a six lane controlled access arterial in the vicinity of the project site, and several major Sierra College Boulevard improvement projects are being pursued by the Regional Transportation Planning Agency of Placer County (PCTPA). The South Placer Regional Transportation Authority (SPRTA) is a Joint Powers Authority formed by Placer County and the Cities of Lincoln, Rocklin, Roseville to impose and administer regional traffic impact fees known as the Regional Transportation and Air Quality Mitigation Fee. Of this regional fee, $39.6 million is slated to fund the widening of Sierra College Blvd from SR 193 to the Sacramento/Placer County line. Additional work is also planned at the Sierra College Boulevard/Rocklin Road intersection, as noted in Figure 9-7.

Traffic volumes under "EPAP plus Project" conditions are shown in Figure 9-8. Levels of Service at study intersections with and without the proposed project are shown in Table 9-10. As under the "Existing plus Project" evaluation, EPAP conditions are evaluated for both Phase 1 and Phase 1+2 site development levels.

TABLE 18-3
EXISTING PLUS APPROVED PROJECTS PLUS PROPOSED PROJECT SATURDAY PEAK HOUR INTERSECTION LEVELS OF SERVICE

Intersection	Control	Existing plus Approved Projects		Existing Plus Approved Projects Plus Proposed Project					
				Phase 1				Phase 1+2	
				1 Access		2 Access		2 Access	
		LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity	LOS	Volume/ Capacity
Sierra College Blvd/ Rocklin Rd	Signal	A	0.51	A	0.57	A	0.57	B	0.61
Sierra College Blvd/ El Don Dr	Signal	A	0.38	A	0.45	A	0.45	A	0.50
Sierra College Blvd/ Southside Ranch Road	Signal	B	0.63	C	0.79	C	0.79	**D**	**0.87**
	Mitigated[1]							A	0.45
Sierra College Blvd/ Access	NB Stop	-	-	-	-	**F**	**68.4 sec**	**F**	**271.2 sec**
	Mitigated[1]					C	17.6 sec	**D**	**27.7 sec**
Sierra College Blvd/ Nightwatch Drive	Signal	B	0.61	**E**	**0.94**	**D**	**0.89**	**F**	**1.04**
	Mitigated[1]			B	0.64	A	0.59	C	0.72
Sierra College Blvd/ Scarborough Dr	Signal	A	0.33	A	0.39	A	0.36	A	0.43

Notes: 1 – add second through lane on Sierra College Boulevard

Source: KD Anderson & Associates, 2008

As shown, the addition of traffic associated with Phase 2 of the proposed project would result in LOS D conditions at the Sierra College Blvd/Southside Ranch Dr intersection. To deliver LOS C, it would be necessary to add a second northbound through lane at this intersection. While this action is generally consistent with long term plans for improving Sierra College Blvd, it would likely require acquisition of right of way along the east side of Sierra College Blvd from properties within the Town of Loomis. Because these properties are designated as rural residential, they are unlikely to develop further and it is unlikely that fronting developers would install frontage improvements.

As shown, with the addition of background traffic growth, with only one northbound through lane the Sierra College Blvd/Nightwatch Dr intersection would operate at LOS E with Phase 1 of the proposed project. As discussed previously in this section, adding a second through lane on Sierra College Blvd would improve the LOS at this location, and LOS A conditions could be maintained under "EPAP plus Phase 1" conditions, while LOS C is forecast with Phases 1+2.

Similarly, the LOS at the Sierra College Blvd Access would be poor if there is only one northbound (eastbound) lane available on Sierra College Boulevard. LOS F conditions are projected with the project. However, the addition of a second through lane would yield LOS C conditions under Phase 1 and LOS D conditions at Phase 1+2.

