

COUNTY OF FRESNO GENERAL PLAN UPDATE 2000

DRAFT Environmental Impact Report Table of Contents

1.	INTRODUCTION	1-1
2.	PROJECT DESCRIPTION AND DEMOGRAPHIC INFORMATION	2-1
	Figures	
2-1	Fresno County and the San Joaquin Valley Region	2-2
2-2	Current Land Uses	2-3
2-3	City Spheres of Influence	2-4
2-4	Five Geographic Areas	2-6
3.	SUMMARY OF IMPACTS AND MITIGATION MEASURES	3-1
4.	ENVIRONMENTAL ANALYSIS	
4.1	Introduction to the Analysis	4.1-1
4.2	Land Use	4.2-1
4.3	Agriculture	4.3-1
4.4	Transportation and Circulation	4.4-1
4.5	Wastewater, Storm Drainage, and Flooding	4-5.1
4.6	Public Services	4.6-1
4.7	Cultural Resources	4.7-1
4.8	Water Resources	4-8.1
4.9	Biological Resources	4.9-1
4.10	Forestry Resources	4.10-1
4.11	Mineral Resources	4.11-1
4.12	Air Quality	4.12-1
4.13	Seismic and Geologic Hazards	4.13-1
4.14	Hazardous Materials	4.14-1
4.15	Noise	4.15-1

4.16 [Visual Quality](#) 4.16-1

5. [OTHER CEQA CONSIDERATIONS](#) 5-1

6. [ALTERNATIVES ANALYSIS](#) 6-1

7. [REFERENCES](#) 7-1

APPENDICES

[Appendix A - Notice of Preparation](#)

[Appendix B - Comments on the Notice of Preparation](#)

[Appendix C - Traffic Model Results](#)

<i>LIST OF TABLES</i>

TABLES ARE LOCATED WITHIN THE CHAPTERS ABOVE

Table Page

2-1 Summary of Existing Land Use by Generalized Land Use Categories

Fresno County 1997 2-5

2-2 Land Demand and Availability for Cities Within Fresno County 2-7

2-3 Components of the Existing Fresno County General Plan 2-9

2-4 Employment Profile 2-16

2-5 Geographic Distribution of Population 2-17

2-6 Geographic Distribution of Employment 2-18

2-7 Geographic Distribution of Non-Residential Space 2-19

2-8 Geographic Distribution of Land Use 2-21

2-9 Geographic Distribution of Housing 2-22

2-10 Comparison of Employment Profile and Non-Residential Acreage
With and Without Proposed Project 2-23

3-1 Summary of Impacts and Mitigation Measures 3-6

4.4-1 Existing Level of Service Deficiencies Rural Fresno County
(Outside the Spheres of Influence of Cities) 4.4-2

4.4-2 Roadway Improvements in the 2020 Baseline Transportation System
4.4-5

4.4-3 FDOT Facility Types 4.4-21

4.4-4 Freeway Level of Service Descriptions Rural or Urban 4.4-21

4.4-5 Arterial Level of Service Descriptions Urbanized Areas	4.4-22
4.4-6 2-Lane Highway Level of Service Descriptions Rural Areas	4.4-22
4.4-7 Evaluation Criteria for Level of Service	4.4-23
4.4-8 Rural Fresno County Roadways That Would Not Meet the Draft Level of Service Policy (LOS D or Worse)	4.4-25
4.4-9 Rural State Routes That Would Not Meet the Draft Level of Service Policy (LOS D or Worse)	4.4-27
4.4-10 Urban Arterials and Expressways That Would Not Meet the Draft Level of Service Policy (LOS E or Worse)	4.4-29
4.4-11 Urban State Routes	4.4-37
4.6-1 Fire Protection Districts Within Fresno County	4.6-6
4.6-2 Park Development Standards for Zone 2, Fresno County, 1997	4.6-18
4.6-3 Elementary School	4.6-24
4.6-4 Middle School (With Track)	4.6-24
4.6-5 High School	4.6-25
4.6-6 Projected Enrollment, Fresno County	4.6-25
4.9-1 Special-Status Species of Fresno County by Geographic Region	4.9-11
4.12-1 Estimated Net Increase in Emissions from Project-Related Operation (Relative to 2020 Without Project Conditions)	4.12-10
4.15-1 Estimated Existing Noise Levels and Distances to Noise Contours	4.15-2
4.15-2 Estimated Existing and Future Traffic Noise Levels (Including the No Project Alternative, Year 2020)	4.15-7
4.15-3 Estimated Distances to Noise Contours (Including the No Project Alternative; Year 2020)	4.15-8
6-1 Geographic Distribution of Land Use (Acres) - Comparison of Alternatives to Proposed Project	6-4
6-2 Geographic Distribution of Population - Comparison of Alternatives to Proposed Project	6-5
6-3 Comparison of Impacts for Alternatives and the Proposed Project	6-9

1. INTRODUCTION

This Environmental Impact Report (EIR) describes the potential environmental effects of the proposed Fresno County General Plan. As required by the California Environmental Quality Act (CEQA of 1970, as amended), this EIR (1) assesses the expected project-specific and cumulative impacts of the ultimate environmental changes resulting from the projected growth in population and employment in the County through the year 2020, (2) identifies means of avoiding or minimizing potential adverse impacts, and (3) evaluates reasonable alternatives to the Proposed Project, including the required No Project Alternative. The Fresno County Board of Supervisors is the "lead agency" for the project evaluated in this EIR and as such has the principal responsibility for approving the project.

State General Plan Requirements

State law requires that every city and county in California adopt a general plan that is comprehensive and long-term. The plans must outline proposals for the physical development of the County or city, and any land outside its boundaries which in the planning agency's judgment bears relation to its planning (California Government Code Section 65300 et seq.). General plans must be comprehensive both in their geographic coverage and in the range of subjects they cover. General plans must also be long-term in perspective. General plan time horizons vary, but typically range from 15 to 25 years into the future.

Every general plan in California must address seven topics or 'elements.'

The relative importance of each of the seven required elements will, of course, vary from community to community. Following are brief descriptions of what State law requires be addressed in each of the seven elements:

1. The **Land Use Element** designates the general distribution and intensity of all uses of the land in the community. This includes residential uses, commercial uses, industrial uses, public facilities, and open space, among others.
2. The **Circulation Element** identifies the general location and extent of existing and proposed major transportation facilities, including major roadways, rail and transit, and airports.
3. The **Housing Element** is a comprehensive assessment of current and projected housing needs for all segments of the community and all economic groups that also embodies policies and programs for providing adequate housing.
4. The **Conservation Element** addresses the conservation; development; and use of natural resources including water, forests, soils, rivers, and mineral deposits.

5. Overlapping the conservation element, the **Open Space Element** details plans and measures for preserving open space for: protection of natural resources—such as wildlife habitat; the managed production of resources—such as agricultural and timber land; outdoor recreation—such as parks, trails, and scenic vistas; and public health and safety—such as areas subject to geologic hazards, tsunamis, flooding, and fires.
6. The **Noise Element** identifies and appraises noise problems and includes policies to protect the community from excessive noise.
7. The **Safety Element** establishes policies and programs to protect the community from risks associated with seismic, geologic, flood, and wildfire hazards.

The general plan may also address other topics that the community feels are relevant to its development, such as scenic resources, historic preservation, and urban design. For each locally relevant mandated issue or optional issue addressed, the general plan must do the following:

- Describe the nature and significance of the issue in the community (*Background Information*)
- Set-out policy in text and maps for how the jurisdiction will respond to the issue (*Policy*)
- Outline specific programs for implementing policies (*Implementation Programs*)

The format and structure of the general plan is left to local discretion, but regardless of the format or issues addressed, all substantive parts of the plan must be consistent with one another (i.e., *internally consistent*).

For instance, the policies in the land use element must be consistent with those of the housing element and vice versa.

Purpose of the Fresno County General Plan EIR

CEQA mandates the preparation of EIRs for projects or programs that have the potential of resulting in adverse impacts on the environment. The CEQA Guidelines (Section 15080) provide the following general direction concerning the coordination of planning and environmental impact assessment:

To the extent possible, the EIR should be combined with the existing planning, review, and project approval process used by each public agency.

Consistent with Section 15166 of the CEQA Guidelines, several General Plan documents are being used to satisfy the requirements for a draft EIR for a General Plan. These documents are: the *Draft General Plan Policy Document*,¹ which lists the proposed goals, policies, and implementation

¹

Note that the proposed Policy Document does not include an updated Housing Element because by State Law an update of the Housing Element is not required until June 2002. The existing Housing Element adopted in 1991 will continue to be part of the General Plan.

programs; the *Draft General Plan Background Report*, which describes the existing environment, demographics, and trends in Fresno County; and this EIR, which assesses the environmental implications and effects of the General Plan. Together, these documents address the issues required by State law to be covered in an EIR. These documents are available for public review at:

County of Fresno
Planning and Resource Management Department
Development Services Division, Suite "A"
2220 Tulare Street
Fresno, CA 93721

The purpose of the General Plan Update EIR is to:

- to satisfy the requirements of the California Environmental Quality Act (CEQA);
- to inform the general public, the local community, and responsible and interested public agencies about possible environmental effects, possible measures to mitigate those effects, and alternatives to the Proposed Project;
- to enable the Fresno County Board of Supervisors to consider environmental consequences when deciding whether to approve the proposed General Plan and the proposed Economic Development Strategy; and
- to provide a basis for preparation of tiered environmental documents pursuant to the requirements of Section 15385 of the CEQA Guidelines and Public Resource Code Sections 21083 and 21087.

As a comprehensive plan, the General Plan is intended to apply to and establish standards for all types of land use activities under County jurisdiction. However, there are certain land uses that are not regulated by the General Plan and other local zoning regulations. Instead, they are enabled through State and federal laws. Examples of such uses include lands subject to the Forest Practices Act, community college sites, certain residential care facilities, and public access to public resources. While some or all of these preemptive uses can have an effect on the General Plan, they are deemed to meet State-wide and regional environmental, social, and economic goals that can best be accommodated through State and federal control. In addition to these areas that are preempted by statutes, there are a number of other special planning areas that are related to, but are not a part of, the Proposed Project, and, therefore, are not analyzed in this EIR. These include airport land use plans and community plans. Finally, the County General Plan does not apply to the incorporated areas, which are subject to City General Plans.

From a CEQA perspective, the proposed Fresno County General Plan differs from a typical plan or development project. The Proposed Project includes no revisions to land use diagrams in County-adopted regional, community or specific plans and only minor revisions to current land use designations for incorporated areas of these other planning areas. The plan does not identify any new growth areas in the incorporated portion of the County

include updated land use maps for County planning areas or identify more specific locations where future growth would occur. Those land use decisions would be made in the future by the County Board of Supervisors for unincorporated areas and City Councils for incorporated areas. The County's population is assumed to grow at the same rate with or without the proposed General Plan. Chapter 2, Project Description, provides a detailed discussion of the project components and assumptions used in this EIR.

Scope of the EIR

This EIR is a Program EIR, pursuant to Section 15168 of the CEQA Guidelines. The Program EIR is an informational document designed to inform and support the local planning and decision-making process. A Program EIR assesses the impacts of a series of actions that can be characterized as one large project and are related in one of the four ways described in Section 15168(a) of the CEQA Guidelines:

- geographically;
- as logical parts in a chain of contemplated actions;
- in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or
- as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

The analysis of environmental impacts is, by necessity, general in nature.

It is not intended to provide project-specific analysis for individual projects, although future projects may tier off of information in this EIR.

Future site-specific projects may rely on impact conclusions without having to prepare new EIRs to address cumulatively significant impacts.

In preparing the General Plan, 1976 General Plan policies and implementation programs were comprehensively reviewed and updated in an effort to make them as current and effective as possible. The General Plan Update is intended to be self-mitigating; it is assumed impacts identified in this EIR would generally be mitigated through adopted federal, State, and local laws and regulations, through the implementation of identified General Plan policies for unincorporated areas of the County, or some combination thereof, rather than through measures independent of the General Plan. The proposed policies are listed in the *General Plan Public Review Draft Policy Document*, which is available for public review at:

County of Fresno
Planning and Resource Management Department
Development Services Division, Suite "A"
2220 Tulare Street
Fresno, CA 93721

The focus of the EIR analysis is on the changes that would occur due to the increased economic activity engendered by the Economic Development Strategy. The policy direction of the strategy is reflected through the Draft General Plan, and more specifically in the Economic Development Element. Most of the growth associated with the Economic Development Strategy is assumed to occur within the incorporated cities' spheres of

influence. It is assumed that projects within the spheres would be annexed, and therefore subject to city discretionary action, rather than the County. The County would have jurisdiction over the relatively small proportion of growth (estimated at approximately 7 percent of total County growth) that would occur outside of the incorporated areas and their spheres. This EIR assumes that County population and employment would increase to levels currently projected by the California Department of Finance. Therefore, this is a worst-case assumption and the impacts evaluated would represent the maximum extent of identified adverse effects.

It should be noted that the EIR attempts to quantify project impacts where possible. Although used for analytical purposes, these numbers are approximations. Actual numbers may vary slightly, with no invalidation of this analysis or its conclusions.

Levels of Significance

This EIR uses a variety of terms to describe the level of significance of adverse impacts identified during the course of the environmental analysis. The following are definitions of terms used in this EIR:

- **Significant and Unavoidable Impact** - Impacts that exceed the defined standards of significance and that cannot be eliminated or reduced to a less-than-significant level, either because feasible mitigation measures do not exist, or such measures would be under the jurisdiction of an agency other than the County.
- **Significant Impact** - Impacts that exceed the defined standards of significance and that can be eliminated or reduced to a less-than-significant level through the implementation of feasible mitigation measures.
- **Potentially Significant Impact** - Significant impacts that may ultimately be determined to be less than significant; the level of significance may be reduced in the future through implementation of policies or guidelines (which are not required by statute or ordinance), or through further definition of the project detail in the future. Potentially significant impacts may also be impacts where there is not enough information to make a finding; however, for the purpose of this EIR, they are considered significant. Such impacts are equivalent to significant impacts and require the identification of feasible mitigation measures.
- **Less-Than-Significant Impact** - Impacts that are adverse but that do not exceed the defined standards of significance.

Development under the Proposed Project would occur within both incorporated and unincorporated areas (see Chapter 2, Project Description for more detail). Within the unincorporated areas, the County has the jurisdiction to enforce Draft General Plan policies and the mitigation measures identified in this EIR. Similar policies and measures are available to the cities to direct development within their boundaries. However, the County cannot compel the cities to adopt and implement such measures for

development in the incorporated areas. Therefore, the findings of significance may differ for impacts due to development in the unincorporated areas versus the incorporated areas. Where applicable, the impact discussions reflect these differences. In addition, Table 3-1, Summary of Impacts and Mitigation Measures, identifies the significance of each impact for areas within County jurisdiction and those areas outside of the County's jurisdiction.

Environmental Review Process

A Notice of Preparation (NOP) was prepared and circulated for a 30-day period of public review comment on April 30, 1999. A copy of the NOP is included in this document (Appendix A). Comments on the NOP are also included in this EIR (Appendix B). This Draft EIR is being publicly circulated beginning on March 3, 2000, for a 45-day period of review and comment by the public and other interested parties, agencies, and organizations. The public review period concludes on April 21, 2000. Comments relating to the Draft EIR may also be presented orally during the public hearings on April 6 and April 20, 2000. All comments or questions about the EIR should be addressed to:

Leona Franke James, Manager
Development Services Division
Planning and Resource Management Department
2220 Tulare Street, Sixth Floor
Fresno, CA 93721

Following the public hearing on this document and after the close of the written public comment period, responses to written and oral comments on the environmental effects of the project will be prepared and published in a supplement to this document. The Final EIR (comprised of this Draft EIR and the published supplement containing comments received on this Draft EIR and responses) will then be considered by the Fresno County Board of Supervisors in a public meeting and will be certified if it is determined to be in compliance with CEQA.

Organization of this EIR

This EIR is organized into the following sections:

Chapter 1 - Introduction: Provides an introduction and overview describing the intended use of the EIR and the review and certification process.

Chapter 2 - Project Description: Provides a description of the proposed General Plan, background information, objectives, and characteristics related to projected population and employment growth.

Chapter 3 - Summary of Impacts and Mitigation Measures: Summarizes environmental impacts that would result from implementation of the General Plan, describes proposed mitigation measures, and indicates the level of significance of impacts after mitigation.

Chapter 4 - Environmental Analysis: Contains the programmatic and cumulative analysis of environmental issue areas. The subsection for each environmental issue contains an introduction and description of the existing setting, standards of significance, methodology used to evaluate impacts, proposed General Plan policies, identifies impacts, and recommends appropriate mitigation measures. Additional information on the scope of the technical analyses is provided below.

Chapter 5 - Other CEQA Considerations: Provides discussions required by CEQA regarding impacts that would result from implementation of the General Plan, including: a summary of cumulative impacts; potential growth-inducing impacts; and unavoidable significant impacts that cannot be mitigated.

Chapter 6 - Alternatives Analysis: Describes the alternatives to the proposed General Plan and their associated environmental effects.

Chapter 7 - References: Itemizes supporting and reference data used in the preparation of the EIR.

Chapter 8 - Report Preparation: Lists report authors by section, agency staff, and others who assisted in the preparation and review of the EIR.

Appendices: Includes appendices to the EIR.

Mitigation Monitoring

CEQA requires that when a public agency makes findings based on an EIR, the public agency must adopt a reporting or monitoring program for those measures which it has adopted or made a condition of the project approval in order to mitigate or avoid significant effects on the environment (Public Resources Code Section 21081.6). The reporting or monitoring program must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6).

The Mitigation Monitoring Program for the General Plan will be prepared for all mitigation measures identified in the EIR. The Mitigation Monitoring Program will be considered by the Board of Supervisors in conjunction with approval of the General Plan and certification of the EIR.

2. PROJECT DESCRIPTION AND DEMOGRAPHIC INFORMATION

Introduction

The Fresno County General Plan is being updated to provide a more current long-term framework for growth in the County and protection of its natural and cultural resources. The Draft General Plan is designed to satisfy State general plan requirements and address related economic development and environmental concerns. The 2020 General Plan Update (Proposed Project) consists of the following: a *Draft General Plan Background Report* (*Background Report*) describing baseline or existing conditions; a *Draft General Plan Policy Document* that includes elements, policies, standards and programs to guide future decisions concerning land use planning and development; and an Economic Development Strategy, which is not part of the General Plan, that formalizes objectives, strategic actions, and organizational responsibilities, and work plans to expand business activity and employment in the County.

This chapter describes the project setting, defines the project, and explains Fresno County's General Plan update process. A thorough description of the environmental setting of Fresno County is contained in the *Background Report*, which is incorporated by reference and summarized, as applicable, in each section of Chapter 4. The *Background Report* is available to the public at the County of Fresno Planning and Resource Management Department, Development Services Division, Suite A, 2220 Tulare Street, Fresno.

