
4.0 INTRODUCTION TO THE ENVIRONMENTAL ANALYSIS

The following is an introduction to the project-specific environmental analysis, cumulative impacts, and general assumptions used in the analysis. The reader is referred to the individual technical sections of the EIR regarding specific assumptions and methodology and significance criteria used in the analysis.

4.0.1 FORMAT OF ISSUE SECTIONS

Sections in this chapter describe, for each environmental issue area, 1) the environmental setting as it relates to the specific issue; 2) the regulatory framework for the issue as applicable to the project; 3) significance criteria and the methodology used to assess impacts; 4) an evaluation of project-specific and cumulative impacts, identification of mitigation measures, and a determination of the level of significance after mitigation measures are implemented. Each section is organized into five parts: Introduction, Setting, Regulatory Framework, Impacts and Mitigation Measures, and References.

The **Existing Setting** subsection describes the existing conditions pertaining to the issue at the regional, local and project site levels, as appropriate.

The **Regulatory Framework** identifies plans, policies, laws and regulations at the federal, state and local levels that are applicable to the particular issue.

The **Impacts and Mitigation Measures** subsection begins with a description of the standards of significance used to evaluate project impacts, followed by a description of the methodology utilized to assess impacts. Next are the individual impact statements, which include explanatory text and technical information necessary to formulate a conclusion. Each of the impacts are addressed at both the program level (Project Buildout) and project level (Phase 2). This is followed by a discussion of potential project-related impacts. Where necessary, each impact discussed is followed by a description of the proposed mitigation and a statement of the level of impact following mitigation.

The **Cumulative Setting, Impacts and Mitigation Measures** subsection describes the cumulative setting that is appropriate to that subject area. For example, some air quality impacts are of a regional nature and the cumulative setting includes the entire air basin, while storm water impacts would be specific to the local drainage basin. Next are the individual impact statements, which include explanatory text and technical information necessary to formulate a conclusion. Following is a discussion of potential cumulative impacts. Where necessary, each cumulative impact is discussed, the project's contribution to that cumulative impact is identified, followed by a description of the proposed mitigation and a statement of the level of impact following mitigation.

The **References** subsection lists the documents, personal communications, and other sources of information cited or otherwise used in the preparation of the section.

4.0.2 DETERMINING LEVEL OF SIGNIFICANCE

Determining the severity of project impacts is fundamental to achieving the objectives of CEQA. CEQA Guidelines Section 15091 requires that decision-makers make findings that significant impacts identified in the final EIR have been mitigated as completely as feasible. If the EIR identifies any significant unmitigated impacts and the agency decides to approve the project, CEQA Guidelines Section 15093 requires decision-makers to adopt a statement of overriding

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considerations, which explains why the benefits of the project outweigh the adverse environmental consequences identified by the EIR.

The level of significance for each impact examined in this EIR was determined by considering the predicted magnitude of the impact against a threshold. Thresholds were developed using criteria from the CEQA Guidelines; local/regional plans and ordinances; and/or consultation with recognized experts. Thresholds are identified in each chapter under Standards of Significance.

Four levels of impact significance are recognized by this EIR:

- **Less than Significant** impacts would not cause a substantial change in the environment or are not disruptive enough to require mitigation.
- **Potentially Significant** impacts may cause a significant effect on the environment, but information is lacking regarding the extent of the impact. This designation may be applied to impacts for which information is incomplete or unavailable, or to impacts that are qualitative in nature and cannot be readily quantified. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact. Mitigation measures are identified to reduce potential impacts to a level that is less than significant.
- **Significant** impacts would cause a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of the project effects using specified significance criteria. Mitigation measures are identified to reduce impacts to a level that is less than significant.
- **Significant and Unavoidable** impacts are significant adverse impacts that cannot be avoided or mitigated to a less-than-significant level. This designation can be given to impacts for which there is no feasible mitigation, or to impacts for which mitigation measures can be applied but are not sufficient to reduce impacts to a level that is less than significant.

4.0.3 IMPACT AND MITIGATION FORMAT

The standard format used to present the evaluation of impacts is as follows:

Impact 4.0.1 The impact number identifies the section of the report and the sequential order of the impact within that section. Following the impact number is the impact statement, which identifies the potential impact

The identified impact is then discussed in more detail. At the end of the discussion, a level of significance is assigned to the impact. If the impact is identified as **less than significant**, there will be no further evaluation of the impact. If the impact is identified as **potentially significant** or **significant**, proposed mitigation measures will follow. **Significant and unavoidable** impacts may or may not have proposed mitigation measures.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. Also, policies and programs from applicable local land use plans that partially or fully mitigate the impact

may be cited. These policies and regulations shall be considered as part of the package of recommended mitigation measures.