The "mitigated" LOS D identified at the site access is sensitive to the number of vehicles that choose this route in lieu of the Nightwatch Drive access. For example, if 30 additional motorists elected to turn right at Nightwatch Drive instead of at the Sierra College Blvd access, the resulting "EPAP plus Phase 1+2" condition would be LOS C at the driveway with the identified mitigation (i.e., second through lane). Based on the availability of this alternative access, the forecast LOS D is not viewed as a significant impact.

Implementation of the proposed project under short term future scenario conditions would result in unacceptable levels of service at multiple study area intersections. This impact is cumulatively considerable. Since the required improvements to the Sierra College Blvd/Southside Ranch Drive intersection would only be implementable through acquisition of right-of-way by another jurisdiction (the Town of Loomis) and is outside of the control of the project proponent and the lead agency, Placer County, it is assumed that the mitigation measures are unlikely to be implemented.

MITIGATION MEASURES

MM 9.6 Placer County shall consult with the Town of Loomis regarding the acquisition of right-of-way in the area of the Sierra College Blvd/Southside Ranch Drive intersection. If the Town has established a fair share assessment for acquisition of right-of-way, the project proponent shall contribute their fair share. Consultation and payment of the project proponent's fair share, if applicable, shall occur prior to issuance of building permits.

Implementation of MM 9.6 could lessen this impact to a less-than-significant level; however, because the acquisition of right-of-way is not within the control of Placer County it cannot be guaranteed that the necessary acquisitions and improvements would be implemented timely with the development of the proposed project and the LOS at the Sierra College/Southside Ranch

Drive intersection could deteriorate to an unacceptable LOS. No further feasible mitigation is available; therefore, this impact is considered significant and unavoidable.

Implementation of the proposed project under long term future (2020) scenario conditions would not result in unacceptable levels of service at any of the study area intersections located within the City of Roseville.

The impact of developing the proposed project on study area intersections located within the City of Roseville was evaluated under Year 2020 conditions by superimposing Phase 1+2 traffic onto the baseline Saturday peak hour condition. Figure 9-6 presents Year 2020 volumes with and without the proposed project. Resulting Levels of Service are shown in Table 9-11 below.

TABLE 18-4
CUMULATIVE YEAR 2020 (ROSEVILLE) SATURDAY INTERSECTION LEVELS OF SERVICE

Intersection	Control	No Project		Year 2020 Plus Project	
		LOS	Volume/ Capacity	LOS	Volume/ Capacity
Sierra College Blvd/Secret Ravine Pkwy	Signal	B	14.8 sec	B	13.7 sec
Sierra College Blvd/Olympus Dr	Signal	B	17.3 sec	B	17.4 sec
Sierra College Blvd/Douglas Blvd	Signal	D	42.9 sec	D	49.6 sec

Source: KD Anderson & Associates, 2008

As indicated, the addition of project traffic does not result in any location operating at a LOS that exceeds the City's minimum standards. This impact is less than cumulatively considerable and no further mitigation is required.

Implementation of the proposed project under long term future (Year 2025) scenario conditions would not result in unacceptable levels of service at any study area intersections within the City of Rocklin.

Figure 9-7 superimposes project traffic (Phases 1+2) onto background year 2025 traffic volumes. Table 9-12 below summarizes Saturday Levels of Service under Year 2025 conditions.

TABLE 18-5
CUMULATIVE YEAR 2025 SATURDAY INTERSECTION LEVELS OF SERVICE

Intersection	Control	No Project		Year 2025 Plus Proposed Project	
		LOS	Volume/ Capacity	LOS	Volume/ Capacity
Sierra College Blvd/Rocklin Rd	Signal	C	0.72	C	0.78
Sierra College Blvd/El Don Dr	Signal	A	0.49	B	0.61
Sierra College Blvd/Southside Ranch Rd	Signal	A	0.44	A	0.56
Sierra College Blvd/Access	NB Stop			C	17.7 sec
Sierra College Blvd/Nightwatch Dr	Signal	A	0.36	C	0.75
Sierra College Blvd/Scarborough Dr	Signal	A	0.47	A	0.56

Source: KD Anderson & Associates, 2007

As shown, with the completion of planned improvements, all study intersections are projected to operate at LOS C or better, with and without the proposed project. Thus, development of the proposed project would not result in the need for additional improvements beyond those already being planned. This impact is less than cumulatively considerable and no further mitigation is required.