Project Setting

Fresno County is located approximately in the center of the San Joaquin Valley, stretching approximately 100 miles from the Coast Range foothills to the eastern slope of the Sierra Nevada (see Figure 2-1). The County is bordered by San Benito, Merced, Madera, Mono, Inyo, Tulare, Kings, and Monterey counties. There are 15 incorporated cities in Fresno County, all located on the valley floor. Over 60 percent of the County's total population and about 80 percent of the incorporated population resides in the County's two largest cities, Fresno and Clovis. Interstate 5 (I-5), State Route (SR) 99, SR 33, and SR 41 are the major north-south transportation routes. Major east-west routes include SR 168 and SR 180.

Fresno County is the nation's top-ranked agricultural-producing county. Business and recreational opportunities are important elements of the County's economy.

Fresno County occupies an area of approximately 6,000 square miles. Table 2-1 shows the existing generalized land use categories for the land within the County. Maps of current land uses in the County and sphere of influence (SOI) for incorporated areas are provided in Figures 2-2 and 2-3, respectively.

Figures 2-1 2-2 and 2-3 are individual figures, linked from the Table of Contents

TABLE 2-1 SUMMARY OF EXISTING LAND USE BY GENERALIZED LAND USE CATEGORIES FRESNO COUNTY 1997	
Generalized Land Use Category	Square Miles
Residential	152
Commercial	7
Industrial	11
Agriculture	2,911
Resource Conservation (including national forests and parks, timber preserves)	2,691
Unclassified (includes streets and highways, rivers)	11
Incorporated Cities	154
TOTAL:	6,005
SOURCE: Fresno County, <i>Perspectives on the Year 2020: Economic and Growth Scenarios</i> , Table 2, March 1998.	

As shown in Table 2-1, the single largest category of land use is agriculture. Incorporated cities occupy about 2.5 percent of the County's total land area. The Fresno County Planning Area contains an estimated 5,851 square miles, including approximately 5,772 square miles outside city SOIs. With the exception of State and federally-owned land, the unincorporated area is under the jurisdiction of the Fresno County Board of Supervisors.

The need for additional land to accommodate future growth in 2020 would occur with or without the Proposed Project. Existing land availability and 2020 land demand for cities in Fresno County is shown in Table 2-2. The "Difference" column shows the difference between available land and land demand in 2020. A value shown in parentheses indicates that land demand would exceed available land. As illustrated in Table 2-2, with the exception of the City of Fresno, the projected land demand in 2020 would be accommodated within each city's SOI.

For the purposes of the General Plan Update and EIR, five geographic analysis areas were delineated. The geographic areas have no policy status, but were used during the development of the update process to allocate population and employment for each of the growth scenarios. General characteristics of each of these areas, from west to east, are summarized below. These terms are used in the EIR where appropriate to the analysis. Figure 2-4 shows boundaries of the five geographic analysis areas.

Figure 2-4 is a separate figure linked from the Table of Contents

TABLE 2-2 LAND DEMAND AND AVAILABILITY FOR CITIES WITHIN FRESNO COUNTY Total Gross Acres - Residential and Non-Residential Land Demand					
City	1996 Acreage in SOI	1996 Acreage in City Limits	1996 Unincorporated Acreage in SOI¹	2020 Land Demand Acreage²	Difference³
Coalinga	5,248	2,624	2,624	309	2,315
Clovis	14,592	9,856	4,736	4,556	180
Firebaugh	3,200	1,984	1,216	217	999
Fowler	4,544	1,216	3,328	213	3,115
Fresno	90,880	66,752	24,128	26,099	(1,971)
Huron	1,344	1,024	320	293	27
Kerman	3,072	1,216	1,856	308	1,548
Kingsburg	3,648	1,472	2,176	315	1,861
Mendota	2,240	1,344	896	271	625
Orange Cove	1,664	1,024	640	208	432
Parlier	1,664	960	704	293	411
Reedley	4,672	2,752	1,920	695	1,225
San Joaquin	960	640	320	197	123
Sanger	4,672	2,880	1,792	613	1,179
Selma	6,528	2,496	4,032	723	3,309
Notes: SOI - Sphere of Influence 1. Represents the total amount of unincorporated land outside city limits but within the city sphere of influence. 2. From Exhibit 28, <i>Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology</i> , Applied Development Economics, February 1999. [Table 2-8 of this EIR] 3. The "Difference" column shows the difference between available land and land demand. The negative value (in parentheses) shows land demand that exceeds available land. This does not reflect potential infill development within city limits or existing development in the unincorporated sphere of influence. SOURCE: Applied Development Economics, <i>Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology</i> , Exhibit 29, February 1999.					

Coast Range Foothills

The Coast Range Foothills geographic area lies on the western-most side of Fresno County, generally west of I-5. This area is devoted to primarily public land, rangeland, and agricultural

land with some very small rural communities and highway commercial areas. There are no incorporated cities within this area.

Westside Valley

This western boundary of the Westside Valley geographic area is west of I-5. The San Joaquin River forms the northern boundary. The eastern boundary is just west of the city of San Joaquin and the community of Lanare. This area includes the cities of Firebaugh, Mendota, Coalinga, and Huron. The predominant land use outside of the cities is agriculture, in addition to some small rural communities.

Eastside Valley

The Eastside Valley geographic area is located within the middle of Fresno County between the Westside Valley and the Sierra Foothills. This area is the most urbanized area of the County with 11 cities (e.g., Fresno, Clovis, Kerman, San Joaquin, Sanger, Fowler, Selma, Kingsburg, Parlier, Reedley, and Orange Cove) and several unincorporated communities (e.g., Tranquility, Biola, Lanare, Riverdale, Laton, Del Rey, Caruthers, Easton, and Friant). The land use in this area consists of a mixture of urban and rural residential, commercial, and agricultural uses.

Sierra Foothills

The boundaries of the Sierra Foothills geographic area include the Friant-Kern Canal on the west side and the State and federal lands on the east side. There are no incorporated communities within this area. This area contains mainly rural residential, rural communities, agriculture, and open space.

Sierra Nevada Mountain Area

This area is located on the easternmost side of the County with the western boundary following the State and federal lands. There are no incorporated communities within this area. Generally, this area consists of State and federal land with some rural communities in the northwest.

Existing General Plan Background

The existing Fresno County General Plan was adopted in 1976 and later supplemented with several community plans and various amendments. The 1976 General Plan consists of nine County-wide topical elements, five regional plans, 13 community plans for the smaller incorporated cities, ten plans for unincorporated communities, eight community plans for the Fresno-Clovis area, and six specific plans. All of the General Plan elements have been amended several times over the years since adoption. Table 2-3 lists the 1976 General Plan elements and existing regional plans, community plans, community area plans, and specific plans.

TABLE 2-3 COMPONENTS OF THE EXISTING FRESNO COUNTY GENERAL PLAN	
COUNTY-WIDE GENERAL PLAN ELEMENTS Land Use Transportation Scenic Highways Parks and Recreation Open Space/Conservation Safety/Seismic Safety Noise Housing Public Facilities	
REGIONAL PLANS Sierra-North Regional Plan Coalinga Regional Plan Westside Freeway Regional Plan Kings River Regional Plan Sierra-South Regional Plan	
INCORPORATED CITIES/COMMUNITY PLANS Coalinga Community Plan Firebaugh Community Plan Fowler Community Plan Kerman Community Plan Kingsburg Community Plan Huron Community Plan Mendota Community Plan Orange Cove Community Plan Parlier Community Plan Reedley Community Plan Sanger Community Plan San Joaquin Community Plan Selma Community Plan	
UNINCORPORATED COMMUNITY PLANS Biola Community Plan Caruthers Community Plan Del Rey Community Plan Friant Community Plan Easton Community Plan Laton Community Plan Riverdale Community Plan Shaver Lake Community Plan Tranquillity Community Plan Lanare Community Plan	

FRESNO-CLOVIS COMMUNITY AREA PLANS Bullard Community Plan Fig Garden Neighborhood Plan Clovis Community Plan Fresno High-Roeding Community Plan McLane Community Plan Roosevelt Community Plan Edison Community Plan Woodward Park Community Plan
SPECIFIC PLANS Shaver Lake Forest Specific Plan Bretz Mountain Village Specific Plan Wild Flower Village Specific Plan Millerton Specific Plan Del Rio Specific Plan Quail Lake Estates Specific Plan
SOURCE: Fresno County, Fresno County General Plan Policy Document, Public Review Draft, January 2000.

General Plan Update Process

Fresno County began its General Plan Update program in late 1996 when it selected a team of consultants to assist the County in its update effort.

The General Plan Update process was undertaken in two major phases: the focus of Phase 1 was to establish the foundation and policy direction for the new General Plan; Phase 2 provides for preparation of a Draft General Plan, a Draft EIR, and a Fiscal and Financial Analysis and public review and adoption of the new General Plan. The current General Plan Program is intended to update and expand all County-wide topical elements, with the exception of the Housing Element, which is not scheduled for update until 2002.

The General Plan Update Program has included several activities. Early in 1997, the University of California Cooperative Extension conducted a series of 15 focus groups throughout the County to solicit County residents' views of land use and growth trends, farmland and resource protection, jobs and economic development, and related issues. The focus group effort was specifically designed to provide information to the Board of Supervisors, other County officials, and the consultants working on the General Plan Update.

In July 1997, the County released for public and agency review a *Draft General Plan Background Report* summarizing existing conditions and trends for all issues to be addressed in the new General Plan. Topics included demographic characteristics; land use; agriculture; economic and fiscal conditions; transportation and circulation; public facilities and services; recreational, archaeological, historical, and natural resources; air quality; noise; and safety. The report is being updated in conjunction with preparation of this EIR.

In March 1998, the County released a report entitled: *Economic and Growth Scenarios: Perspectives on the Year 2020*. The report describes five economic scenarios for the County and traces their possible growth-related impacts. This report was the basis for discussion in meetings and presentations held throughout the County over a three-month period in the Spring of 1998. Staff also distributed questionnaires to elicit residents' preferences regarding the County's future economy and land use patterns. The result was summarized into a list of issues and value statements which was forwarded to the Fresno County Planning Commission.

After holding three public hearings, the Planning Commission recommended that the Board of Supervisors direct the pursuit of a combination of three economic scenarios. Under this blend of scenarios, (1) agriculture would continue to be strengthened, emphasizing the production of higher value crops; (2) value-added agriculture would be pursued to extend the role of farming into such areas as food processing; and (3) the County's economy would be further diversified, with the expansion of such industries as information processing, metal working, and machinery operations. The Commission also adopted a number of recommendations based upon issues identified in the public hearings. Commission recommendations were forwarded to the Board of Supervisors in June 1998. The Board also endorsed the principles in *A Landscape of Choice: Strategies for Improving Patterns of Community Growth*, an independent report published by the Growth Alternatives Alliance in April 1998. The Board endorsed findings of the report and guiding principles contained in the document were included in the Board's policy direction for the GPU process.

Based on decisions made by the Board of Supervisors concerning economic and growth scenarios, the Economic Development Strategy was prepared to formalize objectives, strategic actions, organizational responsibilities, and work plans to expand business activity and employment in the County.

The ultimate purpose of the Economic Development Strategy is to provide direction for County-wide economic development efforts. Following Board review in December 1998, a preliminary draft of the Economic Development Strategy was sent out to over 300 local agencies, organizations, and individuals. The report is being revised based on comments received and will be available for future review by the Board and ultimately for adoption by the Board at the end of the update process.

Development of Economic and Growth Assumptions

Based on the recommendations and direction obtained through the process described above, the Draft General Plan is based on a combination of Economic Scenarios B/C (Shifts in Agricultural Production/Value-Added Agriculture) and D (Non-Agricultural Basic Employment) that were described in the March 1998 *Economic and Growth Scenarios: Perspectives on the Year 2020* report. The statistical allocation of population and job growth among the County's 15 incorporated cities and five unincorporated geographic sectors of the County was based on a methodology described in the *Preferred Economic and Growth Scenario: Economic and Growth Allocation and Methodology Report* prepared in February 1999. This economic and growth allocation was used as a general guide for the expected level and distribution of growth to assist the County Staff, General Plan Consultants, and other update participants in drafting General Plan policies and the land use diagram, and in preparing the General Plan EIR.

Projected population and job growth were allocated to both incorporated areas (spheres of influence) and unincorporated areas within the County.

The estimated population and employment projections for the Proposed Project are lower than those assumed in Scenarios B/C and D. New California Department of Finance (DOF) projections released in December 1998 reduces projected County-wide year 2020 population from approximately 1.5 million to 1.1 million. The 1998 DOF 1996-2020 projection averages 1.6 percent annual growth, compared to 2.5 percent that occurred during the 1970-90 period and 2.2 percent from 1990 to 1996. The most recent growth rates have been below 2 percent, and DOF estimates over the long term that Fresno County will move closer to the State average, which DOF projects to decline from the high growth periods during the 1970s and 1980s.

The DOF projections reflect a continuation of past economic development trends in Fresno County and do not recognize the potential effect of the County's proposed Economic Development Strategy in terms of increased job growth or shifts in the type of jobs that may be created in the County.

However, because the main concern of the proposed Economic Development Strategy is improving the balance between job growth and labor force, DOF projections were selected as the basis for purposes of updating the General Plan.

Project Description

Project Objectives

Fresno County's General Plan Update would provide a County-wide policy framework for urban and rural development, economic development, and protection of agricultural land and environmental quality. The 2020 General Plan Update (GPU) was designed primarily to increase employment and economic development opportunities in Fresno County. Various economic and growth scenarios were developed in the GPU process, leading to the selection of an Economic Development Strategy that is designed to achieve a substantial reduction in the County's unemployment rate. The revised General Plan as proposed is based on aggregate employment, housing and population projections for subareas of the County, rather than updated land use designations for particular areas of the County. The ultimate purpose of the Economic Development Strategy is to provide direction for County-wide funding allocations, economic development program, welfare-to-work efforts and related actions.

Section 15124(b) of the CEQA Guidelines requires that the project description include a statement of the objectives of the Proposed Project.

The County Department of Planning and Resource Management has identified the following primary objectives for the Proposed Project:

- Diversify the Fresno County economy to provide a broad range of employment opportunities.
- Reduce unemployment and promote the creation of higher wage jobs.

- Minimize conversion of agricultural land.
- Promote compact urban development.
- Minimize destruction and disturbance of natural habitat.
- Enhance the quality of life for residents of Fresno County.

Project Characteristics

The guiding principles for the General Plan Update are contained in the Economic Development Strategy, which would alter the mix and amount of employment-generating development in the cities and unincorporated areas of the County. The General Plan Update is also based on the following themes:

<i>Economic Development:</i>	The plan seeks to promote job growth and reduce unemployment through the enhancement and expansion of its traditional agricultural economic base and through the diversification of its economic base, expanding such business clusters as information technology, industrial machinery, and tourism.
<i>Agricultural Land Protection:</i>	The plan seeks to protect its productive agricultural land as the county's most valuable natural resource and the historical basis of its economy through directing new urban growth to cities and existing unincorporated communities and by limiting the encroachment of incompatible development upon agricultural areas.
<i>Growth Accommodation:</i>	The plan is designed to accommodate population growth through the year 2020 consistent with the California Department of Finance projection of 1.1 million by 2020 (November 1998). This represents an additional population of approximately 344,000 (see Appendix A).
<i>Urban-Centered Growth:</i>	The plan promotes compact growth by directing most new urban development to incorporated cities and existing urban communities that already have the infrastructure to accommodate such growth. This plan assumes over 93 percent of new population growth and new job growth will occur within incorporated city spheres of influence and seven percent would occur in unincorporated areas (see Appendix A). Accordingly, this plan prohibits designation of new areas as Planned Rural Community and restricts the designation of new areas for rural residential development while allowing for the orderly development of existing rural residential areas.
<i>Efficient and Functional Land Use Patterns:</i>	The plan promotes compact, mixed-use, and pedestrian and transit-oriented development within city spheres as well as in the county's unincorporated communities.
<i>Service Efficiency:</i>	The plan provides for the orderly and efficient extension of infrastructure such as roadways, water, wastewater, drainage, and expansion services to support the county's economic development goals and to facilitate compact growth patterns. The plan supports development of a multi-modal transportation system that meets community mobility needs, improves air quality, and shifts travel away from single-occupant automobiles to less polluting transportation models.

<i>Recreational Development:</i>	The plan supports the expansion of existing recreational opportunities and the development of new opportunities, particularly along the San Joaquin River, in the foothills, and in the Sierras, for the employment of county residents and to increase tourism as part of the county's diversified economic base.
<i>Resource Protection:</i>	The plan seeks to protect and promote the careful management of the county's natural resources, such as its soils, water, air quality, minerals, and wildlife and its habitat, to support the county's economic goals and to maintain the county's environmental quality.
<i>Hazard Mitigation:</i>	The plan seeks to protect county residents and visitors through mitigating hazards and nuisances such as geological seismic hazards, flooding, wildland fires, hazardous materials, and noise.
<i>Enhanced Quality of Life:</i>	The plan strives throughout all its elements to improve the attractiveness of the county to existing residents, new residents, and visitors through increased prosperity, attractive forms of new development, protection of open space and view corridors, promotion of cultural facilities and activities, efficient delivery of services, and expansion of recreational opportunities.

Development of the Proposed Project also reflects the following guiding principles identified in *A Landscape of Choice*:

1. Utilize urban land as efficiently as possible.
2. Develop livable communities that emphasize pedestrian or transit-oriented design.
3. Recognize the importance of agriculture and the need to protect productive farmland.

These principles provided direction for development of the General Plan policies.

The General Plan Update would not immediately alter the existing land use designations or zoning in the County or change the rate and amount of population growth projected over the next 20 years. While the size of the County's population is not expected to be affected by the Proposed Project, the manner in which growth would occur would be influenced by updates of the General Plan policies.

General Plan Policies

The Proposed Project is a comprehensive update of the County-wide topical elements (excluding housing) of the Fresno County General Plan. Existing elements of the General Plan are being modified or expanded and organized under the following headings:

- Economic Development
- Land Use
- Transportation and Circulation

- Public Facilities and Services
- Open Space and Conservation
- Health and Safety
- Housing (not included in this update)

For the most part, the General Plan Update is intended to be self-mitigating; it is assumed impacts identified in this EIR would generally be mitigated through adopted Federal, State, and local laws and regulations, through the implementation of identified General Plan policies and programs for unincorporated areas of the County, or some combination thereof, rather than through measures independent of the General Plan. The proposed policies are listed in the Draft General Plan Policy Document, which is available for public review at:

County of Fresno
Planning and Resource Management Department
Development Services Division, Suite "A"
2220 Tulare Street
Fresno, CA 93721

Economic Development Strategy and Growth Projections

The Draft General Plan Policy Document is based upon a preferred economic and growth scenario, the draft Economic Development Strategy, and related direction provided by the Fresno County Board of Supervisors, as described in "Development of Economic and Growth Assumptions," above. The Proposed Project includes higher rates of job growth in relation to population growth than the County has experienced in the past. Under the General Plan Update, the County's population would grow at an average annual rate of 1.6 percent, from a population of 769,700 in 1996 to 1,113,785 in the year 2020, consistent with December 1998 Department of Finance projections. Job growth would exceed population growth, reducing unemployment from 13 percent to 4 percent. Key employment growth sectors would be in agricultural manufacturing, non-agricultural manufacturing, and commercial office development. Table 2-4 illustrates changes in the employment profile that would occur during the 1996-2020 timeframe of the Proposed Project.