Mitigation measures are described in the format presented below:

MM 4.0.1a Mitigation is identified that would reduce the impact to the lowest degree possible. The mitigation number links the mitigation to the impact; the letter identifies the sequential order of the mitigation for that impact.

Timing/Implementation: Gives the time when the mitigation measure is to be implemented (e.g., upon submission of final map, prior to issuance of building permit).

Enforcement/Monitoring: Identifies the department or agency with the responsibility for implementing the mitigation measure.

The discussion concludes by describing how the mitigation measures presented above will reduce the impact. It then identifies the resulting level of significance of the impact following mitigation.

4.0.4 ANALYSIS ASSUMPTIONS GENERALLY USED TO EVALUATE THE IMPACTS OF THE PROJECT

BASELINE ENVIRONMENTAL CONDITIONS ASSUMED IN THE EIR

Section 15125(a) of the CEQA Guidelines requires that an EIR include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation (NOP) is published. The CEQA Guidelines also specify that this description of the physical environmental conditions is to serve as the baseline physical conditions by which a lead agency determines whether impacts of a project are considered significant.

The environmental setting conditions of the project site and the surrounding area are described in detail in the technical sections of the EIR (see Sections 4.1 through 4.14). In general, these setting discussions describe the setting conditions of the project site and the surrounding area as they existed when the NOP for the project was released in August 2005. In many cases, the setting conditions of the project site remain largely unchanged since that time. However, given the interval of time between the release of the NOP and circulation of this document, the EIR also includes updated setting information, such as the status of large-scale development projects in the region (e.g., Sanderson Subdivision, the Pleasant Hills Subdivision and the Anderson Marketplace). Further, where more current data has been made available since release of the NOP, the Draft EIR utilizes the more current data (e.g., air quality and population data).

GENERAL PLAN AND SPECIFIC PLAN CONSISTENCY ANALYSIS

As required by CEQA Guidelines 15125(d), each technical section of the EIR (Sections 4.1 through 4.13) has been evaluated for consistency with policies contained in the City of Anderson General Plan and the proposed Vineyards at Anderson Specific Plan. The traffic section of the EIR also evaluated the project for consistency with policies contained in the Shasta County General Plan, City of Redding General Plan, and Caltran's *Guide for the*

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Preparation of Traffic Impact Studies. The consistency tables are located in the relevant sections of this EIR.

PROJECT CONSTRUCTION EFFECTS

Section 3.0, Project Description, provides a description of anticipated construction activities associated with the proposed project. The environmental analysis addresses potentially significant impacts from the direct effects of construction at the project site, off-site improvements, and direct effects associated with required infrastructure improvements, grading activities, and construction traffic.

Proposed off-site construction in support of the project includes the future expansion of the City of Anderson Waste Water Treatment Plant, roadway improvements associated with Rhonda Road, State Route 273, North Street, South Street and West Anderson Drive. The reader is referred to Section 3.0, Project Description, for a complete description of these off-site improvements. In addition, Section 4.4, Transportation and Circulation, describes anticipated environmental effects associated with the implementation of mitigation measures to reduce traffic impacts of the project and cumulative conditions.

PROJECT BUILDOUT ASSUMPTIONS

For the purposes of the environmental analysis, it is assumed that the proposed project would build out under existing baseline conditions. However, for the purpose of a cumulative impact analysis, the EIR also considers build out effects of the project under projected year 2030 conditions. The EIR also provides an analysis of the environmental effects associated with Phase 2 of the project under existing and cumulative conditions.

APPROACH TO THE CUMULATIVE IMPACT ANALYSIS

Definition of Cumulative Setting

State CEQA Guidelines Section 15130 requires that EIRs include an analysis of the cumulative impacts of a project when the project's effect is considered cumulatively considerable. In general, the cumulative setting conditions considered in this EIR are based on the existing land use plans provided by the City of Anderson (General Plan and Zoning Ordinance), Shasta County (via the Shasta County General Plan and the Zoning Ordinance), and the proposed and approved development projects listed in **Table 4.0-1**. **Table 4.0-2** identifies acreages of land uses designated under the City of Anderson Land Use Element of the General Plan. The City of Anderson General Plan Land Use Element anticipates that the City of Anderson's Planning Area will have a population increase of 26,095 residents at full buildout. That estimate included the expected annexation and buildout of a "Special Planning Area", in which the Vineyards at Anderson project is proposed.