Cumulative Geology, Soils, and Seismicity Impact

Geotechnical impacts tend to be site-specific rather than cumulative in nature. For example, seismic events may damage or destroy a building on the project site, but the construction of a development project on one site will not cause any adjacent parcels to become more susceptible to seismic events, nor can a project affect local geology in such a manner as to increase risks regionally. Impacts regarding surficial deposits, namely erosion and sediment deposition, however, can be cumulative in nature within a watershed. See Section 13.0 Hydrology and Water Quality, of this Draft EIR for a discussion of cumulative water quality impacts from soil erosion.

Implementation of the proposed project, in combination with existing, approved, proposed and reasonably foreseeable development, would not contribute to cumulative geologic and soils impacts. Impacts associated with geology, geologic faults, slope stability, avalanche, and soil erosion are based on existing site-specific conditions that are situated within the subsurface materials that underlay the project sites. These inherent conditions are an end result of natural historical events that occur through vast periods of geologic time and are not based on cumulative development. With proper evaluation of these conditions, compliance with existing codes and standards, and implementation of mitigation measures included in this section, the proposed project's contribution to significant impacts related to the area's geology would be less than cumulatively considerable and no further mitigation is required.

Cumulative Hydrology and Water Quality Impact

The cumulative hydrology and water quality analysis involves two separate settings – one for surface and groundwater quality, and one for drainage and flooding. As previously described, the

project site is located within the Dry Creek watershed and overlies the North American Groundwater Subbasin. The Dry Creek watershed generally includes the communities of Granite Bay and Loomis and the eastern portions of the cities of Rocklin and Roseville as well as portions of northern Sacramento County. The surface area of the North American Groundwater Subbasin is approximately 548 square miles and is generally bound by the Bear River to the north, the Feather River to the west, and the Sacramento River to the south. The eastern boundary is a north-south line extending from the Bear River south to Folsom Lake, which passes about two miles east of the City of Lincoln. The setting for the analysis of cumulative water quality impacts encompasses both this watershed and groundwater subbasin.

Storm drainage is an issue that is linked primarily to development in a specific area. The proposed drainage system for the project site would not be connected to any other public or private systems. Therefore, for this EIR, the cumulative setting for storm drainage is limited to the project site and downstream properties that could be affected by the proposed project. The cumulative impact analysis is based on other approved and planned development projects in the cumulative setting areas as described in Section 17.0, and on state and regional studies on Cumulative Water Quality Impacts.

Implementation of the proposed project, in combination with other development activities within the Dry Creek watershed and North American Groundwater Subbasin, would contribute to a cumulative degradation of water quality from construction activities and increased urban runoff. Construction and operation of the proposed project would result in increased urban runoff and the introduction of constituents and pollutants to runoff. This would add to other approved and planned development activities and the ongoing urban runoff processes within the cumulative setting area, as describe in Section 4.0. This could result in cumulative water quality impacts, to both surface and groundwater supplies.

As described under Impacts 6-1 and 6-2, the proposed project, as well as all projects in the area that would disturb one acre or more, would be subject to the state's NPDES program which requires the implementation of BMPs to protect water quality during construction and dewatering. Projects within Placer County would also be subject to the grading and erosion control measures contained in the County's Municipal Code (§15.48.630).

Furthermore, operation of the proposed project, as well as all other development within Placer County, would be subject to the County's Stormwater Management Plan (SWMP). The SWMP helps to reduce pollutants in local waterways by reducing pollutants in stormwater runoff through public education and involvement, illicit discharge detection and elimination, construction and post-construction stormwater management in new development and redevelopment, and pollution prevention for municipal operations. The proposed drainage system for the project would include the use of both temporary and permanent BMPs on the site. These BMPs would remove sediment and pollutants from site runoff and minimize impacts to downstream waterways and the underlying aquifer.