The geographic distribution of the 1996-2020 growth increment and year 2020 population (and the percent change from existing conditions) is shown in Table 2-5. Under the Proposed Project, 93 percent of new population and employment growth would occur within city SOIs and 7 percent in the unincorporated areas, compared to 85 percent and 15 percent, respectively, in 1996. Clovis and Fresno would gain a higher percentage of future growth in population than their 1996 share. Population in the Westside Valley geographic area would also increase, but not to the same level as incorporated areas in the Eastside Valley geographic area.

Table 2-6 lists the geographic distribution of employment by business sector. As shown in Table 2-6, employment would become increasingly concentrated in incorporated areas (primarily Fresno and Clovis) and their SOIs. Table 2-7 shows the geographic distribution of non-residential space for retail, commercial, industrial, and public/institutional uses. As shown in Table 2-6, Clovis

Table 2-4

Table 2-5

Table 2-6

Table 2-7

and Fresno would gain a higher percentage of future growth in employment categories than their 1996 share. The only exception to this is in agricultural production employment, which would increase more in the County's unincorporated areas. The highest job growth would occur in the office sector. Office employment in Fresno and Clovis would increase from 70 to 80 percent of that in the business sector. Clovis is projected to increase from 10 percent to 16 percent. In the industrial sector, the unincorporated areas would have a very high growth rate. Some food processing development is likely to occur in the unincorporated areas as this sector is likely to expand rapidly. The County-wide General Plan Land Use Diagram and the various regional, community, and specific plan land use diagrams contain a surplus of planned commercial and industrial land for development. However, market forces would largely determine the rate at which employment growth occurs in Fresno County. Fresno County could ultimately accommodate an estimated 49,700 jobs.

Land use projections assume that future development would generally be consistent with the existing residential and non-residential development patterns and densities. The incremental change in land use for the period 1996-2020 and year 2020 geographic distribution of developed non-agricultural land (in gross acres) is presented in Table 2-8. In 2020, it is estimated that the County would have approximately 77,000 gross acres of residential land and 38,000 acres of non-residential land.¹ These totals include all land within the County, including the SOI. Land use projections indicate that almost 90 percent of newly developed land would occur in the incorporated areas. As shown in Table 2-8, a little over one-half of the new development would be in the incorporated areas of the Eastside Valley geographic area. Incorporated areas of the Westside Valley geographic area would also experience a similar increase in land use demand. As indicated in Table 2-2, the projected land demand in 2020 would be accommodated within each city's SOI, except in Fresno.

Table 2-9 indicates the anticipated increase in housing. As shown in Table 2-9, there would be an additional approximately 81,600 single-family dwelling units, totaling approximately 263,000 dwelling units in year 2020. Multi-family dwelling units would increase approximately an additional 29,300, to a total of approximately 93,700. Most of the housing growth would occur in the Fresno-Clovis area. For both the incorporated and unincorporated areas, housing densities would be four dwelling units per acre (DU/ac) for single-family residences, and eight DU/ac for multi-family housing. As discussed above, an additional 24,070 acres would be developed to accommodate increased housing, bringing the total number of acres developed in residential uses in 2020 to approximately 77,000.

As discussed above, the Proposed Project would not affect the County's population growth or housing development. The Proposed Project, particularly the Economic Development Strategy, would affect the amount and type of non-residential development, including the mix of agricultural, industrial and commercial development. To illustrate the direct effect of the project on these sectors, Table 2-10 shows development that would be anticipated in 2020 if the Proposed Project is not implemented, and compares it to non-residential development as it is expected to occur under the Proposed Project.

Table 2-8

Table 2-9

Table 2-10

Relationship of General Plan Update to Other Existing Plans and Policies

Fresno County regulates the use of land within its jurisdiction through its *General Plan* and implementing regulations for the purpose of promoting and protecting the health, safety, and welfare of the public. The *General Plan* is a legal document, adopted by the Board of Supervisors, which primarily affects development in the County. There are numerous other legal documents affecting development in the County. These include the Fresno County Zoning Ordinance, Memoranda of Understanding (MOUs), Spheres of Influence, and city plans.

In unincorporated areas, the *General Plan* directly controls land use and is the legal basis for zoning and approval of development permits. Inside the city limits of Fresno County's 15 cities, the individual city general plans directly control land use. Since city general plans and the County's *General Plan* overlap in areas planned for city expansion but not yet annexed, the County cooperates with the cities in an effort to develop compatible land use plans for these areas of overlap.

The Proposed Project does not include updated land use maps for County planning areas (i.e., regional plans, community plans, and specific plans) or identify more specific locations where future growth would occur. Those land use decisions would be made by the County Board of Supervisors for unincorporated areas and by city councils for incorporated areas. The County's population is assumed to grow at the same rate with or without the *General Plan* Update. For these reasons, the focus of the EIR analysis is on the changes that would occur due to the increased economic activity engendered by the Economic Development Strategy. Most of the growth associated with the Economic Development Strategy is assumed to occur within the cities' spheres of influence. It is assumed that projects within the spheres would be annexed, and therefore subject to city discretionary action, rather than the County. The County would have jurisdiction over the small proportion of growth that would occur outside of the incorporated areas and within cities' spheres of influence.

Regional plans, community plans, and specific plans will not be updated as part of the Proposed Project, although the *General Plan* Update proposes a new framework for all these plans, and identifies needed plan changes or additions based on revisions to the County-wide elements.

Project Schedule

The timeframe for the updated *General Plan* will be the year 2020. The *General Plan* Update assumes that the County population will grow from 769,700 in 1996 to 1,113,785 in 2020, consistent with projections released by the California Department of Finance in December 1998. Increases in job growth would also occur over the same time period.

Intended Uses of the EIR and Required Approvals and Actions

The proposed *General Plan* Update provides goals, policies, and implementation measures consistent with the intent of Government Code Sections 65300 and 65300.5, which would guide the future growth of the County. The *General Plan* would provide a comprehensive framework for the County's subsequent adoption of a wide range of policy documents, standards, specific plans, and regulations (ordinances). As discussed in Chapter 1, Introduction, this EIR is a program-level document intended to provide information to the public and to decision-makers regarding the potential environmental effects of adoption of the GPU.

The *Draft General Plan Policy Document* and *Draft EIR* have been prepared by a consulting team in coordination with County staff. Following the release of these documents for public and agency review and comment, the Planning Commission will conduct public hearings on the *Draft General Plan* and *Draft EIR*. After consideration of public input, the Planning Commission will deliberate and make recommendations for any modifications to the General Plan Update. At that point, County staff and consultants will make revision to the documents and prepare the final *General Plan* for adoption by the Board of Supervisors and prepare the *Final EIR* for certification.

The *Final EIR* will be certified before the Board of Supervisors formally adopts the updated *General Plan*. The County may also use the *Final EIR* as a program EIR or first-tier EIR in the approval of subsequent plans and projects. Other local and State agencies may also use the *Final EIR* in the approval of their own plans and projects.

To implement the General Plan Update, the County would adopt or approve a number of more specific actions, such as ordinances, guidelines, studies, specific plans, use permits, or subdivision maps, all of which would be required to be consistent with the guidelines provided in the General Plan Update. Some of the major policy documents, standards, regulations, programs, and procedures that may be adopted, approved, or revised by Fresno County based on the General Plan Update include, but would not be limited to: regional plans, community plans, specific plans, zoning ordinance and map, subdivision regulations, capital improvement plans, transportation plans, design review guidelines, redevelopment plans, public facilities master plans, and various ordinances (e.g., noise, grading, tree protection).

Revising the General Plan Update

From time to time, the County will be asked to consider proposals for specific amendments to the General Plan. The County will initiate some of these proposals itself, but most will be initiated by private property owners and developers. Most general plan amendments involve changes in land use designations for individual parcels. State law limits general plan amendments to four times per year, but each amendment can include multiple changes. As with the adoption of the general plan itself, general amendments are subject to environmental review, public notice, and hearing requirements and must not create inconsistencies with other parts of the plan.

Alternatives

The following three alternatives to the Proposed Project have been identified. Additional detail regarding each alternative and the analysis of the environmental effects associated with each alternative is provided in Chapter 6, Alternatives Analysis.

No Project Alternative

This alternative is based on Scenario A from the March 1998 *Economic and Growth Scenarios Report*. The No Project Alternative assumes that population will grow in accordance with the 1998 Department of Finance projections, identical to that of the Proposed Project (approximately 1.1 million County-wide in 2020), but that the County would not pursue the

Economic Development Strategy. The population and housing projections for the incorporated and unincorporated areas would be identical to the Proposed Project. Job growth would not accelerate as projected for the Proposed Project scenario, and the employment profile would remain at prevailing levels and future growth would reflect current trends, as described in Scenario A in the March 1998 *Economic and Growth Scenarios Report*.

High Growth Alternative

Some jurisdictions have commented that the 1998 DOF projections underestimate future growth in the County. Under the High Growth Alternative, County population would increase by 743,669 for a total of approximately 1.5 million in year 2020, consistent with the employment assumptions in Scenario E in the March 1998 *Economic and Growth Scenarios Report*. The High Growth Alternative provides a "worst-case" analysis of the Economic Development Strategy, which would better reflect environmental effects if growth occurs at faster pace than estimated in the 1998 DOF projections.

Increased Residential Development Densities Alternative

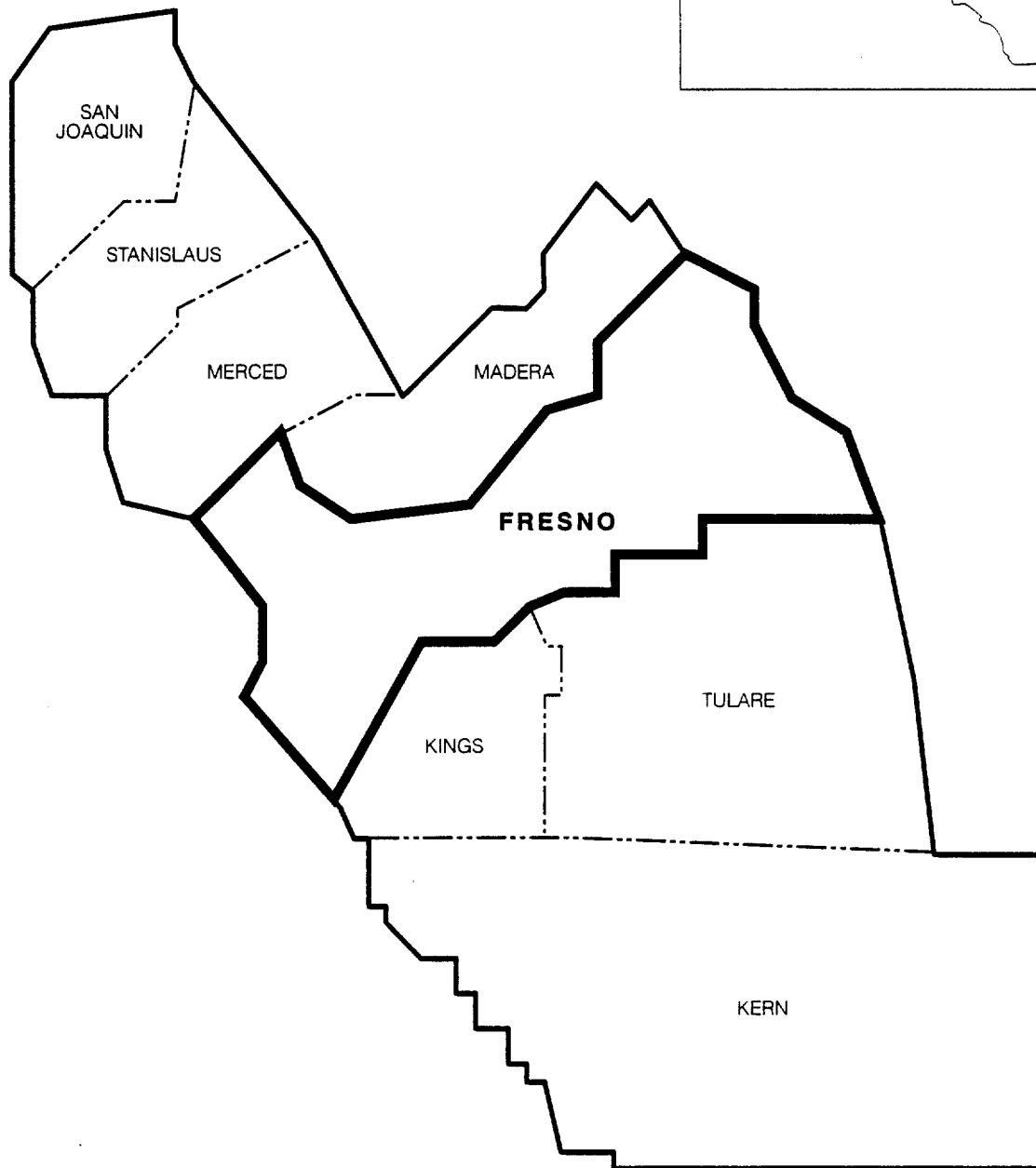
Employment and population projections under this alternative would be the same as for the Proposed Project. However, residential development densities would be higher and residential development projections by acreage would, therefore, be reduced. Higher residential development densities would be comparable to those recommended in the report, *A Landscape of Choice*, which was endorsed by the Board of Supervisors in October 1998. These projections are based on average densities of 6 dwelling units per acre (DU/ac) for single-family housing and 12 units per acre for multi-family housing, as compared to 4 dwelling units per acre (DU/ac) for single-family residences, and 8 DU/ac for multi-family housing under the Proposed Project.

ENDNOTES

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1. This figure does not include existing rural residential acreage, because an accurate inventory does not exist for rural residential development.

FIGURE 3-1

*Fresno County
and the
San Joaquin Valley Region*



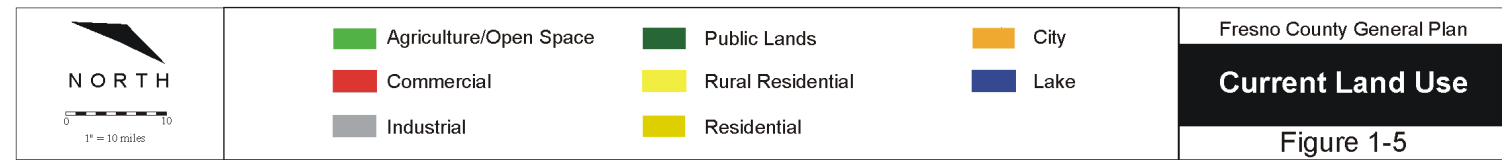
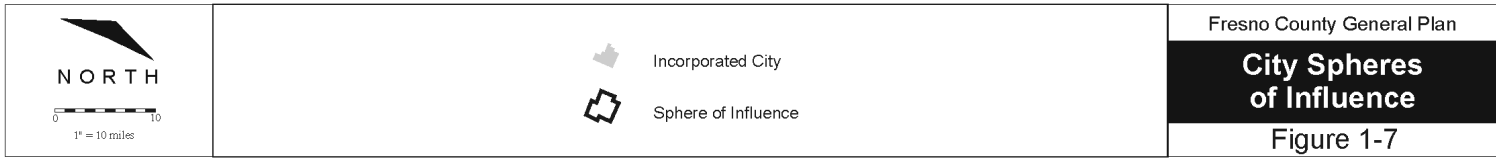
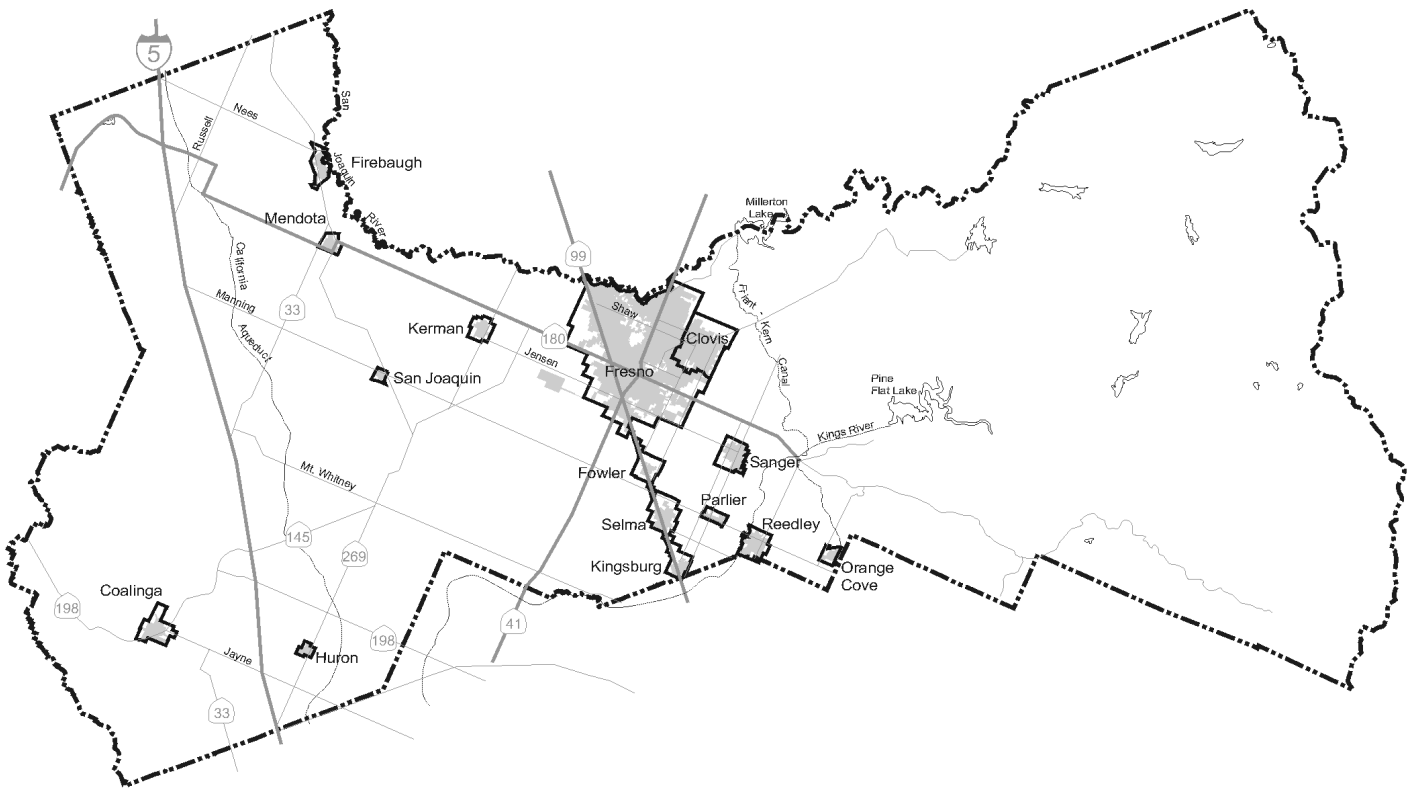
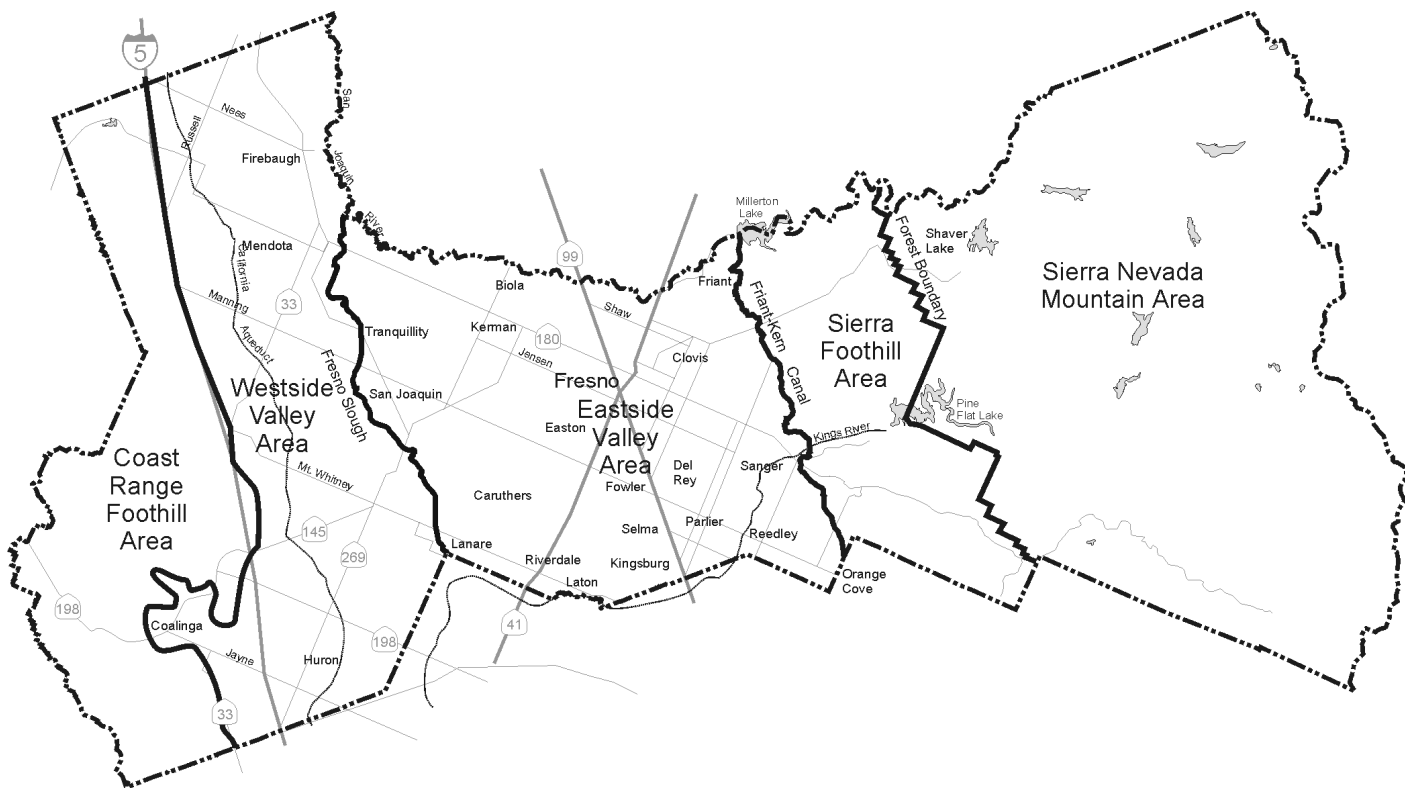