The geographic extent of the cumulative setting for this EIR generally consists of the City of Anderson as well as the City's sphere of influence, the City of Redding, the City of Shasta Lake, and growth projections for Shasta County to the year 2040 (see **Table 4.2-2** in Section 4.2, Population and Housing), as well as consideration of regional activities and attributes (e.g., regional traffic volumes and patterns associated with Interstate 5 and State Route 273). This cumulative setting was based on the extent of project-related impacts beyond the City of Anderson as well as the analysis provided in the technical sections of this EIR (e.g., traffic impacts [Section 4.4], public services and utilities [Section 4.11], noise [Section 4.5] and land use [Sections

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4.1 and 7.0]. However, each technical section of the EIR includes a description of the cumulative setting as it relates to the characteristics of the environmental issue under consideration (e.g., consideration of the Sacramento Valley Air Basin for cumulative air quality analysis) as set forth in Section 15130(b) of the State CEQA Guidelines.

**TABLE 4.0-1
SURROUNDING PROPOSED/APPROVED LARGE-SCALE RESIDENTIAL AND COMMERCIAL PROJECTS
FOR THE CITY OF ANDERSON AND SHASTA COUNTY**

| Projects Located in the City of Anderson | | |
|--|---|---|
| Project Name | Description of Project | Status |
| Anderson Potential Target Site | 326,000 square feet of retail and 5,000 square feet of fast food | Undeveloped |
| Projects Located in the City of Redding | | |
| Project Name | Description of Project | Status |
| City of Redding | 992,000 square feet of industrial | Undeveloped |
| Clover Creek | 72,700 square feet of retail and 72,700 square feet of office space | Initial planning stages |
| Cobblestone Business Park | 187,000 square feet of office space | Approximately 95% built out |
| Stillwater Business Park | 4,201,000 square feet of industrial and 2,097,500 square feet of office space on approximately 700 acres | Undeveloped |
| Highland Park | 394 detached single-family residential dwelling units and 55 attached multi-family dwelling units | Currently undergoing CEQA review |
| Shastina Ranch | 446 detached single-family residential dwelling units on approximately 195 acres | Constructing infrastructure improvements |
| Redding Riverfront Specific Plan | 22 detached single-family residential dwelling units, 123 attached multi-family dwelling units, 187,200 square feet of retail, 42,500 square feet of office space and 98,000 square feet of hotel | Adopted, but undeveloped |
| Oasis Road Specific Plan | 104 single-family residential units, 2,081 multi-family residential units, and 3,118,622 square feet of commercial on 762 acres | Undeveloped |
| VA Home Property | 150 bed veteran's home, including administrative support offices on 30 acres | Currently undergoing CEQA/NEPA review |
| Projects Located in the City of Shasta Lake | | |
| Project Name | Description of Project | Status |
| Mountain Gate | 1,000 detached single-family dwelling units, 500 attached multi-family dwelling units and 100,000 square feet of commercial space on 592 acres | Currently undergoing CEQA review |
| Shasta Gateway Industrial Park | 1,970,000 square feet of industrial and 98,000 square feet of commercial space on approximately 230 acres | 50 acres developed during initial phase, with remainder reserved for future expansion |
| Lasata | 301 attached multi-family dwelling units | Initial planning stages |

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| Projects Located in the Unincorporated Area of Shasta County | | |
|--|--|--|
| Project Name | Description of Project | Status |
| Oak Ranch Estates | 132 detached single-family residential units | Undeveloped |
| Woodridge Lake | 60,000 square feet of retail commercial | Partially constructed |
| McConnell Land ¹ | 1,388 detached single-family residential units | Undeveloped |
| Shingletown Sierra Pacific | 132 detached single-family residential units | Constructing infrastructure improvements |
| Silverbridge Oaks | 300 detached single-family residential units | Undeveloped |
| North Fork Ranch | 1,189 detached single-family residential units, 185 high density residential dwelling units, 942,000 square feet of retail and 145,000 square feet of office space | Currently undergoing CEQA review |
| Cottonwood Hills | 128 detached single-family residential units | Undergoing redesign |

Source: Shasta County RTPA Traffic Model, Dowling Associates, Inc. Also, City of Redding and Shasta County Planning Departments

¹ Partially located within the City of Redding and mostly in unincorporated Shasta County.