Continued enforcement of state and local regulations related to stormwater management and water quality protection would minimize impacts on surface and groundwater resources from new development. Additionally, the project's proposed drainage system would include the use of temporary and permanent BMPs to minimize the project's individual impacts to water quality. Therefore, this impact is considered to be less than cumulatively considerable.

Implementation of the proposed project, in combination with other approved and planned development in the area, would increase impervious surfaces and alter drainage conditions and rates, which could contribute to cumulative flood conditions along Dry Creek, its tributaries, and/or other local waterways.

As discussed under Impact 6-3, development of the project site and throughout the Dry Creek Watershed, would increase runoff and restrict natural percolation by creating new impervious surfaces such as roadways, parking areas and building rooftops. As a result, flood conditions for area waterways could be worsened.

All development within the Dry Creek Watershed and throughout the County would be subject to the Placer County Flood Control and Water Conservation District's Stormwater Management Manual as well as the standards contained in the County's Municipal Code (§15.48) which regulate the affects of grading on natural drainage flows and the design and construction of new drainage systems.

Continued enforcement of these existing regulations would ensure that new development and redevelopment would not create new or worsen existing flooding conditions. Furthermore, the drainage study prepared for the proposed project determined that the proposed drainage system would be adequate and no onsite or downstream flooding would occur as a result of project implementation. Therefore, this impact is considered to be less than cumulatively considerable.

Cumulative Public Services Impact

Fire Protection and Emergency Medical Services

This cumulative setting for fire services is the service area of the SPFD. Cumulative conditions include the proposed and approved projects discussed in this document, listed in **Table 4.1-1**.

Additional residential, commercial and other development within Placer County under cumulative conditions would result in additional calls for fire and emergency services. It is reasonable to conclude that proposed and approved new development within the cumulative setting area would lead to increased service demands from SPFD. As the County contineus to grow, additional staffing and equipment will be necessary. Because of the nexus between development and the increase in service calls, the County will be required to pay their fair share of the costs to offset the need for additional fire and emergency services staff to respond to requests for services. Under the General Plan, Placer County requires developers to pay development impact fees. Such fees are necessary for the development of fire facilities, purchase of equipment, etc. Existing and future businesses and area residents would be also be responsible (through taxes and other County assessments) for providing adequate funding for the operation of potential future expanded fire protection services.

In the future, the construction and operation of additional fire stations in the cumulative setting area to serve future growth is likely. Details regarding the location of new or expanded facilities to serve cumulative conditions are not currently available, so specific impacts associated with development of facilities are speculative. CEQA review would be required for the development of new or expanded facilities. The physical environmental effects of the future development of new or expanded fire facilities may include impacts to biological resources, air quality, water quality, traffic, cultural resources, and noise. Implementation of the Amazing Facts project

would not directly result in the need for additional fire protection facilities. Therefore, the project's contribution to this cumulative impact is considered **less than cumulatively considerable**.

Law Enforcement

The cumulative setting area for law enforcement services includes the current Placer County limits. The cumulative setting refers not only to the conditions that this project will create, but also to the impact that this one project will have on a service in conjunction with other such projects that will require the same services. The cumulative setting also includes the proposed and approved projects discussed in **Table 4.1-1**.

The demands for police services that will arise from the approval of this project, in addition to the demands for services for other proposed and/or approved projects in Placer County, would increase service demands on PCSD. The additional responses to calls for emergency and non-emergency services that would arise from the proposed site and other planned developments under buildout conditions, would have a cumulative impact upon availability of services by PCSD. Because there is a nexus between the budgets of PCSD and Placer County, it is reasonable to conclude that the growth that will occur within Placer County will allow for the funding of additional officers and staff as necessary to serve the County.