Figure 1-5



Source: Fresno County GIS Database, 1997



<p>NORTH</p> <p>0 10</p> <p>1" = 10 miles</p>	<p>Geographic Area Boundary</p>	<p>Fresno County General Plan</p> <p>Five Geographic Areas</p> <p>Figure 1</p>
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3. SUMMARY OF IMPACTS AND MITIGATION MEASURES

Introduction

This summary chapter provides an overview of the 2020 General Plan Update (Proposed Project), which is described in detail in Chapter 2, Project Description and Demographic Information, and the conclusions of the environmental analysis, provided in detail in Chapter 4. This chapter also summarizes the alternatives to the 2020 General Plan Update that are described in Chapter 6, Alternatives, and identifies the Environmentally Superior Alternative. Table 3-1, at the end of this chapter, provides a summary of the environmental effects of the Draft General Plan identified in each technical issue section of Chapter 4. The table consists of the environmental impacts, the significance of the impact, the proposed mitigation measure(s), and the significance of the impact after the mitigation measure is implemented.

Project Setting

Fresno County is located approximately in the center of the San Joaquin Valley, stretching approximately 100 miles from the Coast Range Foothills to the eastern slope of the Sierra Nevada (see Figure 2-1 in Chapter 2).

The County is bordered by San Benito, Merced, Madera, Mono, Inyo, Tulare, Kings, and Monterey counties. There are 15 incorporated cities in Fresno County, all located on the valley floor. Fresno County occupies an area of approximately 6,000 square miles. Over 60 percent of the County's total population and about 80 percent of the incorporated population resides in the County's two largest cities, Fresno and Clovis. Interstate 5 (I-5), State Route (SR) 99, SR 33, and SR 41 are the major north-south transportation routes. Major east-west routes include SR 168 and SR 180.

Project Description

The existing Fresno County General Plan was adopted in 1976 and later supplemented with several community plans and various amendments. Fresno County began its General Plan program in late 1996 when it selected a team of consultants to assist the County in its update effort. The General Plan process was undertaken in two major phases: the focus of Phase 1 was to establish the foundation and policy direction for the new General Plan; Phase 2 provides for preparation of a Draft General Plan, a Draft EIR, and a Fiscal and Financial Analysis and public review and adoption of the new General Plan. The current General Plan Program is intended to update and expand all County-wide topical elements, with the exception of the Housing Element, which is not scheduled for update until 2002.

The General Plan Program has included several activities. Early in 1997, the University of California Cooperative Extension conducted a series of 15 focus groups throughout the County to solicit County residents' views of land use and growth trends, farmland and resource protection, jobs and economic development, and related issues. The focus group effort was specifically designed to provide information to the Board of Supervisors, other County officials, and the consultants working on the General Plan.

In July 1997, the County released for public and agency review a *Draft General Plan Background Report* summarizing existing conditions and trends for all issues to be addressed in the new General Plan. Topics included demographic characteristics; land use; agriculture; economic and fiscal conditions; transportation and circulation; public facilities and services; recreational, archaeological, historical, and natural resources; air quality; noise; and safety.

In March 1998, the County released a report entitled: *Economic and Growth Scenarios: Perspectives on the Year 2020*. The report describes five economic scenarios for the County and traces their possible growth-related impacts. This report was the basis for discussion in meetings and presentations held throughout the County over a three-month period in the Spring of 1998. Staff also distributed questionnaires to elicit residents' preferences regarding the County's future economy and land use patterns.

The result was summarized into a list of issues and value statements which was forwarded to the Fresno County Planning Commission.

After holding three public hearings, the Planning Commission recommended that the Board of Supervisors direct the pursuit of a combination of three economic scenarios. Under this blend of scenarios, (1) agriculture would continue to be strengthened, emphasizing the production of higher value crops; (2) value-added agriculture would be pursued to extend the role of farming into such areas as food processing; and (3) the County's economy would be further diversified, with the expansion of such industries as information processing, metal working, and machinery operations. The Commission also adopted a number of recommendations based upon issues identified in the public hearings. Commission recommendations were forwarded to the Board of Supervisors in June 1998. The Board also endorsed the principles in *A Landscape of Choice: Strategies for Improving Patterns of Community Growth*, an independent report published by the Growth Alternatives Alliance in April 1998. The Board endorsed findings of the report and guiding principles contained in the document were included in the Board's policy direction for the GPU process.

Based on decisions made by the Board of Supervisors concerning economic and growth scenarios, the Economic Development Strategy was prepared to formalize objectives, strategic actions, organizational responsibilities, and work plans to expand business activity and employment in the County.

The ultimate purpose of the Economic Development Strategy is to provide direction for County-wide economic development efforts. Following Board review in December 1998, a preliminary draft of the Economic Development Strategy was sent out to over 300 local agencies, organizations, and individuals. The report is being revised based on comments received and will be available for future review by the Board and ultimately for adoption by the Board at the end of the update process.

Environmental Impacts and Mitigation

Under CEQA, a significant effect on the environment is defined as a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. For development that occurs under the County's jurisdiction, significant impacts would occur in the following areas: Transportation and Circulation, Wastewater, Storm Drainage and

Flooding, Water Resources, Biological Resources, and Air Quality. Impacts in these areas would remain significant even after implementation of Draft General Plan policies and mitigation identified in this EIR. Therefore, the impacts are considered significant and unavoidable. Impacts from development in the incorporated areas would be considered significant in these areas, as well as Land Use, Public Services, Cultural Resources, Mineral Resources, Seismic and Geologic Hazards, Hazardous Materials, Noise, and Visual Resources. These impacts are also considered significant and unavoidable, because there are no mechanisms by which the County can compel the cities to implement policies or mitigation measures to reduce the effects of new development.

This EIR discusses mitigation measures that could be implemented by the County to reduce potential adverse impacts to a level that is considered less than significant. Such mitigation measures are noted in this report and are found in the following sections: Transportation and Circulation, Biological Resources, Air Quality and Visual Quality. If an impact is determined to be significant or potentially significant, applicable mitigation measures are identified as appropriate. These mitigation measures are also summarized in Table 3-1. The mitigation measures presented in the EIR will form the basis of the Mitigation Monitoring and Reporting Program(MMP). An impact that remains significant after mitigation is considered an unavoidable adverse impact of the Proposed Project.

Summary of Project Alternatives

The following summary describes the three alternatives to the Proposed Project that are evaluated in this Draft EIR. For a complete description of project alternatives, please see Chapter 6, Alternatives.

No Project Alternative

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6(e)(1)). The No Project alternative refers to the consequences of declining to adopt a project or project alternatives. Two "No Project" alternatives can be considered: "No Development" or "No Action". The No Project/No Development Alternative describes an alternative in which no development would occur on the site and the uses on the site would remain as under current conditions. The "No Action" Alternative assumes that the development continues under the current General Plan, based on Scenario A from the March 1998 *Economic and Growth Scenarios Report*. Under this alternative, population growth would be the same as the Proposed Project, but non-residential development would be reduced.

High Growth Alternative

This alternative is based on higher growth projections prepared by the California Department of Finance (1997) and Scenario E from the March 1998 *Economic and Growth Scenarios Report*. Under the

High Growth Alternative, county population in 2020 would be 1,513,369, approximately 36 percent higher than the Proposed Project.

Increased Residential Development Densities Alternative

Employment and population projections under this alternative are the same as for the Proposed Project. However, residential development densities would be higher and residential development projections by acreage would therefore be reduced. Higher residential development densities would be comparable to those recommended in the report, *A Landscape of Choice*, which was endorsed by the Board of Supervisors in October 1998.

Environmentally Superior Alternative

In addition to the discussion and comparison of impacts of the alternatives to the Proposed Project, CEQA requires that an "environmentally superior" alternative be selected and the reasons for such selection disclosed. In general, the environmentally superior alternative is the alternative that would be expected to generate the least adverse impacts. In the case of the Fresno County General Plan Update, the Environmentally Superior Alternative is the Increased Residential Development Densities Alternative.

A more detailed discussion of the environmentally superior alternative appears in Chapter 6.

Potential Areas of Concern

A number of concerns regarding the Proposed Project have been expressed throughout the Draft General Plan planning process and in response to the Notice of Preparation (see Appendix B). For the most part, these concerns have to do with the effects of growth and increased urbanization, such as increased traffic congestion, degradation of air quality, traffic noise, depletion of agricultural, mineral and water resources, reduced water quality, loss of biological and other natural resources and increased demand for public services and utilities. These issues are addressed in Chapter 4 of this DEIR. The protection of particular County resources, including agriculture, the rivers and waterways, aggregate resources, recreational and scenic resources, was also raised as a concern. Another issue of concern was that the population projections used as the baseline for the Proposed Project may be too low. As discussed in Chapter 6, Alternatives, a High Growth Alternative is analyzed to determine the effects of more rapid growth rates, based on population projects developed by the Department of Finance in 1997.

Scope of the EIR

The County of Fresno, as lead agency, identified potentially significant impacts which would result from project implementation in the Notice of Preparation for this EIR circulated beginning April 30, 1999 (see Appendix A). The County determined that potentially significant impacts could occur in the following areas, which are the subject of this EIR

- Land Use

- Agriculture
- Transportation and Circulation
- Wastewater, Storm Drainage, and Flooding
- Public Services
- Cultural Resources
- Water Resources
- Biological Resources
- Forestry Resources
- Mineral Resources
- Air Quality
- Seismic and Geologic Hazards
- Hazardous Materials
- Noise
- Visual Quality

Table 3-1 provides a summary of the environmental impacts that would result from implementation of the Proposed Project, potential mitigation measures, and the level of significance of the environmental impacts before and after implementation of the proposed mitigation.

Development under the Proposed Project would occur within both incorporated and unincorporated areas (see Chapter 2, Project Description for more detail). Within the unincorporated areas, the County has the jurisdiction to enforce Draft General Plan policies and the mitigation measures identified in this EIR. Similar policies and measures are available to the cities to direct development within their boundaries. However, the County cannot compel the cities to adopt and implement such measures for development in the incorporated areas. Therefore, the findings of significance may differ for impacts due to development in the unincorporated areas versus the incorporated areas. Where applicable, the impact discussions reflect these differences. In addition, Table 3-1, Summary of Impacts and Mitigation Measures, identifies the significance of each impact for areas within County jurisdiction and those areas outside of the County's jurisdiction.

LS = Less Than Significant S = Significant SU = Significant and Unavoidable NA = Not Applicable

TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County1		County	Non-County1
4.2 Land Use					
4.2-1 Development under the Draft General Plan would not conflict with adopted environmental plans and community goals.	LS	LS	4.2-1 None required beyond Draft General Plan Policies LU-G.1, LU-G.2, LU-G.4, LU-G.6 through LU-G.9, LU-G-13 through LU-G.16, LU-C.2 through LU-C.5, LU-H.9, and LU-H.10.	NA	NA
4.2-2 Development under the Draft General Plan would likely increase the potential for residential-agricultural and urban residential-rural residential conflicts.	LS	S	4.2-2 No mitigation is required beyond Draft General Plan Policies LU-A.1, LU-A.12 through LU-A.14, LU-G.5, LU-E.15, LU-E.17 and LU-E.18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.2-3 The proposed Draft General Plan would not divide the physical arrangement of an established community.	LS	LS	4.2-3 None required.	NA	NA
4.3 Agriculture					
4.3-1 Development under the Draft General Plan would result in the permanent loss of important farmland.	S	S	4.3-1 None available beyond Draft General Plan Policies LU-A.1 through LU-A.20 and LU-B.1 through LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.3-2 Development under the Draft General Plan would result in a significant reduction in agricultural production.	S	S	4.3-2 None available beyond Draft General Plan Policies LU-A.6, LU-A.7, LU-A.10, LU-A.11, LU-A.18 through LU-A.20, and LU-B.5 through LU-B.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.3-3 Development under the Draft General Plan would result in increased non-renewal and cancellation of Williamson Act Contracts.	S	S	4.3-3 None available beyond Draft General Plan Policies LU-A.15, LU-A.16, and LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU

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LS = Less Than Significant S = Significant SU = Significant and Unavoidable NA = Not Applicable

TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.3-4 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the permanent loss of important farmland, a significant reduction in agricultural production, and an increase in the non-renewal and cancellation of Williamson Act Contracts.	S	S	4.3-4 None available beyond Draft General Plan Policies LU-A.1 through LU-A.20 and LU-B.1 through LU-B.14.	SU	SU
4.4 Transportation and Circulation					
4.4-1 Development under the Draft General Plan would increase traffic volumes on rural Fresno County roadways outside the spheres of influence of the cities, causing some of these roadway segments to operate at an unacceptable level of service.	S	NA	4.4-1 None available beyond Draft General Plan Policies TR-A.5 through TR-A.7 and TR-A.10.	SU	NA
4.4-2 Development under the Draft General Plan would increase traffic volumes on rural State highways outside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	NA	4.4-2 None available beyond TR-A.9.	SU	NA
4.4-3 Development under the Draft General Plan would increase traffic volumes on local urban roadways inside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-3 None available beyond Draft General Plan Implementation Program TR-A.B.	SU	SU
4.4-4 Development under the Draft General Plan would increase traffic volumes on State highways inside the spheres of influence of cities in Fresno County, and cause some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-4 None available beyond Draft General Plan Policy TR-A.9.	SU	SU

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TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.4-5 Development under the Draft General Plan would increase truck traffic on rural Fresno County roadways outside the spheres of influence of the cities, reducing the County's ability to maintain pavement conditions on the rural roadway system.	S	NA	4.4-5 None available beyond Draft General Plan Policies TR-A.4 and TR-A.5.	SU	NA
4.4-6 Development under the Draft General Plan would increase transit demand throughout Fresno County, especially inside the spheres of influence of cities.	S	S	4.4-6 None available beyond Draft General Plan Policies TR-B.1, TR-B.2, TR-B.3, and TR-B.4.	SU	SU
4.4-7 Development under the Draft General Plan would increase the demand for bicycle facilities throughout Fresno County, especially inside the spheres of influence of cities.	S	S	4.4-7 None available beyond Draft General Plan Policies TR-A.13, TR-D.1, TR-D.2, TR-D.4 and TR-D.5.	SU	SU
4.4-8 Development under the Draft General Plan would increase the number of people and amount of property that could be exposed to aircraft crash hazards.	LS	LS	4.4-8 None required.	NA	NA
4.4-9 Development under the Draft General Plan, in combination with cumulative development, would increase traffic volumes on State and local roadways within the spheres of influence, on rural Fresno County roadways outside the spheres of influence, including increased truck traffic, and on roadways that provide access to and from Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-9 None available beyond Draft General Plan Policies TR-A.4, TR-A.5, TR-A.7, TR-A.9, TR-A.13, TR-B.1 through TR-B.4, and TR-D.1, TR-D.2, TR-D.4, and TR-D.5, and Implementing Program TR-A.B.	SU	SU
4.5 Wastewater, Storm Drainage, and Flooding					