**TABLE 4.0-2
CITY OF ANDERSON GENERAL PLAN LAND USE ELEMENT**

| Land Use Designation | Planning Area Total ¹ (Acres) | Existing City Developed (Acres) | Planning Area Vacant (Acres) | Maximum Density ² (Units/Acre) | Assumed Density ³ (Units/Acre) | Assumed Units At Buildout | Assumed Population At Buildout ⁴ |
|---|--|---------------------------------|------------------------------|---|---|----------------------------|---|
| Rural Holding (RH) | 2,131 | 461 | 1,670 | 1 du/5 ac | 0.2 | 334 | 898 |
| Rural Estate (RE) | 1,253 | 805 | 448 | 0.5-2 du/ac | 1.0 | 448 | 1,204 |
| Low Density Residential/ Hill Side (LDR/HS) | 410 | 223 | 187 | 1 du/2 ac | 0.5 | 94 | 251 |
| Low Density Residential (LDR) | 876 | 559 | 317 | 6 du/ac | 4.0 | 1,268 | 3,408 |
| Medium Density Residential (MDR) | 234 | 178 | 56 | 10-20 du/ac | 15.0 | 840 | 2,258 |
| High Density Residential (HDR) | 73 | 51 | 22 | 20-40 du/ac | 25.0 | 550 | 1,478 |
| Special Planning Area (SPA) | 2,406 | — | 2,406 | 2.5 du/ac | 2.5 | 6,015 | 16,168 |
| Mixed Use (MU) | 59 | 51 | 8 | 30 du/ac | 20.0 | 160 | 430 |
| Public & Quasi-Public (PSP) | 913 | 842 | 71 | — | — | — | — |
| Commercial (C) | 807 | 324 | 483 | — | — | — | — |
| Industrial (I) | 1,768 | 702 | 1,066 | — | — | — | — |
| TOTALS | 10,930 | 4,196 | 6,734 | — | — | 9,709 | 26,095 |
| | | | | | | Existing Population | 10,677 |
| | | | | | | Total at Build-out | 36,772 |

Source: City of Anderson General Plan Land Use Element (2007)

¹ As measured by City's GIS

² Densities from Table 2.7.1 of the City of Anderson General Plan Land Use Element (2007).

³ Assumed Density is based on historic development within the City and understanding of topographical and biological constraints.

⁴ Population figures based on 2.688 persons per unit as estimated by the California Department of Finance, E-5 Report, January 2006.

Consideration of Cumulative Impacts

Each technical section in the EIR considers whether the project's effect on anticipated cumulative setting conditions is cumulatively considerable (i.e., a significant effect). The determination of whether the project's impacts on cumulative conditions are considered significant is based on consideration of applicable public agency standards, technical analysis, consultation with public agencies, and/or expert opinion.

4.0.5 ACRONYMS AND ABBREVIATIONS

ACRONYMS AND ABBREVIATIONS

The following acronyms and abbreviations have been used throughout the Vineyards at Anderson Environmental Impact Report. These are defined at their first mention in each of the captions/sections.

**TABLE 4.0-3
ACRONYMS AND ABBREVIATIONS CONTAINED WITHIN EIR**

| Acronyms/Abbreviations | Definition |
|-------------------------------|---|
| AB | California State Assembly Bill |
| ACID | Anderson Cottonwood Irrigation District |
| ACOE | Army Corps of Engineers |
| ADD | Average daily demand |
| ADT | Average daily traffic |
| APCD | Air Pollution Control District |
| APN | Assessor's Parcel Numbers |
| AQAP | Air Quality Attainment Plan |
| AQMD | Air Quality Management District |
| ARB | California Air Resources Board |
| AWSC | All-Way Stop-Controlled intersection |
| BAMM | Best available mitigation measures |
| CAA | Federal Clean Air Act |
| CAAA | Federal Clean Air Act Amendments |
| CAAQS | California ambient air quality standards |
| CCAA | California Clean Air Act |
| CALFIRE | California Department of Forestry and Fire Protection |
| CALTRANS | California Department of Transportation |
| CAPCOA | California Air Pollution Control Officers Association |
| CARB | California Air Resources Board |
| CBC | California Building Code |