In the future, the construction of new police facilities or the expansion of existing police stations within Placer County is likely. Details regarding the location of new or expanded facilities to serve cumulative conditions are not currently available, so specific impacts associated with development of facilities are speculative. CEQA review would be required for the development of new or expanded facilities. The physical environmental effects of the future construction of new or expanded police facilities may include impacts to biological resources, air quality, water quality, traffic, cultural resources, and noise. Implementation of the Amazing Facts project would not directly result in the need for additional police or law enforcement facilities. Therefore, the project's contribution to this cumulative impact is considered **less than cumulatively considerable**.

Public Schools

Cumulative conditions for public school facilities include all proposed, planned, and approved projects within the boundaries of the Roseville Joint Union High School District and the Loomis Union School District. The Granite Bay Community Plan indicated that three new school sites will be needed in order to accommodate the planned growth in the area. A new high school with a capacity of up to 1800 students is currently being planned south of Eureka Road east of Sierra College Boulevard. The LUSD Strategic Plan 2007-2012 does not include any additional facilities within the district.

As indicated in **Impact 14.3.1**, the project is a church development and is expected to generate minimal new students to area schools. Other future development and anticipated population growth in the Districts would require improvement and expansion of public school facilities and services. New schools planned within the districts would provide additional capacity to accommodate existing and future enrollment. New schools and additional portable classrooms have the potential to create environmental effects, such as increased traffic. However, new school sites require rigorous environmental review prior to construction, which would identify

and lessen any cumulative related impacts. Additionally, all new development is subject to mitigation consistent with payment of fees as established between the school districts, the state, and the local jurisdictions. Per California Government Code Sections 65995(h) and 65996(b), the existing fee mechanisms would fully mitigate the environmental effects of the increased population and the project's public school related impacts and pursuant to state law, payment of statutory fees represents full and complete school facilities mitigation and **less than cumulatively considerable** impacts would result.

Electrical, Cable and Telecommunication Services

The cumulative setting for electrical energy, natural gas and cable and telephone services includes Placer County and all development identified in **Table 4.1-1**. Increased urbanization throughout Placer County would increase demand for these services.

There are a number of current and proposed development projects within Placer County that would be served by electric, natural gas, telecommunication services, which would result in an increased cumulative demand for these services. Adequate electric supplies to serve cumulative levels of development currently exist in the project area. Additionally, Title 24 energy efficiency requirements will apply to the proposed project as well as future projects that would occur under cumulative conditions. The project would not contribute to any cumulative environmental impacts, including the need for additional facilities to serve cumulative conditions.

The proposed project would not require the construction of new infrastructure beyond those needed to serve the project site. The project site is located adjacent to existing development and would not result in the extension of the above referenced infrastructure to areas that are not currently served. The environmental impacts of extending infrastructure to the project site are site specific, and not cumulative in nature. This impact is considered **less than cumulatively considerable**.

Parks and Recreation

The cumulative setting includes the proposed and approved projects (discussed in **Table 4.1-1**), existing land use conditions and planned development according to the Placer County General Plan, as well as the existing setting in surrounding incorporated cities (e.g. Roseville, Rocklin, Loomis). Future development the region will continue to place additional pressures on existing recreational facilities and the need for new and expanded recreational facilities.

Cumulatively, the effects of development, including multiple small projects, can lead to increased rates of deterioration of parks and result in the need to establish additional parks within the County. Implementation of the project, as proposed, would contribute to the deterioration of the current regional and neighborhood parks within the Placer County. However, the County has accounted for the effects of increased development on parks and recreation facilities through policies identified in the General Plan. In order to offset the effects of growth on parks and recreational facilities, project applicants are required to mitigate for the effects of a project through dedication of park land or pay in lieu fees. The use of in lieu fees allows the parks department to locate neighborhood and community parks in areas that would maximize their potential to serve as many residents as possible. Thus, while growth will permanently increase the use of parks under cumulative conditions, the effects of such growth will be mitigated by in

lieu fees and land dedications that would be required from future projects. Therefore, this project is deemed to have **less than cumulatively considerable** impact.