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TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.5-1 Increased development intensity in urban areas and added industrial users under the Draft General Plan could increase sewage treatment demand beyond the capacities of existing wastewater treatment facilities. This could result in the construction of new or expanded wastewater collection and treatment facilities.	S	S	4.5-1 No mitigation is available beyond Draft General Plan Policies PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4, PF-D.6, PF-D.7, PF-A.2, PF-A.3, and OS-A.26. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.5-2 Development under the Draft General Plan would increase the number of individual septic systems.	LS	LS	4.5-2 None required.	NA	NA
4.5-3 Development under the Draft General Plan would increase potential downstream flooding through the addition of impervious surfaces and resulting increases in stormwater runoff from development sites, which could require expansion or construction of storm drainage facilities.	S	S	4.5-3 No mitigation is available beyond Draft General Plan Policies PF-E.1 through PF-E.11, PF-E.13, and PF-E.19 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.5-4 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within flood-prone areas associated with 100-year flooding.	LS	S	4.5-4 No mitigation is required beyond Draft General Plan Policies PF-E.9, HS-C.1 through HS-C.11, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.5-5 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within areas subject to dam failure inundation.	LS	S	4.5-5 No mitigation is required beyond Draft General Plan Policies HS-C.2, HS-C.12, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.5-6 Increased development density, industrial development, and incremental development overall under the Draft General Plan would increase demand for wastewater treatment and conveyance and would increase stormwater runoff from development sites, resulting in increased potential downstream flooding through the addition of impervious surfaces, and could expose new development in flood-prone areas.	S	S	4.5-6 None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4 through PF-D.7, PF E.1 through PF-E.11, PF-E.13, PF-E.19, LU-A.9, LU-B.7, LU-E.9, LU-E.22, HS-C.1 through HS-C.13, OS-A.20, and OS-A.26.	SU	SU
4.6 Public Services					
4.6-1 Development under the Draft General Plan would increase the demand for protection from the Fresno County Sheriff's Department.	LS	NA	4.6-1 None required beyond Draft General Plan Policies PF-G.1 through PF-G.5.	NA	NA
4.6-2 Development under the Draft General Plan would increase the demand for police protection in incorporated jurisdictions of the County.	S	S	4.6-2 No mitigation is available to the County to reduce this impact.	SU	SU
4.6-3 Development under the Draft General Plan would increase the demand for fire protection services from districts serving the unincorporated area of the County.	LS	NA	4.6-3 None required beyond Draft General Plan Policies PF-H.1 through PF-H.6, PF-H.9, and PF-H.10.	NA	NA
4.6-4 Development under the Draft General Plan would increase the demand for fire protection services from the districts serving incorporated areas of the County.	S	S	4.6-4 No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.	SU	SU
4.6-5 Development under the Draft General Plan would increase the demand for emergency response services.	LS	S	4.6-5 None required beyond Draft General Plan Policies HS-A.1 through HS-A.3 for development under the jurisdiction of Fresno County. No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.	NA	SU
4.6-6 Development under the Draft General Plan would increase the demand for parks and recreational facilities in unincorporated areas of the County.	LS	NA	4.6-6 None required beyond Draft General Plan policies OS-H.2 through OS-H.4.	NA	NA

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TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.6-7 Development under the Draft General Plan would increase the demand for park and recreational facilities in incorporated jurisdictions of the County.	S	S	4.6-7 None available to the County to reduce the impact of development within the cities' jurisdiction.	SU	SU
4.6-8 Development under the Draft General Plan would result in an increase in the student enrollment resulting in the need for additional staff and facilities.	LS	LS	4.6-8 None required.	NA	NA
4.6-9 Development under the Draft General Plan would increase the volume of solid waste accepted at the County landfills.	LS	LS	4.6-9 None required.	NA	NA
4.6-10 Development under the Draft General Plan would increase demand for Fresno County Library facilities.	LS	NA	4.6-10 None required beyond Draft General Plan Policies PF-A.1 and PF-I.9.	NA	NA
4.6-11 Development under the Draft General Plan would increase demand for Coalinga Library District services.	S	S	4.6-11 No mitigation is available to the County to reduce the impact of development within the Coalinga Library District.	SU	SU
4.6-12 Development under the Draft General Plan, in combination with other development in the County, would increase the demand for public services.	S	S	4.6-12 None available.	SU	SU
4.7 Cultural Resources					
4.7-1 The Proposed Project could result in disturbance, alteration, or destruction of subsurface archaeological prehistoric resources.	LS	S	4.7-1 No mitigation is required beyond Draft General Plan Policies OS-J.1 through OS-J.3 and OS-J.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.7-2 The Proposed Project could result in devaluation, disturbance, alteration or destruction of historic areas, sites, and structures.	LS	S	4.7-2 No mitigation is required beyond Draft General Plan Policies OS-J.1 and OS-J.4 through OS-J.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.7-3 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the devaluation, disturbance, alteration or destruction of unidentified subsurface prehistoric resources and historic areas, sites and structures.	S	S	4.7-3 None available beyond Draft General Plan Policies OS-J.1 through OS-J.8.	SU	SU
4.8 Water Resources					
4.8-1 Development under the Draft General Plan could result in the demand for water exceeding available supply, resulting in overdraft conditions and potential adverse effects on groundwater recharge potential.	S	S	4.8-1 No mitigation is available beyond Draft General Plan Policies PF-C.1 through PF-C.9, PF-C.11 through PF-C.13, PF-C.16 through PF-C.18, PF-C.21 through PF-C.24 PF-C.30, PF-E.14, PF-E.17, OS-A.1 through OS-A.9, OS-A.11 through OS-A.15, OS-A.17 through OS-A.19, OS-A.21, and OS-A.28 for Fresno County. No mitigation measures are available to the county to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-2 Development of future water supplies would require additional water treatment and delivery systems.	S	S	4.8-2 No mitigation is available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.10, PF-C.14, PF-C.15, PF-C.19, and PF-C.20 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-3 Development under the Draft General Plan could exacerbate groundwater overdraft conditions, resulting in secondary effects such as subsidence, lowering of water tables, or altering the rate or direction of contaminated groundwater.	S	S	4.8-3 No mitigation is available beyond Draft General Plan Policies PF-C.18, PF-E.14, PF-E.17 through PF-E.20, OS-A.11 through OS-A.15, OS-A.17, OS-A.19, OS-A.21, and OS-A.22 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-4 Stormwater runoff from areas under construction could affect receiving water quality.	LS	LS	4.8-4 None required.	NA	NA
4.8-5 Runoff from new impervious surfaces would contain urban contaminants that could affect receiving water quality.	LS	S	4.8-5 No mitigation is required beyond Draft General Plan Policies PF-A.2, PF-A.3, OS-A.10, OS-A.16, OS-A.22, PF-E.20, and PF-E.21 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.8-6 Development under the Draft General Plan would increase the volume of wastewater treated and discharged by publicly owned facilities, which could affect the quality of waters receiving treated effluent.	LS	LS	4.8-6 None required.	NA	NA
4.8-7 Increased wastewater discharges associated with development under the Draft General Plan could contribute nitrate and other constituents to groundwater through septic system use.	LS	S	4.8-7 No mitigation is required beyond Draft General Plan Policies PF-D.6, OS-A.20, OS-A.27. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.8-8 Continued agricultural practices could affect groundwater or surface water quality.	LS	LS	4.8-8 None required.	NA	NA
4.8-9 Increased development under the Draft General Plan, in combination with other cumulative development, would increase demand for water exceeding available supply and require additional facilities for water treatment and delivery systems. Secondary effects of long-term groundwater overdraft conditions would increase. Surface and groundwater quality could be affected by increased areas under concurrent construction and increased impervious areas, and from continued agricultural practices. The increase in wastewater treated from increased development intensity and development in new areas could affect the quality of waters receiving treated effluent.	S	S	4.8-9 None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.1, through PF-C.30, PF-D.1 through PF-D.7, PF-E.1 through PF-E.21, OS-A.1 through OS-A.28, HS-F.4, and HS-F.6.	SU	SU
4.9 Biological Resources					
4.9-1 Development under the Draft General Plan could result in the loss of wetland habitat (e.g., seasonal wetland, vernal pool, riverine, riparian, and wet sierra meadows).	S	S	4.9-1 None available beyond Draft General Plan Policies OS-D.1 through OS-D.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU

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	County	Non-County ¹		County	Non-County ¹
4.9-2 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, or other various habitats that support special-status animals.	S	S	4.9-2 No mitigation is available beyond Draft General Plan Policies OS-E.1 through OS-E.13, OS-E.16, and OS-E.18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.9-3 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, and other habitats that could support special-status plants.	S	S	4.9-3 None available beyond Draft General Plan Policies OS-F.1 through OS-F.10 and OS-E.9 for Fresno County. No mitigation measures are available to the County to reduce impacts to the cities' jurisdiction.	SU	SU
4.9-4 Development under the Draft General Plan could result in the loss of heritage or landmark oak trees.	S	S	4.9-4(a) Fresno County shall define the specifications for landmark trees identification, based on size and health of the trees.	LS	SU
			4.9-4(b) Native oak and other landmark trees shall be replaced on an inch-for-inch basis when tree size exceeds 6 inches in diameter.		
			4.9-4(c) A 5-year monitoring plan shall be prepared for all replacement trees, including provisions for maintenance and replacement of trees that do not survive.		
4.9-5 Development under the Draft General Plan could result in riparian and associated aquatic habitat degradation.	S	S	4.9-5 None available beyond Draft General Plan policies OS-D.3, OS-E.1, OS-E.10 through OS-E.13, and OS-E.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities jurisdiction.	SU	SU
4.9-6 Development under the Draft General Plan would result in the loss of grassland habitat.	S	S	4.9-6 None available beyond Draft General Policies OS-E.1 through OS-E.7, OS-E.9, OS-E.13, OS-E.18, and OS-E.19 for development in Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the Cities jurisdiction.	SU	SU

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	County	Non-County ¹		County	Non-County ¹
4.9-7 Development under the Draft General Plan, in combination with other cumulative development, could result in the loss of heritage or landmark oak trees, riparian, aquatic, or other wetland habitat, chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, grasslands, or other various habitats that support special-status wildlife and plant species in Fresno and other areas within the Central Valley, Coast Range and Sierra Nevada mountains and foothills.	S	S	4.9-7 None available beyond Draft General Plan Policies OS-D.1 through OS-D.8, OS-E.1 through OS-E.13, OS-E.16 through OS-E.19, OS-B.2, and OS-F.1 through OS-F.10.	SU	SU
4.10 Forestry Resources					
4.10-1 Development under the Draft General Plan could result in the conversion of private forest lands to non-forestry uses or create land use incompatibilities between timber operations and adjacent land uses.	LS	LS	4.10-1 None required.	NA	NA
4.10-2 Development under the Draft General Plan would increase the demand for timber resources.	LS	LS	4.10-2 None required.	NA	NA
4.11 Mineral Resources					
4.11-1 Development under the Draft General Plan could result in the reduction of the amount of land available for mineral resource extraction.	LS	S	4.11-1 No mitigation is required beyond Draft General Plan Policies OS-C.2, OS-C.9, and OS-C.10 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.11-2 Development under the Draft General Plan could result in land use incompatibilities with adjacent mineral extraction operations.	LS	S	4.11-2 No mitigation is required beyond Draft General Plan Policies OS-C.1 through OS-C.7, OS-C.9 through OS-C.20, LU-A.4, LU-B.4, LU-C.4 and LU-C.5 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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	County	Non-County ¹		County	Non-County ¹
4.11-3 Development under the Draft General Plan would incrementally contribute to a reduction in aggregate resources, which may be depleted prior to 2020.	LS	LS	4.11-3 None required.	NA	NA
4.11-4 Development under the Draft General Plan, in combination with other cumulative development, could result in the reduction of the amount of land available for mineral resource extraction, land use incompatibilities with adjacent mineral extraction operations, and incremental loss of aggregate resources.	S	S	4.11-4 None available beyond Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5.	SU	SU
4.12 Air Quality					
4.12-1 Construction activities associated with development under the Draft General Plan would result in emissions of PM ₁₀ , ozone precursors, and other pollutants.	LS	S	4.12-1 No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, OS-G.13, and TR-A.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.12-2 Development under the Draft General Plan would result in emissions of ozone precursors and other pollutants caused by mobile source activity, area sources, and stationary sources.	S	S	4.12-2 None available beyond Draft General Plan Policies OS-G.3, OS-G.5 through OS-G.10, OS-G.12, and OS-G.14 through OS-G.16 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.12-3 Development under the Draft General Plan could result in localized violations of the CO standards.	LS	S	4.12-3 No mitigation is required beyond Draft General Plan Policies OS-G.6 through OS-G.11 and TR-A.2, TR-A.14, and TR-A.15 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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	County	Non-County ¹		County	Non-County ¹
4.12-4 Development under the Draft General Plan could result in placement of sensitive land uses near potential sources of objectionable odors or in new potential sources of objectionable odors.	LS	S	4.12-4 No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.12-5 Development allowed under the General Plan could result in placement of sensitive land uses near potential sources of toxic air contaminants or in new potential sources of toxic air contaminants.	LS	LS	4.12-5 None required.	NA	NA
4.12-6 Development under the Draft General Plan, in combination with other cumulative development, would result in emissions of pollutants caused by mobile source activity, area sources, and stationary sources.	S	S	4.12-6 None available beyond Draft General Plan Policies OS-G.1 through OS-G.16, and TR-A.2, TR-A.14, TR-A.15, and TR-A.17.	SU	SU
4.13 Seismic and Geologic Hazards					
4.13-1 Development under the Draft General Plan would increase the number of people and structures who could be exposed to seismic hazards.	LS	LS	4.13-1 None required.	NA	NA
4.13-2 Future development near Coalinga and Panoche in western Fresno County could expose people and property to hazards associated with surface rupture or fault creep from active faults designated as Alquist-Priolo Earthquake Fault Zones.	LS	LS	4.13-2 None required.	NA	NA
4.13-3 Development under the Draft General Plan could expose an increased number of people to hazards associated with unreinforced masonry buildings.	LS	S	4.13-3 No mitigation is required beyond Draft General Plan Policy HS-D.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.13-4 Development under the Draft General Plan could increase the number of people in areas subject to landslide hazard.	LS	S	4.13-4 No mitigation is required beyond Draft General Plan Policies HS-D.10 through HS-D.12 and LU-B.12 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

¹ This column refers to the significance of the projects in the incorporated areas, where the County would not have the jurisdiction to implement Draft General Plan policies or mitigation measures (see Chapter 1).

LS = Less Than Significant S = Significant SU = Significant and Unavoidable NA = Not Applicable

TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.13-5 Additional development could occur in areas with expansive soils.	LS	LS	4.13-5 None required.	NA	NA
4.13-6 Additional development could affect the rate or extent of erosion.	LS	S	4.13-6 No mitigation is required beyond Draft General Plan Policies HS-D.9, HS-D.10, HS-D.11, and HS-D.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.14 Hazardous Materials					
4.14-1 Development under the Draft General Plan would increase the use of hazardous materials and the generation of hazardous wastes.	LS	LS	4.14-1 None required.	NA	NA
4.14-2 Development under the Draft General Plan would increase the risk of exposure to existing soil and groundwater contamination.	LS	S	4.14-2 No mitigation is required beyond Draft General Plan Policies HS-F.4 through HS-F.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.14-3 Development under the Draft General Plan, in combination with cumulative development, would increase the use of hazardous materials and the generation of hazardous wastes.	S	S	4.14-3 None available beyond General Plan Policies HS-F.1 through HS-F.8 and OS-G.12.	SU	SU
4.15 Noise					
4.15-1 Development under the Draft General Plan would increase traffic on roadways and railroad activity, which would result in exposure of sensitive receptors to unacceptable noise conditions.	LS	S	4.15-1 No mitigation is required beyond Draft General Plan Policies HS-G.2, HS-G.4, and HS-G.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.15-2 Development under the Draft General Plan would result in increased airport activity, which would increase noise levels.	LS	LS	4.15-2 None required.	NA	NA
4.15-3 Development under the Draft General Plan would result in increased fixed noise source activity or new fixed noise sources, which would result in exposure of sensitive receptors to unacceptable noise conditions.	LS	S	4.15-3 No mitigation is required beyond Draft General Plan Policies HS-G.3 and HS-G.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

¹ This column refers to the significance of the projects in the incorporated areas, where the County would not have the jurisdiction to implement Draft General Plan policies or mitigation measures (see Chapter 1).

LS = Less Than Significant S = Significant SU = Significant and Unavoidable NA = Not Applicable

TABLE 3-1**SUMMARY OF IMPACTS AND MITIGATION MEASURES**

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.15-4 Development under the Draft General Plan could result in placement of new sensitive receptors in areas with existing or future unacceptable noise conditions.	LS	S	4.15-4 No mitigation is required beyond Draft General Plan Policies HS-G.3, HS-G.4, HS-G.8, and HS-G.9 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.15-5 The Draft General Plan, in combination with other cumulative development, would result in increases in mobile and fixed noise source levels, resulting in permanent increases in ambient noise levels that could affect sensitive receptors.	S	S	4.15-5 No mitigation is available beyond Draft General Plan Policies HS-G.1 through HS-G.9.	SU	SU
4.16 Visual Quality					
4.16-1 Development under the Draft General Plan could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources.	LS	S	4.16-1 No mitigation is required beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.16-2 Development under the Draft General Plan would introduce new sources of light and glare into development areas and surrounding rural areas.	S	S	4.16-2 In approving new development, the County shall require that lighting standards be designed and constructed to minimize the project contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive (e.g., residences, hospitals) properties.	LS	SU
4.16-3 Development under the Draft General Plan, in combination with other development in the County, could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources and the introduction of new sources of light and glare into development areas and surrounding rural areas.	S	S	4.16-3 None available beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 and Mitigation Measure 4.16-2.	SU	SU

¹ This column refers to the significance of the projects in the incorporated areas, where the County would not have the jurisdiction to implement Draft General Plan policies or mitigation measures (see Chapter 1).

4.1 INTRODUCTION TO THE ANALYSIS

SCOPE OF THE ENVIRONMENTAL IMPACT REPORT

Chapter 4 presents the environmental analysis for each subject examined in this EIR. Chapter 4 is subdivided into individual subsections, each of which addresses a specific subject. Chapter 4 includes the following subsections and subjects:

- 4.2 Land Use
- 4.3 Agriculture
- 4.4 Transportation and Circulation
- 4.5 Wastewater, Storm Drainage, and Flooding
- 4.6 Public Services
- 4.7 Cultural Resources
- 4.8 Water Resources
- 4.9 Biological Resources
- 4.10 Forestry Resources
- 4.11 Mineral Resources
- 4.12 Air Quality
- 4.13 Seismic and Geologic Hazards
- 4.14 Hazardous Materials
- 4.15 Noise
- 4.16 Visual Quality

As noted in Chapter 1, Introduction, the Proposed Project does not include updated land use maps for County planning areas or identify more specific locations where future growth would occur. Those land use decisions would be made by the County Board of Supervisors for unincorporated areas and City Councils for incorporated areas. Consequently, the focus of the EIR analysis is on the changes that would occur due to the increased economic activity engendered by the Economic Development Strategy. Most of the growth associated with the Economic Development Strategy is assumed to occur within the cities' spheres of influence. It is assumed that projects within the spheres would be annexed, and therefore subject to City discretionary action, rather than the County. The County would have jurisdiction over the small proportion of growth that would occur outside of the incorporated areas and their spheres. This EIR assumes that County population and employment would increase to levels currently projected by the California Department of Finance. Therefore, the analyses represent a worst-case assumption and the impacts evaluated would represent the maximum extent of identified adverse effects.

PRESENTATION OF THE IMPACT ANALYSIS

Chapter 4 is divided into sections that provide the environmental setting, standards of significance, impacts to the environmental setting, and feasible mitigation measures for significant impacts. This analysis is conducted for the topics listed above.