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| Acronyms/Abbreviations | Definition |
|------------------------|---|
| CDF | California Department of Forestry and Fire Protection |
| CDFG | California Department of Fish and Game |
| CEC | California Energy Commission |
| CEQA | California Environmental Quality Act |
| CESA | California Endangered Species Act |
| CFR | Code of Federal Regulations |
| CGS | California Geological surveys |
| CNDDDB | California Natural Diversity Database |
| CNEL | Community noise equivalent level |
| CNPS | California Native Plant Society |
| CO | Carbon Monoxide |
| Corps | Army Corps of Engineers |
| CRHR | California Register of Historic Resources |
| CRMP | Coordinated Resource Management and Planning Group |
| CVRWQB | Central Valley Regional Water Quality Control Board |
| CWA | Clean Water Act |
| DAU | North Coast Deer Assessment Unit |
| DB | Decibel |
| DbA | A-weighted decibel scale |
| DBE | Design Basis Earthquake |
| DPM | Diesel exhaust particulate matter |
| DFG | California Department of Fish and Game |
| DEIR | Draft environmental impact report |
| DTSC | Department of Toxic Substances Control |
| DUE | Dwelling unit equivalent |
| EIR | Environmental impact report |
| EPA | Federal Environmental Protection Agency |
| ERP | Emissions Reduction Plan |
| FEIR | Final environmental impact report |
| FEMA | Federal Emergency Management Agency |
| FESA | Federal Endangered Species Act |
| FHWA | Federal Highway Administration |
| FIP | Federal Implementation Plan |

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| Acronyms/Abbreviations | Definition |
|------------------------|---|
| FIRM | Flood Insurance Rate Map |
| GHG | Greenhouse gas(es) |
| GIS | Geographical Information System |
| GPS | Global Positioning System |
| HAP | Hazardous air pollutants |
| HE | Household equivalent |
| HCP | Habitat conservation plan |
| HCS | Hazard communication standard |
| I-5 | Interstate 5 |
| IPCC | Intergovernmental Panel on Climate Change |
| ITE | Institute of Transportation Engineers |
| IWMP | Integrated Waste Management Plan |
| kV | Kilovolt |
| L _{dn} | Day-night average noise level |
| L _{eq} | Energy-equivalent noise level |
| LS | Less than significant |
| M | Magnitude |
| MBTA | Migratory Bird Treaty Act |
| MCL | Maximum contaminant level |
| MDD | Maximum daily demand |
| MDBM | Mount Diablo Base Meridian |
| μg/m ³ | Micrograms per cubic meter |
| mgd | Million gallons per day |
| mg/m ³ | Milligrams per cubic meter |
| MM | Mitigation measure |
| MMRP | Mitigation Monitoring Reporting Program |
| MOU | Memorandum of Understanding |
| MSL | Mean sea level |
| NAAQS | National ambient air quality standards |
| NAHC | Native American Heritage Commission |
| NASA | National Aeronautics Space Administration |
| NCCP | Natural community conservation plan |
| NMFS | National Marine Fisheries Service |

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| Acronyms/Abbreviations | Definition |
|------------------------|---|
| NOAA | National Oceanic and Atmospheric Association |
| NOC | Notice of Completion |
| NOP | Notice of Preparation |
| NO _x | Oxides of Nitrogen |
| NPDES | National Pollutant Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NSVAB | Northern Sacramento Valley Air Basin |
| PM ₁₀ | Particulate matter between 2.5 and 10 microns |
| PM _{2.5} | Particulate matter less than 2.5 microns |
| PPM | Parts per million |
| PS | Potentially significant |
| PSA | Project study area |
| RAWB | Redding Area Water Basin |
| RAWC | Redding Area Water Council |
| ROG | Reactive organic gas |
| RTPA | Regional Transportation Planning Agency |
| RWQCB | Regional Water Quality Control Board |
| SB | California State Senate Bill |
| SCAQMD | Shasta County Air Quality Management District |
| SEL | Sound exposure level |
| SHPO | State Historic Preservation Office |
| SIP | State Implementation Plan |
| SMM | Standard mitigation measures |
| SR 273 | State Route 273 |
| SU | Significant and unavoidable |
| SWPPP | Storm Water Pollution Prevention Water Plan |
| SWRCB | California State Water Resource Control Board |
| TAC | Toxic Air Contaminant |
| TEQ | Toxic equivalents |
| TWSC | Two-way stop controlled intersection |
| UBC | Uniform Building Code |
| UNEP | United Nations Environment Programme |
| UPRR | Union Pacific Railroad |

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| Acronyms/Abbreviations | Definition |
|------------------------|---|
| USACE | United States Army Corps of Engineers |
| USC | United States Code of Federal Regulations |
| USFS | United States Forest Service |
| USFWS | U.S. Fish and Wildlife Services |
| USGS | U.S. Geographic Society |
| UTM | Universal Transverse Mercator |
| VOC | Volatile organic compounds |
| Vpd | Vehicles per day |
| VPD | Vineyards Planned Development Zone District |
| VMT | Vehicle miles traveled |
| WDR | Waste discharge requirements |
| WMO | World Meteorological Organization |
| WWTP | Wastewater treatment plant |