Solid Waste Service

The cumulative setting for solid waste service includes the APDS and WPWMA service areas. The estimated life of the current landfill used for disposal is 27 years before it has to move into the next disposal area.

Placer County currently exceeds the 50 percent diversion reduction as required by AB 939, and is currently at a 68 percent reduction rate (as calculated by the California Integrated Waste Management Board). Based on these calculations, the projected solid waste of the proposed project would be reduced to roughly 13.4 tons per year. This increase may require additional personnel and equipment for WPWMA to effectively operate the MRF. APDS and WPWMA may also require additional personnel and equipment due to the increase in generated solid waste as a result of the project. There will be a need for additional trips to the Western Regional Sanitary Landfill to dispose of the solid waste. Additional funding from service charges would be used to pay for any expansion of their current facilities and operations. At current operation, the landfill where solid waste is currently being disposed will have adequate capacity until 2036. Given the existing diversion facility and the available landfill capacity, project cumulative impacts associated with solid waste disposal are considered **less than cumulatively considerable**.

Water Services

The cumulative setting for water services, including supplies and related infrastructure, consists of PCWA's boundaries, which are the same as Placer County boundaries. PCWA provides water to approximately 220,000 people in Placer County, including retail water service to approximately 36,000 agricultural, municipal, and industrial connections in the cities of Auburn, Colfax, Loomis, and Rocklin, and to most of the small communities in unincorporated western Placer County along the I-80 corridor below Alta. PCWA also provides treated water to several mutual water companies within its Zone 1 service area that operate their own distribution systems. PCWA makes wholesale deliveries of treated water to the City of Lincoln and California American Water Company and untreated water from its canal system to several smaller water utilities that provide their own treatment and distribution service. PCWA also provides surface water out of the American River that is diverted and used by San Juan Water District, the City of Roseville, and Sacramento Suburban Water District (Brown & Caldwell, 2005, p. 1-1).

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within the PCWA service area. **Table 4.0-1** in Section 4.0 of this DEIR contains a list of regional development projects that would be included in the cumulative setting.

The proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within the PCWA service area, would cumulatively increase the current demand for water supply and water facilities. Water supply, delivery and fire flows must be demonstrated on a project-by-project basis. As previously discussed, the PCWA has adequate water supply to reliably meet all of the projected PCWA western Placer County service area demands, including the proposed project, under normal climate, multiple year, and single year drought conditions. In addition, future infrastructure needs for the PCWA water system are

currently included in PCWA's Capital Improvement Program and fees paid by new development go toward funding water infrastructure improvements. As there is adequate water available and infrastructure planned to serve cumulative development, this impact is considered **less than cumulatively considerable**.

Wastewater Service

The cumulative setting includes all existing, planned, proposed, approved, and reasonably foreseeable development within SPMUD and SPWA service areas. The SPMUD's 26-mile service area consists of the entire City of Rocklin, a major portion of the Town of Loomis, and certain unincorporated areas in southern Placer County that include the communities of Penryn and Rodgersdale.

The SPWA's cumulative service area is comprised of the 2005 Regional Service Area and the eleven Urban Growth Areas (UGAs) considered in the South Placer Regional Wastewater and Recycled Water Systems Evaluation (June, 2007). The UGAs consist of planning areas adjacent to the SPWA's Regional Service Area (namely those with the most or best available planning information) that were included in the Systems Evaluation.

Table 4.0-1 in Section 4.0 of this EIR contains a list of regional development projects that would be included in the cumulative setting.