The environmental setting and standards of significance discussions establish the base condition and threshold by which the Proposed Project is analyzed. The setting discussion addresses the conditions that exist prior to project development (e.g., traffic conditions, air quality conditions). A standard of significance is identified for each environmental category to determine if the development under the Draft General Plan could result in a significant environmental impact when evaluated against the environmental setting. This standard of significance varies depending on the environmental category.

Project impacts and feasible mitigation measures are presented, where appropriate, for each environmental category. It should be noted that the EIR attempts to quantify project impacts where possible. Although used for analytical purposes, these numbers are approximations. Actual numbers may vary slightly, with no invalidation of this analysis or its conclusions.

Each impact discussion evaluates the potential effects that would occur if the Proposed Project is not implemented, because growth will occur whether or not the Proposed Project is implemented. Under this scenario, the population will grow in accordance with the 1998 Department of Finance projections, identical to that of the Proposed Project (approximately 1.1 million County-wide in 2020), but the County would not pursue the Economic Development Strategy. The population and housing projections for the incorporated and unincorporated areas would be identical to the Proposed Project, but job growth would not accelerate as projected for the Proposed Project scenario, and the employment profile would remain at prevailing levels and future growth would reflect current trends. The Proposed Project would increase the amount of employment-related development that occurs, change the mix of economic activity, and direct the pattern (rather than amount) of residential growth in the unincorporated area.

The significance of the Proposed Project impacts are listed in one of three ways throughout the discussion: (1) no impact, (2) less than significant, or (3) significant. The impact analysis evaluates the extent to which Draft General Plan policies would reduce the severity of impacts before making a finding of significance. Feasible mitigation measures are identified, if available, for those impacts found to be significant, but are not presented for those found to be less than significant. An impact

is considered significant and unavoidable if there are no feasible mitigation measures available to reduce the impact to a less-than-significant level.

SECTION FORMAT

Each section includes the following components:

- **Introduction**, which briefly describes the content of the section.
- **Environmental Setting** as it pertains to a particular issue. Information provided in the Environmental Setting is summarized from the *Fresno County General Plan Background Report (Background Report)*.
- **Regulatory Setting**, which includes a brief discussion of the relevant federal, State, and local laws and regulations and relevant plans.

Plan Elements, which lists the applicable Draft General Plan policies that would reduce or avoid significant environmental effects.

- **Impacts and Mitigation Measures**, including the assumptions and methods used to evaluate impacts in this EIR and standards of significance.

An example of the impact format is shown below.

4.X-1 Statement of impact for the Proposed Project in bold type.

Discussion of impact. The ***level of significance*** is presented in bold, italic type.

Mitigation Measures

4.X-1 *Statement of what, if any, mitigation measures are required to reduce the magnitude of the impact.*

Explanation of how the mitigation measure would reduce the impact.

4.2 LAND USE

INTRODUCTION

This section of the EIR addresses potential impacts from the Fresno County General Plan Update on land use in two general areas: land use compatibility and plan consistency. Under land use compatibility, this section examines potential land use conflicts and nuisances, such as those from urban-rural conflicts. This section compares the Draft General Plan's consistency with other local plans, such as city general plans and environmental plans. This section also examines how the Draft General Plan might divide the physical arrangement of the established communities in the county.

Topics discussed in this land use section that overlap other sections of this EIR include: noise (i.e., land use compatibility) and agriculture (i.e., nuisance and encroachment).

ENVIRONMENTAL SETTING

Existing urban land characteristics are described in Chapter 1, Land Use and Population, of the *Fresno County General Plan Background Report (Background Report)* and development estimates for the Draft General Plan are presented in Chapter 2 of this EIR. These chapters are hereby incorporated by reference, and summarized below. Fresno County encompasses roughly 6,000 square miles, making it California's sixth largest county.

Agriculture, with 2,911 square miles, and resource conservation (includes national forests and parks and timber reserves), with 2,691 square miles, are overwhelmingly the predominate land use in the county -- occupying over 90 percent of county land. The 15 incorporated cities occupy the next largest amount of land with 154 square miles. Closely behind the cities is unincorporated residential land with 152 square miles. The last three categories include commercial (seven square miles), industrial (11 square miles), and unclassified lands such as highways, streets, and rivers (11 square miles).

Fresno County contains many constraints that may limit plan buildout. The primary constraint that could limit the buildout of the unincorporated areas to a lower level than anticipated by the community plans is the availability of funding for needed infrastructure improvements, especially for roads; the availability of a sustainable water supply; air quality regulations; flooding and other natural hazards; topography (especially in mountain communities) and other physical limitations such as rivers or political boundaries; and local and regional policies that seek to preserve productive agricultural land. Another factor that could limit growth in the unincorporated communities is the extent to which the incorporated cities absorb the projected increase in developmental pressures expected within the county.

REGULATORY SETTING

The County's primary regulatory tool for implementing the General Plan is the Zoning Ordinance. Fresno County's first zoning ordinance was adopted in 1938 as Ordinance 822. The current *Fresno County Zoning Ordinance* (Division VI of Part VII of the *Ordinance Code of the County of Fresno*) was adopted in 1960 and covers all of the unincorporated county. The Code has been amended many times since then, but has not undergone a comprehensive update since 1960. Zoning regulations clearly indicate the extent and type of development that can occur in the unincorporated areas (and hence holding capacity and buildout potential). A major difference between the general plan and zoning is that the General Plan provides guidance on the location, type, density, and timing of new growth and development over the long-term, while zoning determines what development can occur on a day-to-day basis. Both the land use designations of the general plan and the zoning classifications and development standards of the zoning ordinance have the effect of determining the holding capacity and buildout potential of the county.

The *Zoning Ordinance* establishes eleven residential designations, ten commercial, three industrial zones, and twelve other zones that are mainly related to agriculture, timber and other resource-related land uses. The purpose of the zones is to translate the broad land use categories established by the *Fresno County General Plan* into detailed land use classifications that are applied to property with much greater precision than the General Plan. The zoning classifications follow specific property lines and road alignments that correspond to the applicable General Plan categories. Working with the zoning classifications, the text of the *Zoning Ordinance* provides detailed regulations for the development and use of land.

PLAN ELEMENTS

The Draft General Plan contains the following policies aimed at reducing potential land use conflicts, promoting an efficient urban form, and ensuring consistency with local land use and environmental plans.

Policy LU-A.1 The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.

Policy LU-A.7 The County shall generally deny requests to create parcels less than the minimum size specified in Policy LU-A.6 based on concerns that these parcels are less viable economic farming units, and that the resultant increase in residential density increases the potential for conflict with normal agricultural practices on adjacent parcels. Evidence that the affected parcel may be an uneconomic farming unit due to its current size, soil conditions, or other factors shall not alone be considered a sufficient basis to grant an exception. The decision-making body shall consider the negative incremental and cumulative effects such land divisions have on the agricultural community.

Policy LU-A.12 In adopting land uses policies, regulations and programs, the County shall seek to protect agricultural activities from encroachment of incompatible land uses.

Policy LU-A.13 The County shall minimize potential land use conflicts between agricultural activities and urban land uses through the provision of appropriate buffers or other measures.

- Policy LU-A.14 The County shall generally condition discretionary permits for residential development within or adjacent to agricultural areas upon the recording of the Right-to-Farm Notice, which is an acknowledgment that residents in the area should be prepared to accept the inconveniences and discomfort associated with normal farming activities and that an established agricultural operation shall not be considered a nuisance due to changes in the surrounding area.
- Policy LU-E.15 The County shall not designate additional land for Rural Residential or Foothill Rural Residential development, except for unique circumstances to be determined by the Board of Supervisors.
- Policy LU-E.17 The County shall consider redesignating undeveloped parcels ten (10) acres or larger in size to the Reserve designation if such parcels are located within the sphere of influence of a city and designated for future urban use on the city's general plan.
- Policy LU-E.18 In areas outside the sphere of influence of a city, the County shall encourage owners of parcels twenty (20) acres or larger in size to seek redesignation of their land for agricultural uses by establishing procedures that allow the related General Plan Amendment and rezoning applications to be processed without cost to the property owner provided that the property owner concurrently executes a California Land Conservation contract with the County.
- Policy LU-G.1 The County acknowledges that the cities have primary responsibility for planning within their LAFCO-adopted spheres of influence and are responsible for urban development and the provision of urban services within their spheres of influence.
- Policy LU-G.2 The County shall encourage the cities to adopt policies consistent with Urban Development Policies LU-F.1 through LU-F.10 of this General Plan.
- Policy LU-G.3 The County shall encourage orderly outward expansion of urban development by only supporting city sphere of influence expansion proposals where the city has demonstrated a need for additional territory after documenting a good faith effort to implement an infill development program.
- Policy LU-G.4 The County shall encourage the cities to incorporate in their general plans County land use policies for neighborhoods that were established under County jurisdiction.
- Policy LU-G.5 The County shall encourage cities to incorporate in their general plans land use policies that minimize potential land use conflicts with agriculturally-related industrial operations and other agricultural activities at the urban interface through the provision of appropriate buffers or other measures.
- Policy LU-G.6 Within the spheres of influence, and two miles beyond, the County shall encourage consultation between the cities and the County at the staff level in the early stages of preparing General Plan Amendments and other policy changes which may impact growth or the provision of urban services. Staff consultations, particularly concerning community plans, shall provide for meaningful participation in the policy formulation process and shall seek resolution of issues prior to presentation to the decision-making bodies.
- Policy LU-G.7 Following city adoption of a community plan, the County shall update the applicable County-adopted community plan. Any unresolved conflicts between the County and city plans shall be identified for the decisionmaking bodies. The County shall establish and maintain land use controls on unincorporated lands within the spheres of influence consistent with the policies of County community plan and this countywide Land Use Element.
- Policy LU-G.8 The County shall promote consultation between the cities and the County at the staff level when cities are developing proposed annexation boundaries and proposed sphere of influence expansions.

Policy LU-G.9 The County shall encourage the cities to generally include in their annexation proposals only those parcels that are proposed for immediate development.

Policy LU-G.11 The County shall not approve any discretionary permits for new urban development within a city's sphere of influence unless that development has first been referred to the city for consideration of possible annexation pursuant to the policies of this section and provisions of any applicable City/County memorandum of understanding.

Policy LU-G.14 Within that portion of a city's planned urban boundary which the County has identified on its community plan as existing urban and which is within one-half (½) mile of the city, the County shall:

- a. Maintain zoning on existing fully-developed properties consistent with the County's community plan.
- b. Maintain zoning on undeveloped or underdeveloped properties consistent with the County's community plan if such properties are small in size and there is no conflict with provision LU-G.14c below.
- c. Maintain a "holding zone" on undeveloped or underdeveloped properties to minimize further urban development on properties which the County considers appropriate for annexation by the city. Criteria used to determine which properties will be placed in a "holding zone" include, but are not limited to, any one of the following:
 1. The property is adjacent to the city.
 2. The property adjoins a series or grouping of properties which are eighty (80) percent vacant and in aggregate contain a minimum of five (5) acres.
 3. The property is proposed for commercial or industrial use on the County's community plan, is at least two (2) acres in size, and abuts vacant property planned for a similar use.
- d. Refer all applicants for subdivision (except residential parcel maps), rezoning, and conditional use permits to the city for annexation.
- e. Consider additional urban development on properties previously referred to the city for annexation if such action is recommended by the city. Any such urban development must be consistent with the County's community plan.

Policy LU-G.15 Within that portion of a city's planned urban boundary which the County has identified on its community plan as existing urban and which is more than one-half (½) mile from the city, the County shall:

- a. Maintain zoning on existing fully developed properties consistent with the County community plan.
- b. Maintain a "holding zone" on undeveloped or underdeveloped properties to preclude further urban development. This zoning may be changed subject to provisions LU-G.15c and d below.
- c. Consider subdivision, rezoning, or conditional use proposals on planned non-industrial properties where the proposed use is consistent with the County community plan. As conditions of approval, the County may require: (1) community sewer and water service; and (2) completion of all roadways providing access to the development as if they were part of the development to the nearest fully developed street.
- d. Consider rezoning and conditional use permit proposals in planned industrial areas consistent with the County community plan.

Policy LU-G.16 On land that is not within a city's planned urban boundary but is within a city's sphere of influence, the County shall:

- a. Maintain zoning consistent with the countywide General Plan Land Use Element.
- b. Accept contracts in accordance with the California Land Conservation Program or some other similar program. It is the intent of the County to enter into California Land Conservation contracts on any existing parcel eight (8) acres in size or larger that is devoted to open space use.

Policy LU-G.17 The County may designate Special Commercial areas within one-half ($\frac{1}{2}$) mile of a city's sphere of influence at intersections of major roads where substantial existing commercial development at the intersection has rendered continued agricultural use of the corner portion of the subject property difficult or infeasible. The following standards and criteria shall apply:

- a. The Special Commercial designation should be allowed only where at least two (2) corners at the intersection are developed with permanent, legally established commercial uses.
- b. The Special Commercial designation should be limited to a maximum total road frontage of one-eighth ($\frac{1}{8}$) mile and a maximum size of two (2) acres per corner.
- c. The implementing zone for Special Commercial designations granted under this Section shall be the C-6(c) District, limited to uses which provide convenience goods or services to the surrounding area.
- d. Neither the operation nor the physical characteristics of the commercial development or any individual uses shall have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter ($\frac{1}{4}$) mile radius.

Policy LU-H.9 The County shall adopt minimum format and content guidelines for the preparation of updated and new regional, community, and specific plans to ensure consistency with the countywide General Plan.

Policy LU-H.10 The County shall periodically update regional, community, and specific plans to ensure consistency with the countywide General Plan.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The analysis of impacts for this section was conducted qualitatively. Since the county-wide General Plan Land Use Diagram contains no significant site-specific land use designation changes at this time, much of the analysis focused on the existing General Plan Land Use Diagram. The potential growth implications of the Land Diagram were examined against proposed General Plan policies that seek to remedy the potential impacts.

Standards of Significance

The significance of impacts on land use was determined by applying criteria found in Appendix G of the *CEQA Guidelines*. For the purposes of this EIR, a project is deemed to have a significant effect on the environment if it:

- conflicts with adopted environmental plans and goals of the community where it is located;

- results in significant land use and planning impacts if it substantially alters the type or intensity of land use on a proposed site, causing it to be incompatible with surrounding land uses or the overall character of the surrounding neighborhoods; or
- divides the physical arrangement of an established community.

Impacts and Mitigation Measures

4.2-1 Development under the Draft General Plan would not conflict with adopted environmental plans and community goals.

The most important local land use and environmental plans in Fresno County include the following:

- | | |
|----------------------------------|----------------------------|
| • San Joaquin River Parkway Plan | • Kingsburg General Plan |
| • Fresno City General Plan | • Orange Cove General Plan |
| • Clovis General Plan | • Parlier General Plan |
| • Firebaugh General Plan | • Reedley General Plan |
| • Huron General Plan | • Sanger General Plan |
| • Mendota General Plan | • San Joaquin General Plan |
| • Fowler General Plan | • Selma General Plan |
| • Kerman General Plan | • Coalinga General Plan |

The Draft General Plan was designed specifically to achieve and promote consistency with the cities' general plans over time. Policies LU-G.2 and LU-G.4 encourage the cities to adopt policies consistent with the urban development policies of this General Plan. Policies LU-G.1, and LU-G.6 through LU-G.9 address coordination of the County and cities for sphere of influence expansion and annexation. Policies LU-G.2 and LU-G.4 address consistency between the County's and the cities' land use policies. Policies LU-G.13 through LU-G.16 address coordination among the county and cities for land within the planned urban boundary. Policies LU-C.2 and LU-C. 5 ensure consistency with the San Joaquin River Parkway Plan policies.

Although this Draft General Plan does not update regional and community plans that are legal part of the Fresno County General Plan, the General Plan does establish guidelines for when these plans are updated in the future. Policy LU-H.9 requires the County to prepare and adopt minimum format and content guidelines for the preparation of updated and new regional, community, and specific plans to ensure consistency with the county-wide General Plan. Policy LU-H.10 ensures that regional, community, and specific plans are periodically updated and consistent with the county-wide plan.

As discussed in Chapter 2, Project Description and Demographic Characteristics, over 90 percent of the growth anticipated in Fresno County would occur within the cities and their spheres of influence. Each city within the county has an adopted General Plan and Zoning Ordinance, as well as other plans. Under State law (Government Code Sections 65860, 66474 and 66474.61 and case law) new development within the cities must be consistent with their adopted general plans.

The Draft General Plan adequately addresses coordination among the County and local jurisdictions as well as consistency among the general plans, environmental plans, and community goals. Local jurisdictions must also ensure that development is consistent with their plans and policies. Therefore, the impact is considered ***less than significant***.

Mitigation Measure

4.2-1 None required beyond Draft General Plan Policies LU-G.1, LU-G.2, LU-G.4, LU-G.6 through LU-G.9, LU-G.13 through LU-G.16, LU-C.2 through LU-C.5, LU-H.9, and LU-H.10.

4.2-2 Development under the Draft General Plan would likely increase the potential for residential-agricultural and urban residential-rural residential conflicts.

Under the Draft General Plan, approximately 37,700 acres in the county would be developed for residential and non-residential uses from 1996 to 2020. The General Plan and the development review and approval process generally seek to locate land uses adjacent to one another so that they are compatible, related, mutually supportive, and similar in the amount of traffic they generate. In some cases, however, existing land use patterns, the timing of development on properties with different owners, environmental constraints, or other factors, prevent new land use patterns from providing a "gradation" of uses that help to achieve compatibility.

The county-wide General Plan Land Use Diagram designates land in several areas for uses that could be incompatible with adjacent designations. The most common examples are where residential uses are directly adjacent to nearby agricultural operations and where urban residential uses and rural residential uses are adjacent.

Policies LU-A.1, LU-A.12, LU-A.13, and LU-A.14 require that the County minimize potential land use conflicts between agricultural activities and urban land uses through application of land use regulations consistent with the Fresno County Zoning Ordinance, Right-to-Farm Ordinance, and other development regulations.

Policy LU-G.5 encourages cities to adopt land use policies that minimize land use conflicts with agricultural uses at the urban interface.

The Draft General Plan establishes several policies that seek to limit designations of new rural residential areas. Ultimately, this will reduce the number of new rural residential lots created, thus reducing future potential conflicts with urban development. Policy LU-E.15 restricts designating additional land for rural residential uses. Policies LU-E.17 and LU-E.18 encourage the redesignation of rural residential lots to other uses such as agriculture.

The Draft General Plan adequately addresses incompatibility issues among County land uses such as residential, rural residential, and agricultural. Therefore, the impact is considered less than significant for the County. However, the County cannot ensure that similar measures would be adopted or enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered ***significant***.

Mitigation Measures

4.2-2 *No mitigation is required beyond Draft General Plan Policies LU-A.1, LU-A.12 through LU-A.14, LU-G.5, LU-E.15, LU-E.17, and LU-E 18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would reduce impacts related to potential incompatibilities between new development occurring within the County's jurisdiction, the County cannot ensure that similar policies are adopted or implemented for development within the cities' jurisdiction. Therefore, the impact is considered significant and unavoidable for development outside of the County's jurisdiction.