Implementation of the proposed project, in combination with other existing, planned, proposed, approved, and reasonably foreseeable development within SPMUD and SPWA service areas would cumulative increase demand for wastewater services. Regional wastewater treatment was planned for in the SPWA's Systems Evaluation, which considered buildout development within the SAB plus UGAs outside of the 2005 SAB. Therefore, regional conveyance and treatment facilities for buildout of the SPWA service area have been planned for in the Systems Evaluation. In addition, the SPMUD has updated its Master Plan to identify the main infrastructure needs to serve the areas in the SPMUD as they developed. Furthermore, the SPMUD has confirmed it has adequate capacity to serve the project. Therefore, the proposed project's contribution to cumulative wastewater impacts would be considered **less than cumulatively considerable**.

CUMULATIVE HAZARDOUS MATERIALS AND HAZARDS IMPACT

Hazardous material, human health, and safety impacts, as described in State CEQA Guidelines Appendix G, are typically site-specific and not cumulative by nature. Therefore, the cumulative setting for hazardous materials is limited to the project site and the area immediately surrounding the project site. The site is surrounded by residential and commercial office uses as well as undeveloped, naturally vegetated land. There are no known hazardous waste generators or disposal sites or hazardous material release sites on or in the vicinity of the project site.

Cumulative hazardous material impacts would result if the proposed project or other existing, planned, or reasonably foreseeable projects within the cumulative setting area would increase the total amount of hazardous materials being transported over public roadways or being used, stored, or disposed in the area or would newly expose the public to existing hazardous conditions.

The proposed project and other existing, approved, and planned projects in the vicinity would not result in the addition of hazardous materials or otherwise expose the public to such materials over

established thresholds. The proposed project would not involve the use, storage or disposal of hazardous materials, has not been identified as a hazardous materials release site and has not been used for any purposes involving hazardous materials in the past. Additionally, there are no identified hazardous waste generators or disposal sites or hazardous material release sites within one mile of the project site. Furthermore, there are no planned or reasonably foreseeable projects in the cumulative setting area that would involve significant amounts of hazardous materials. Therefore, this impact is considered less than cumulatively considerable and no further mitigation is required.

Other Cumulative Impacts

No other cumulative impacts were identified through the comprehensive cumulative impact assessment.

GROWTH-INDUCING IMPACTS

Introduction

The California Environmental Quality Act (CEQA) Guidelines Section 15126.2(d) requires that an Environmental Impact Report (EIR) evaluate the growth-inducing impacts of a proposed action. A growth-inducing impact is defined by the CEQA Guidelines as:

The way in which a proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which could remove obstacles to population growth…It is not assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth inducement potential. Direct growth inducement could result if a project, for example, involved construction of new housing. A project could have indirect growth inducement potential if it established substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it could involve a construction effort with substantial short-term employment opportunities that could indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, a project could indirectly induce growth if it could remove an obstacle to additional growth and development, such as removing a constraint on a required public service. A project providing an increased water supply in an area where water service historically limited growth could be considered growth inducing.

The CEQA Guidelines further explain that the environmental effects of induced growth are considered indirect impacts of the proposed action. These indirect impacts or secondary effects of growth may result in significant, adverse environmental impacts. Potential secondary effects of growth include increased demand on other community and public services and infrastructure, increased traffic and noise, and adverse environmental impacts such as degradation of air and water quality, degradation or loss of plant and animal habitat, and conversion of agricultural and open space land to developed uses.

Growth inducement may constitute an adverse impact if the growth is not consistent with or accommodated by the land use plans and growth management plans and policies for the area

affected. Local land use plans provide for land use development patterns and growth policies that allow for the orderly expansion of urban development supported by adequate urban public services, such as water supply, roadway infrastructure, sewer service, and solid waste service.

Components of Growth

The timing, magnitude, and location of land development and population growth in a community or region are based on various interrelated land use and economic variables. Key variables include regional economic trends, market demand for residential and non-residential uses, land availability and cost, the availability and quality of transportation facilities and public services, proximity to employment centers, the supply and cost of housing, and regulatory policies or conditions. Since a general plan of a community defines the location, type and intensity of growth, it is the primary means of regulating development and growth in California.