4.2-3 The Draft General Plan would not divide the physical arrangement of an established community.

Although there are no substantial changes to the land use diagram, the Draft General Plan does contain minor changes in land use designations and development standards. However, these changes to the General Plan would not significantly alter the density/intensity of development. Furthermore, the Land Use Diagram includes no potential disruptions to existing communities, in that it reflects historically planned land uses and adopted County plans and City General Plans. Therefore, the Proposed Project would result in a ***less-than-significant impact***.

Mitigation Measures

4.2-3 *None required.*

Cumulative Impacts

For land use, there is no cumulative context to assess land use consistency and compatibility issues, because the effects are entirely localized, and would not combine with similar effects in other locations. Therefore, there are no cumulative land use impacts. However, the conversion of agriculture land or open space to developed uses could result in cumulative impacts related to loss of important farmland, loss of biological resources, and other environmental effects. Cumulative impacts related to these issue areas and others are discussed in their respective sections in this chapter (Chapter 4).

4.3 AGRICULTURE

INTRODUCTION

This section analyzes potential impacts on agricultural resources from projected population growth and development in Fresno County to the year 2020. Agricultural impacts include the loss of prime farmland, removal of land from agricultural preserves, and changes in the amount of agricultural output and the County's revenue base.

The analyses of project impacts to agriculture includes determining the amount of land that will potentially be converted from agricultural to urban uses; the types, amount and location of farmland soils that will be removed from production; the types, and the amount, cost and general location of where crops will be lost due to urban land conversion. A discussion of land that may be taken out of agricultural preserves is also included.

ENVIRONMENTAL SETTING

Information on the agricultural resource setting is provided in Chapter 2, Agriculture, of the *Fresno County General Plan Draft Background Report*. Chapter 2 is hereby incorporated by reference and summarized below.

According to the Department of Conservation, Farmland Mapping Program, the County has approximately 374,567 acres of prime farmland, and another 144,243 acres of farmland of Statewide importance, 96,724 acres of unique farmland, and 29,663 acres of farmland of local importance. For purposes of discussion and analysis, the county is differentiated into five geographical regions including: the Coast Range; Westside Valley; Eastside Valley; Sierra foothills; and Sierra Mountains. Most of the high-quality farmland areas are located in the Eastside Valley. Land west of I-5 (the Coast Range foothills area) is generally used for cattle grazing and mineral extraction, although there is also a small amount of irrigated fruit and nut tree crops, row crops, and dry crop farming in that area. The Westside Valley is typically used for row and field crop production, with some fruit and nut tree crops. The Sierra Foothill area supports cattle grazing and citrus production at the lower elevations. Land in the Sierra Nevada area is not typically farmed; however, it is used for cattle grazing. Along the west side of the City of Fresno, Clovis, Sanger, and Reedley, and elsewhere in the Eastside Valley, farms generally grow tree fruits, almonds, and raisin grapes. On the west side of SR 99, farms mostly grow grapes, almonds, apples, and alfalfa. Near the Fresno Slough area of the Eastside Valley, row crops are predominant. Near I-5, as well as on the North and South Valley area, almonds, row crops, field crops, apples, and some grapes are grown.

As discussed in Chapters 2 and 3 of the *Background Report*, farming and agricultural related businesses comprise a significant component of the local economy. Combined harvested crop production in the County grossed over \$3.3 billion in 1996. Several factors contribute to the success of agricultural operations in Fresno County, not the least of which are excellent soil and climatic growing conditions. Workforce and transportation availability are also key factors.

County farmers harvested over 2,134,762 acres of crops in 1996. Seventy percent of the harvested acreage was field crops; 17 percent was fruits and nuts; 11 percent vegetable crops, and the remaining was other crops such as seeds and nursery products. Cattle, poultry, industrial crops and apiary products were valued at over \$712,622,300 in the same year. Crop trends indicate the largest areas of agricultural market growth are in lettuce, onions and garlic, tomatoes, almonds, safflower, peaches, and nectarines and other deciduous fruits, and citrus and olives.

The County has over 374,567 acres of prime farmland, and 144,243 acres of farmland of statewide importance. Approximately 308,945 acres of land are used for cattle grazing. Approximately 1,494,454 acres of farmland are within Williamson Act agricultural preserves on 14,450 parcels. Most of the preserves are located in unincorporated areas of the county, as shown in Figure 1-6, Land Conservation Act Contracts, in Chapter 1 in the *Background Report*. Notices of non-renewal have been filed for 7,571.06 acres in Fresno County. The contractual agreements on all of these lands will expire by 2006.

There are approximately 37,737 acres of land within the existing SOIs and community plan areas that are presumed to be urbanized in the future. Land near these areas are primarily in the Eastside Valley area, as shown in Figure 2-1, Important Farmland, the *Background Report*. The majority of land includes prime or important soils, representing about 7.3 percent of the total amount of prime or important soils in the county.

REGULATORY SETTING

The County Agricultural Commissioner's Office employs various regulations and procedures to minimize agricultural impacts on adjacent non-agricultural properties, including the issuance of pesticide application permits, providing agricultural land use recommendations on development projects, and providing a range of educational programs and services. The County also enforces a Right-to-Farm Ordinance. This ordinance helps protect farming operations from interruptions due to land use conflicts with adjacent properties. The intent of the ordinance is to allow farmers to conduct normal farming operations (harvest crops, till soil, or spray crops) without interference from nearby land owners. In essence, it allows farmers to conduct their operations as needed.

PLAN ELEMENTS

The Draft General Plan would allow new urban development (residential, industrial, or commercial land uses) on approximately 37,737 acres of land. New development would most likely occur near or adjacent to existing urban areas (e.g. within Sphere of Influence areas). If this occurs, it would result in a loss of approximately 7.3 percent of the County's prime/important agricultural soil. Agricultural output would decrease due to removal of farmland from crop production. Agricultural market revenues would also decrease due to reduced farm production. Farming operations adjacent to urban land uses may be impacted from urban land use conflicts. Agricultural preserves may decrease as urban land uses move into agricultural areas.

The Draft General Plan contains the following policies to support the goal of long-term preservation and protection of agricultural resources.

Agriculture

- Policy LU-A.1 The County shall maintain agriculturally-designated areas for agriculture use and shall direct urban growth away from valuable agricultural lands to cities, unincorporated communities, and other areas planned for such development where public facilities and infrastructure are available.
- Policy LU-A.2 The County shall allow by right in areas designated Agriculture activities related to the production of food and fiber and support uses incidental and secondary to the on-site agricultural operation. Uses listed in Table LU-3 are illustrative of the range of uses allowed in areas designated Agriculture.
- Policy LU-A.3 The County may allow by discretionary permit in areas designated Agriculture, special agricultural uses and agriculturally-related activities, including value-added processing facilities, and certain non-agricultural uses listed in Table LU-3. Approval of these and similar uses in areas designated Agriculture shall be subject to the following criteria:
- a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or which requires location in a non-urban area because of unusual site requirements or operational characteristics;
 - b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity;
 - c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one-quarter (1/4) mile radius;
 - d. A probable workforce should be located nearby or be readily available;
 - e. For proposed agricultural commercial center uses the following additional criteria shall apply:
 1. Commercial uses should be clustered in centers instead of single uses.
 2. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four (4) miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community.
 3. New commercial uses should be located within or adjacent to existing centers.
 4. Sites should be located on a major road serving the surrounding area.
 5. Commercial centers should not encompass more than one-quarter (1/4) mile of road frontage, or one-eighth (1/8) mile if both sides of the road are involved, and should not provide potential for developments exceeding ten (10) separate business activities, exclusive of caretakers' residences;
 - f. For proposed value-added agricultural processing facilities, the evaluation under criteria "a" above, shall consider the service requirements of the use and the capability and capacity of cities and unincorporated communities to provide the required services; and
 - g. For proposed churches and schools, the evaluation under criteria LU-A.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community.
 - h. When approving a discretionary permit for an existing commercial use, the criteria listed above shall apply except for LU-A.3b, e2, e4, and e5.

TABLE LU-3 TYPICAL USES ALLOWED IN AREAS DESIGNATED AGRICULTURE (Policies LU-A.2 and LU-A.3)			
BY RIGHT	SPECIAL PERMIT USES		
Agricultural Uses	Special Agricultural Uses	Agriculturally-Related & Value-Added Agricultural Uses	Agricultural Commercial Center Uses & Other Non-Agricultural Uses
<p>Crop & livestock production, except as specified under special permit uses</p> <p>Packing, processing & sale of crops produced on premises, or where such activity is carried on in conjunction with or as part of a bonafide agricultural operation under the same ownership, except as specified under special permit uses</p> <p>Sale of livestock produced or raised on the premises</p> <p>Residences</p> <p>Home occupations</p> <p>Certain oil & gas development activities pursuant to the policies in Section OS-C, Mineral Resources, of the Open Space and Conservation Element</p>	<p>Cattle feed lots</p> <p>Dairies</p> <p>Goat lots</p> <p>Swine yards</p> <p>Poultry operations</p> <p>Fish farms</p>	<p>Wineries & distilleries</p> <p>Cotton ginning</p> <p>Cottonseed delinting</p> <p>Tree nut hulling & shelling</p> <p>Trucking operations servicing the agricultural community</p> <p>Inspection & weighing services associated with transportation of agricultural products</p> <p>Commercial land leveling & developing establishments</p> <p>Farm labor camps</p> <p>Commercial grain elevators</p> <p>Dehydration operations</p> <p>Commercial soil preparation service establishments</p> <p>Commercial packing & processing of crops</p> <p>Commercial meat processing plants</p>	<p><u>Commercial Centers:</u></p> <ul style="list-style-type: none"> • Veterinary Services & hospitals • Medical & health services • Irrigation systems administration offices • Water-well drilling services • Farm equipment & machinery sales, rental, storage & maintenance • Welding & blacksmith shops • Agricultural employment services • Feed & farm supply sales • Fertilizer sales • Building materials sales • Hardware stores • Grocery stores • Gasoline service stations • Liquefied petroleum gas distribution & storage • Livestock auction market <p><u>Other:</u></p> <ul style="list-style-type: none"> • Organic & inorganic fertilizer manufacturing & mixing • Boarding & training kennels • Home occupations • Sewage treatment plants • Solid waste disposal • Race tracks • Pistol & rifle range • Churches • Schools • Cemeteries • Commercial stables & riding academies • Golf courses • Radio & television broadcasting stations • Wireless communication facilities • Electrical substations • Liquefied petroleum gas distribution & storage • Airports • Detention facilities • Interstate freeway commercial development • Mineral extraction and oil and gas development pursuant to the policies in Section OS-C, Mineral Resources, of the Open Space and Conservation Element.

- Policy LU-A.4 The County shall require that the recovery of mineral resources and the exploration and extraction of oil and natural gas in areas designated Agriculture comply with the Mineral Resources Section of the Open Space and Conservation Element. (See Section OS-G)
- Policy LU-A.5 The County shall allow the Agricultural Commercial (AC) center zone district to remain in areas designated Agriculture if the land was so zoned prior to September 20, 1990. Commercial uses legally established prior to that date shall be deemed conforming, but expansion or the addition of new commercial uses shall require a discretionary permit as provided in Policy LU-A.3.
- Policy LU-A.6 The County shall maintain twenty (20) acres as the minimum permitted parcel size in areas designated Agriculture, except as provided in Policies LU-A.9, LU-A.10, and LU-A.11. The County may require parcel sizes larger than twenty (20) acres based on zoning, local agricultural conditions, and to help ensure the viability of agricultural operations.
- Policy LU-A.7 The County shall generally deny requests to create parcels less than the minimum size specified in Policy LU-A.6 based on concerns that these parcels are less viable economic farming units, and that the resultant increase in residential density increases the potential for conflict with normal agricultural practices on adjacent parcels. Evidence that the affected parcel may be an uneconomic farming unit due to its current size, soil conditions, or other factors shall not alone be considered a sufficient basis to grant an exception. The decision-making body shall consider the negative incremental and cumulative effects such land divisions have on the agricultural community.
- Policy LU-A.8 The County shall allow by right on each parcel designated Agriculture and zoned for agricultural use one (1) single family residential unit. One (1) additional single family residential unit shall be allowed for each twenty (20) acres in excess of twenty (20) acres where the minimum parcel size is twenty (20) acres. One (1) additional single family residential unit shall be allowed for each forty (40) acres in excess of forty (40) acres where the required minimum parcel size is forty (40) acres. The County may, by discretionary permit, allow a second unit on parcels otherwise limited by this policy to a single unit.
- Policy LU-A.9 The County may allow creation of homesite parcels smaller than the minimum parcel size required by Policy LU-A.6, if the parcel involved in the division is at least twenty (20) acres in size, subject to the following criteria:
- a. The minimum lot size shall be sixty thousand (60,000) square feet of gross area, except that a lesser area shall be permitted when the owner submits evidence satisfactory to the Health Officer that the soils meet the Water Quality Control Board Guidelines for liquid waste disposal, but in no event shall the lot be less than one (1) gross acre; and
 - b. One of the following conditions exists:
 1. A lot less than twenty (20) acres is required for financing construction of a residence to be owned and occupied by the owner of abutting property; or
 2. The lot or lots to be created are intended for use by persons involved in the farming operation and related to the owner by adoption, blood, or marriage within the second degree of consanguinity, there is only one (1) lot per related person, and there is no more than one (1) gift lot per parcel of twenty (20) acres or more; or
 3. The present owner owned the property prior to the date these policies were implemented and wishes to retain his/her homesite and sell the remaining acreage for agricultural purposes.

Each homesite created pursuant to this policy shall reduce by one (1) the number of residential units otherwise authorized on the remainder parcel created from the original parcel.

- Policy LU-A.10 The County may allow by discretionary permit creation of substandard lots when necessary for the development of an agricultural commercial center pursuant to Policy LU-A.3 or in conjunction with development within a designated commercial interchange within the Westside Freeway Corridor Overlay. Approval of such parcels shall take into consideration the proposed use of the property, surrounding uses, and the potential for abandonment of the planned commercial use at a future date. Appropriate conditions shall be applied to minimize adverse impacts on surrounding agricultural operations. Parcels for agricultural commercial centers shall in no case be less than one (1) gross acre.
- Policy LU-A.11 The County may allow by discretionary permit creation of substandard size lots when such action is deemed necessary by the Board of Supervisors for the recovery of mineral resources and the exploration and extraction of oil and gas in accordance with the policies of Section OS-C, Mineral Resources, of the Open Space and Conservation Element. In no case shall such action result in creation of lots less than five (5) gross acres in size.
- Policy LU-A.12 In adopting land uses policies, regulations and programs, the County shall seek to protect agricultural activities from encroachment of incompatible land uses.
- Policy LU-A.13 The County shall minimize potential land use conflicts between agricultural activities and urban land uses through the provision of appropriate buffers or other measures.
- Policy LU-A.14 The County shall generally condition discretionary permits for residential development within or adjacent to agricultural areas upon the recording of a Right-to-Farm Notice, which is an acknowledgment that residents in the area should be prepared to accept the inconveniences and discomfort associated with normal farming activities and that an established agricultural operation shall not be considered a nuisance due to changes in the surrounding area.
- Policy LU-A.15 The County should consider the use of agricultural land preservation programs that improve the competitive capabilities of farms and ranches, thereby ensuring long-term conservation of viable agricultural operations. Examples of programs to be considered should include: land trusts; conservation easements; dedication incentives; new and continued Williamson Act contracts; Farmland Security Zone Act contracts; the Agricultural Land Stewardship Program Fund; agricultural education programs; zoning regulations; agricultural mitigation fee program; urban growth boundaries; transfer of development rights; purchase of development rights; and agricultural buffer policies.
- Policy LU-A.16 The County shall accept California Land Conservation contracts on all designated agricultural land subject to the acreage and use limitations established by the County.
- Policy LU-A.17 The County shall encourage land improvement programs to increase soil productivity in areas containing lesser quality agricultural soils.
- Policy LU-A.18 The County shall encourage landowners to participate in programs that reduce soil erosion and increase soil productivity. To this end, the County shall promote coordination between the Natural Resources Conservation Service, Resource Conservation Districts, UC Cooperative Extension, and other agencies and organizations.
- Policy LU-A.19 The County shall adopt and support policies and programs that seek to protect and enhance surface water and groundwater resources critical to agriculture. (See Section OS-A, Water Resources; and Section PF-C, Water Supply and Delivery)
- Policy LU-A.20 The County shall support and participate in on-going public education programs by organizations such as the County Agricultural Commissioner's Office, UC Cooperative Extension, Farm Bureau, and industry organizations to help the public better understand the importance of the agricultural industry.