Growth Effects of the Project

As described in Section 3.0 Project Description, the proposed project would consist of construction of a 17 acre campus which would support its various ministries which include television, radio, internet, publishing, and the Amazing Facts School of evangelism and training. The project includes three phases (described below). The proposed project would be constructed in three phases with buildings totaling ±208,000 square foot (sf). Building heights will range from 42 feet to 62 feet. Utilities, including water, sewer, electric, gas would be constructed within the project site. Improvements would also be made to bordering roadways of Sierra College Boulevard and Night Watch Drive to provide access to the site and to accommodate project-generated traffic.

As previously mentioned under discussion in Section 4.0 Project Description, the project site is located within the northern portion of Granite Bay and is within the boundaries of the Granite Bay Community Plan. The site is designated Rural Estate 4.6 acre to 20 acre minimum and is zoned F-B-X 20 acre minimum (farm, combining a minimum building site size of 20 acres). At this base zoning, the 17 acre developable portion of the project site could accommodate a maximum of three houses. As also discussed previously, the Placer County General Plan designates the project site as Rural Residential (RR). The RR designation under the County General Plan is applied to areas generally located away from cities and unincorporated community centers, in hilly, mountainous, or forested terrain, and as a buffer zone where dispersed residential development on larger parcels would be appropriate and compatible with smaller-scale farming and ranching operations.

However, each of the Plan's zoning districts considers houses of worship accessory uses requiring a minor use permit (Placer County, 2009a). The project as proposed would allow for a more intense urban use with the development of the Amazing Facts Ministry church and associated facilities. Though the church use would not generate increases in population or significant increases in employment, the size and scale of the proposed project will change the character of the site and result in a larger extent of land disturbance.

The project's cumulative impacts could be in addition to the environmental effects of growth in the region. Since the project site will be improved with planned improvements to roadways bordering the project site, and the necessary infrastructure to extend water, sewer, gas, and electricity, any potential constraints to growth due to lack of improved access, or water and sewer

service would be removed. The specific environmental effects resulting from the proposed land use patterns and associated extension of public services are discussed in the environmental issue areas in Sections 4.0 through 16.0.

SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA Sections 21100(b)(2) and 21100.1(a) require that EIRs prepared for the adoption of plan, policy, or ordinance of a public agency must include a discussion of significant irreversible environmental changes of project implementation. In addition, CEQA Guidelines Section 15126.2(c) describes irreversible environmental changes as:

Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

Implementation of the proposed project components could result in the conversion of undeveloped open space land to urban uses. It is unlikely that circumstances would arise that would justify the return of the land to its original condition. Development of the project site could irretrievably commit building materials and energy to the construction and maintenance of buildings and infrastructure proposed. Renewable, nonrenewable, and limited resources that could be consumed as part of the development of the proposed project would include, but are not limited to: oil, gasoline, lumber, sand and gravel, asphalt, water, steel, and similar materials. In addition, development of the project could result in an increased demand on public services and utilities (see Section 14.0 Public Services).

UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL IMPACTS

The potential environmental impacts that would result from implementation of the proposed project are summarized in Table 2-2 in Chapter 2 of this Draft EIR. In some cases, impacts that have been identified would be less than significant. In other instances, incorporation of mitigation measures identified in this Draft EIR would reduce the impacts to levels that are less than significant. Those impacts that cannot be feasibly mitigated to a less-than-significant level would remain as unavoidable significant environmental impacts. They are listed below:

Impact 4-5 Convert Farmland of Local Importance

Impact 8-3 Adversely Affect a Scenic Vista

Impact 9.6 Short Term Cumulative Traffic Impacts

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20.0
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CHAPTER 2 – EXECUTIVE SUMMARY

No references

CHAPTER 3 – PROJECT DESCRIPTION

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