Rangeland

- Policy LU-B.2 The County shall allow by right in areas designated Westside Rangeland grazing and other agricultural activities related to the production of food and fiber and support uses incidental and secondary to the onsite agricultural operations. Uses listed in Table LU-4 are illustrative of the range of uses allowed in areas designated Westside Rangeland. Other uses consistent with the intent of the grazing policies may be permitted by amendment of the Zoning Ordinance.
- Policy LU-B.3 The County may allow by discretionary permit in areas designated Westside Rangeland special agricultural uses and agriculturally-related activities, and certain non-agricultural uses listed in Table LU-4. Approval of these or similar uses in areas designated Westside Rangeland shall be subject to the following criteria:
- a. The use shall provide a needed service to the surrounding agricultural area which cannot be provided more efficiently within urban areas or requires location in a non-urban area because of unusual site requirements or operational characteristics.
 - b. The use should not be sited on productive agricultural lands if less productive land is available in the vicinity.
 - c. The operational or physical characteristics of the use shall not have a detrimental impact on water resources or the use or management of surrounding properties within at least one quarter (1/4) mile radius.
 - d. A probable workforce should be located nearby or be readily available.
 - e. For proposed commercial uses the following additional criteria shall apply:
 1. Commercial uses should be clustered in centers instead of single uses.
 2. To minimize proliferation of commercial centers and overlapping of trade areas, commercial centers should be located a minimum of four (4) miles from any existing or approved agricultural or rural residential commercial center or designated commercial area of any city or unincorporated community.
 3. New commercial uses should be located within or adjacent to existing centers.
 4. Sites should be located on a major road serving the surrounding area.
 5. Commercial centers should not encompass more than one quarter (1/4) mile of road frontage, or one eighth (1/8) mile if both sides of the road are involved, and should not provide potential for developments exceeding ten (10) separate business activities, exclusive of caretakers' residences.
 - f. For proposed churches and schools, the evaluation under criteria LU-B.3a above shall include consideration of the size of the facility. Such facilities should be no larger than needed to serve the surrounding agricultural community.
 - g. When approving a discretionary permit for an existing use, the criteria listed above shall apply except for LU-B.3b, e2, e4, and e5.
- Policy LU-B.5 The County shall maintain forty (40) acres as the minimum permitted parcel size in areas designated Westside Rangeland, except as provided in Policies LU-B.7, LU-B.9, and LU-B.10. The County may require parcel sizes larger than forty (40) acres based on zoning, local conditions, and to help ensure the viability of grazing and agricultural operations.
- Policy LU-B.7 The County may allow creation of homesites smaller than the minimum parcel size required by Policy LU-B.5 in areas designated Westside Rangeland if the parcel involved in the division is at least forty (4) acres in size and subject to the following criteria:
- a. The minimum lot size shall be sixty thousand (60,000) square feet of gross area, except that a lesser area shall be permitted when the owner submits evidence satisfactory to the Health Officer that the soils meet the Water Quality Control Board Guidelines for liquid waste disposal, but in no event shall the lot be less than one (1) gross acre, and

TABLE LU-4 TYPICAL USES ALLOWED IN AREAS DESIGNATED WESTSIDE RANGELAND (Policies LU-B.2 and LU-B.3)				
BY RIGHT	SPECIAL PERMIT USES			
	Special Agricultural Uses	Agriculturally-Related & Non-Agricultural Uses		Agricultural Commercial Centers
Crop & livestock production except as specified under Special Permitted Uses Packing, processing, & sale of crops produced on the premises, or where such activity is carried on in conjunction with, or as part of a bonafide agricultural operation under the same ownership except as specified under Special Permitted Uses Sale of livestock produced or raised on the premises Residences Home occupations Non-intensive recreation such as hiking, rockhounding, and hunting Certain oil and gas activity pursuant to policies in Section OS-C, Mineral Resources, of the Open Space and Conservation Element	Cattle feed lots Sheep lots Goat lots Swine lots Poultry operations Mushroom growing	Trucking operations servicing the agricultural community Inspection & weighing services associates with transportation of agricultural products Boarding & training kennels Commercial meat processing plants Commercial packing & processing of crops Specialty animal raising Feed & farm supply sales Veterinarian offices Public buildings & yards, fire stations Churches	Flood control Sewage treatment plants Solid waste disposal Schools Cemeteries Commercial stables & riding academies Radio & television broadcasting stations Wireless communication facilities Substations Liquified petroleum gas distribution & storage Airports Detention facilities Intensive recreation such as golf courses, dude ranches, off-road vehicle parks, recreational vehicle camp sites, & campgrounds Mineral extraction and oil and gas development pursuant to policies in Section OS-C, Mineral Resources of the Open Space and Conservation Element	Veterinary services & hospitals Medical & health services Public bldgs. and yards, fire stations Irrigation systems, administration offices Water-well drilling service Farm equipment & machinery sales, rental, storage, & maintenance Welding & blacksmith shops Agricultural employment services Farm labor contractor service Feed & farm supply sales Fertilizer sales Bldg. materials sales Hardware stores Misc. general merchandise stores Grocery stores Gasoline service station Liquified petroleum gas distribution & storage Livestock auction markets Eating & drinking establishments Beauty & barber shops Caretaker's residence Churches Trucking operations servicing the agricultural community

- b. One of the following conditions exists:
 - 1. A lot less than forty (40) acres is required for financing construction of a residence to be owned and occupied by the owner of abutting property, or
 - 2. The lot or lots to be created are intended for use by persons involved in the farming or ranching operations and related to the owner by adoption, blood, or marriage within the second degree of consanguinity, there is only one (1) lot per related person, and there is no more than one (1) gift lot per each forty (40) acres, or
 - 3. The present owner owned the property prior to the date that these policies were implemented by adoption of the exclusive agriculture zone district and wishes to retain his homesite and sell the remaining acreage for grazing or other agricultural purposes.

Each homesite created pursuant to this policy shall reduce by one (1) the number of residential units otherwise authorized on the remainder parcel created from the original parcel.

Policy LU-B.9 The County may allow by discretionary permit creation of substandard lots when necessary for the development of an agricultural commercial center pursuant to Policy LU-B.3 or in conjunction with development within a designated commercial interchange within the Westside Freeway overlay. Approval of such parcels shall take into consideration the proposed use of the property, surrounding uses, and the potential for abandonment of the planned commercial use at a future date. Appropriate conditions shall be applied to minimize adverse impacts on surrounding agricultural operations. Parcels for agricultural commercial centers shall in no case be less than one (1) gross acre.

Policy LU-B.10 The County may allow by discretionary permit creation of substandard size lots when such is deemed necessary by the Board of Supervisors for the recovery of mineral resources and the exploration of oil and gas in accordance with the policies in Section OS-C, Mineral Resources, of the Open Space and Conservation Element. In no case shall such action result in creation of lots less than five (5) gross acres in size.

Policy LU-B.14 The County shall accept California Land Conservation contracts on all land designated Westside Rangeland subject to the acreage and use limitations established by the County.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Land acreage data provided for the different economic and growth scenarios, analyzed as part of the general plan update process, were tabulated to project the amount of land that will be needed to accommodate the population growth anticipated in the proposed land use plan. Land available within existing sphere's of influence (SOIs) for each incorporated city and for urban areas in the unincorporated areas of the county were also tabulated. Land demand under the growth alternatives (growth rates) was compared to the amount of land available within the SOIs to determine the amount of land that will be needed within and outside the existing SOIs and unincorporated urban areas for the different alternatives.

Land within the SOIs generally have prime soils, and are currently used for agriculture. The amount and location of farmland that will be converted to urban uses and its soil types were calculated, and implications to agricultural resource loss were determined.

Potential crop loss estimates were determined based on soil characteristics. Soil and drainage conditions, slope, and water availability affect the ability to grow certain crop types and their productivity. These and other factors (as discussed in the *Background Report, Chapter 2*) define soil categories.

Generalizations on the potential to grow a range of crop types were determined based on general soil conditions. However, it should be noted that specific soil characteristics such as mineral content, alkalinity, and the presence of cobbles affects the types of crops that can be grown and their potential yield. For instance, soil depth, drainage, and water supply will be factors in determining whether land should be planted with permanent crops such as tree fruit or grape vines. In addition, although land may contain prime soil, subtle nuances in soil characteristics will lend themselves better to growing certain types of fruit crops over others. However, it was assumed that prime soils can support a wide variety of crop types including permanent crops, vegetable crops, etc. Soils with less quality and less reliable water supply also cannot support certain crops. They may be able to grow the same crops, but may not yield as much as other areas. Generally, farmers will plant crops that will produce the highest market value and crop yields that cost the least to grow and maintain. Financial impacts from crop loss due to the conversion of agricultural land was determined by calculating the value of crops that can be produced per acre by the presence of soil types in the locations that will be converted to urban land uses under the Draft General Plan.

Implications to the status of agricultural preserves, specifically lands under Williamson Act contracts, were assessed based on the location of the land under contract and whether the lands are within an existing SOI or on land just outside it, and whether it would likely be subject to pressure to convert to urban land uses.

Standards of Significance

For the purposes of this EIR, a significant environmental impact would occur if the Proposed Project would:

- convert prime agricultural land to non-agricultural land uses;
- significantly decrease the amount of agricultural production due to land being taken out of agricultural use that would impact the amount of food and fiber available to consumers; or
- significantly increase the number of land conservation contract non-renewals and cancellations (Williamson Act contracts) or encourage conversion of farmland to urban land uses.

Impacts and Mitigation Measures

4.3-1 Development under the Draft General Plan would result in the permanent loss of important farmland.

The Proposed Project is a combination of Economic Scenarios B/C (Shifts in Agricultural Production/Value Added Agriculture) and D (Non-Agricultural Basic Employment), which were developed as part of the General Plan update process. The Proposed Project assumes an increase in the area of land currently occupied by urban land uses to accommodate new growth and development to the year 2020. Although there are variances in the amount of land projected to be needed between scenarios B/C and D for different regions of the County (some areas will require less land than planned for, while others will require more), the total amount of land that would be needed is 37,737 acres. This represents approximately 1.02 percent of land in the County, excluding cities.

Currently, there are 50,688 acres (combined) within the existing spheres of influence and community plan areas that are available to absorb urban development within the foreseeable future. With the exception of the City of Fresno (see Table 2-2 in Chapter 2, Project Description and Demographic Information), there is enough land within the existing SOIs to accommodate projected growth under the Proposed Project. Most new development would occur on vacant, agricultural land located within or adjacent to SOIs, while some new development would either occur on land outside of SOIs/planned areas or within city boundaries as infill.

Almost all of the cities and urbanized areas in Fresno County are surrounded by prime farmland and/or farmland of statewide importance, both inside and outside their SOIs and around the unincorporated community plan areas. Under the Proposed Project, it is conservatively assumed the total 37,737 acres (7.3 percent) of the County's prime and/or important soil would be converted to urban uses, based on the 1997 State Department of Conservation Farmland Mapping program. Such loss of farmland would also occur without the Proposed Project. Although 4,129 acres less land would be converted to urban uses than that which would occur under the Proposed Project, the 33,608 acres that would be converted would still result in the permanent loss of prime and/or important farmland without the project. The potential loss of up to 37,373 acres of prime and/or important farmland as a result of the Proposed Project would be a significant environmental impact. Region-specific effects are summarized below.

Most farmland impacts would occur in the Eastside Valley region because that is the location of the County's most valuable soils, largest cities, and areas with the most potential for new growth. As noted above, all of the cities in the Eastside Valley can accommodate projected growth with less land than currently allocated in their SOIs, with the exception of Fresno. The City of Fresno would require approximately 1,971 acres outside its SOI. Areas surrounding the cities within the SOIs and areas adjacent to the SOIs are generally all prime or important farmland. A total of approximately 36,019 acres of prime or important farmland could be converted to urban uses in the Eastside Valley area.

The Proposed Project would affect farmland soils in the Westside Valley by converting approximately 1,441 acres of farmland to urbanized land uses. The unincorporated area of this region is projected to require approximately 351 acres of the 1,441 acres, but it is undetermined how this conversion would be distributed.

The Coast Range foothills would experience a loss of approximately 2 acres due to urbanization in the unincorporated area. This area typically does not produce crops, and does not include areas with significant prime or important farmland. Thus, impacts to farmlands in this region from the development under the Proposed Project would be minimal.

The projection of land estimated for the Proposed Project in the Sierra Nevada foothills is 232 acres. Very little of this land is prime or important farmland, so impacts to soil resources would be minimal; however, this land is used for cattle grazing and orchards to some extent.

The Sierra Nevada Mountain region does not have significant soil or agricultural resources, however some portions of the region are used for cattle grazing. The land use projection for this scenario would only convert 43 acres of the 448 acres included in the community planning areas. The Proposed Project would result in far less land conversion than currently planned.

In the past, existing regulations have not been very effective in controlling farmland conversion. Williamson Act contracts and the Right-to-Farm ordinance are among the few tools the County has to assist farmers in maintaining their land in agriculture and being able to make a living in the agricultural industry.

The Draft General Plan policies would help the County clearly define where new development should occur and where agricultural land should be preserved. For example, Policy LU-A.1 states that new development should be located within existing urban areas. Policies LU-A.12 and LU-A.13 protects agricultural activities from encroachment of incompatible land uses. Policy LU-A.14 enables the county to condition permits for residential development adjacent to agricultural areas by recording a Right-to-Farm Notice. Policies LU-A.15, LU-A.16, LU-A.20 and LU-B.14 also provide direction for the County to consider establishing several agricultural conservation programs, including setting up criteria to determine which lands should receive priority funding for land conservation easements, establishing an agricultural mitigation fee program to help offset development on agricultural lands, and participation in the Agricultural Land Stewardship Program Fund. Although these policies would reduce the magnitude of this impact within the unincorporated areas, it would not reduce the effect to a less-than-significant level. In addition, most of development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence, where the County cannot ensure implementation of similar measures to minimize identified significant impacts. Therefore, the potential loss of farmland is considered a **significant impact**.

Mitigation Measures

- 4.3-1 *None available beyond Draft General Plan Policies LU-A.1 through LU-A.20, and LU-B.1 through LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce the magnitude of loss of farmland due to development that occurs within the County's jurisdiction, but not to a less-than-significant level.

Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact would remain significant and unavoidable.

4.3-2 Development under the Draft General Plan would result in a significant reduction in agricultural production.

Development under the Draft General Plan could result in the loss of 37,737 acres of land currently producing food and fiber. Although farming techniques have improved and in some cases intensified, resulting in greater productive capabilities (gross yields per acre) than a decade ago, farmland conversion will result in crop losses. As previously stated, farmland conversion will likely occur near existing urban areas. These areas are also the location of the County's most productive and high value farmlands. These areas typically have prime and/or important farmland, and are planted with permanent crops such as tree fruit or nuts, vineyards, or specialty crops such as strawberries, lettuces, etc. Thus, there will also be financial impacts due to crop loss as well as a loss to consumers. The cost of products produced on remaining land will potentially increase since land available to grow them will decrease. This will perhaps be passed on to consumers.

If 37,737 acres of farmland are converted to urban uses, within existing SOIs and/or nearby areas, the production of tree fruit or nuts, vineyards, specialty crops, vegetables and other crops would be reduced. Since the exact location of parcels that would be converted is not known, the exact location of particular crops that will be lost cannot be precisely determined. However, the range of financial impacts can be calculated based on the type of farmland projected to be converted. As noted in the publication, *A Landscape of Choice*, farmland crops in Fresno County can range in value between \$6,000 per acre and \$15,000 per acre. (The value of crops per acre is larger due to the multiplier effect of crop production on the agricultural economy.) Thus, impacts from conversion of 37,737 acres of land and loss of crop production could result in losses of between \$226,422,000 and \$566,055,000. It should be noted that the conversion of acres to developed uses would occur with or without the Proposed Project. Without the project, losses would range from \$201,648,000 to \$504,120,000, assuming conversion of 33,608 acres.

As previously stated, most farmland conversion will likely occur near existing urban areas. These areas are also the location of the County's most productive and high value farmlands. These areas typically have prime and/or important farmland, and are planted with permanent crops such as tree fruit or nuts, vineyards, or specialty crops such as strawberries and lettuce. Thus, there would also be financial impacts due to crop loss as well as a loss to consumers. The cost of products produced on remaining land would potentially increase since land available to grow them will decrease. This cost could be passed on to consumers.

The Draft General Plan includes policies to address the reduction in farmland productivity. Policy LU-A.18 encourages land improvement programs to increase soil productivity in areas containing low quality soils. Policies LU-A.18 through LU-A.20 encourage landowners to participate in programs designed to understand soil and water issues and promote educational programs to better understand the importance of the agricultural industry. Policies LU-A.6, LU-A.7, LU-A.10, LU-A.11, and LU-B.5 through LU-B.7 address minimum parcel sizes for agricultural and rangeland activities. These policies would ensure reduce the magnitude of the loss of agricultural production, but not to less-than-significant levels. In addition, most of development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence, where the County cannot ensure implementation of similar measures to minimize identified significant impacts. Therefore, the potential loss in agricultural production is considered a **significant impact**.

Mitigation Measures

- 4.3-2 *None available beyond Draft General Plan Policies LU-A.6, LU-A.7, LU-A.10, LU-A.11, LU-A.18 through LU-A.20, and LU-B.5 through LU-B.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce the magnitude of loss of farmland productivity that occurs within the County's jurisdiction, but not to a less-than-significant level. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact would remain significant and unavoidable.

4.3-3 Development under the Draft General Plan would result in increased non-renewal and cancellation of Williamson Act Contracts.

One of the primary tools used to preserve agricultural lands is the California Land Conservation Act (LCA) or Williamson Act. The act provides tax incentives to those landowners who voluntarily enter into a long-term contract with cities or counties to maintain their lands as farmlands. Under the contract, lands are prohibited from being converted into urbanized areas for a period of ten years. The contract is automatically renewed each year for 10 years to maintain the 10-year time horizon. To have lands removed from this time horizon, a land owner must file a notice of non-renewal, or request of cancellation. Once a notice of non-renewal has been processed, the land value assessed is incrementally increased to reach market rates at the time the contract on the land expires, 10 years from the time that the notice of non-renewal is filed. As the amount of land within the boundaries of the SOI's decrease, market pressures to file notices of non-renewal upon lands adjacent to these boundaries will increase.

As urban growth continues, and less land within the SOIs are available to be developed, investors will look to land adjacent to the SOI boundaries. By 2020, it is estimated that approximately 13,500 acres of land that is located within SOIs and that is subject to existing LCA contracts will likely be taken out of preserve to accommodate urban growth, which would result in conversion of farmland and crop production loss. It should be noted that most projected development would occur with or without the Proposed Project, as would the pressure to cancel Williamson Act contracts.

The Draft General Plan includes policies LU-A.15, LU-A.16, and LU-B.14, which encourage the use of agricultural preservation programs (i.e., Williamson Act) to ensure long-term conservation of viable agricultural operations. These policies would reduce the magnitude of impacts associated with cancellation of Williamson Act Contracts, but not to a less-than-significant level for lands within County jurisdiction. Further, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact is considered **significant**.

Mitigation Measure

- 4.3-3 *None available beyond Draft General Plan Policies LU-A.15, LU-A.16, and LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce the magnitude of effects associated with cancellation of Williamson Act Contracts that would occur within the County's jurisdiction, but not to a less-than-significant level. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact would remain significant and unavoidable.

Cumulative Impacts

The cumulative context for agricultural resources is development on agriculturally-designated areas or used for active agricultural production or grazing within the Central Valley through the year 2020. These designations and activities occur throughout the Central Valley, particularly in the San Joaquin Valley flatland areas for crop production and in foothill areas for cattle grazing.

4.3-4 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the permanent loss of important farmland, a significant reduction in agricultural production, and an increase in the non-renewal and cancellation of Williamson Act Contracts.

The Proposed Project by itself (i.e., the growth attributable directly to the Draft General Plan policies plus the increment attributable to the Economic Development Strategy) represents a relatively small portion of the growth projected to occur in the county by 2020, and an even smaller portion of growth anticipated within the San Joaquin Valley during the planning horizon. However, some of this growth is expected to occur in areas in which agriculturally-designated areas exist.

This cumulative impact on agricultural lands will occur incrementally as individual development projects are entitled and built, most in conformance with and not requiring amendment to the County General Plan or other jurisdiction long-range land use plans. In aggregate, these projects could result in the loss of land designated for agricultural purposes or used for active agricultural production or grazing.

As discussed above, the project would contribute considerably to these impacts within Fresno County.

Furthermore, development in Fresno County, including the project increment, would contribute to the significant loss of agricultural resources elsewhere in the San Joaquin Valley, and in the Coast Range and Sierra Nevada foothills and the Sierra Nevada to a lesser degree.

The policies aimed at preserving and protecting agricultural resources will minimize the cumulative impact from the Project within Fresno County's jurisdiction. Similar policies in adjacent counties and mandated by the State and other cities and counties could minimize the impacts within the San Joaquin Valley (and Central Valley). However, implementation of such policies are beyond the control of the County. Therefore, the cumulative impacts to agriculture are considered **significant**.

Mitigation Measures

4.3-4 *None available beyond Draft General Plan Policies LU-A.1 through LU-A.20 and LU-B.1 through LU-B.14.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.4 TRANSPORTATION AND CIRCULATION

INTRODUCTION

This section addresses the effects of development on traffic operations, transit services, bicycle facilities and airport safety.

ENVIRONMENTAL SETTING

The existing transportation system and services in Fresno County are addressed in Chapter 4 of the *General Plan Background Report (Background Report)*, which is hereby incorporated by reference. That chapter addresses the following:

- The street and roadway system serving the County, including a description of the County's existing functional classification system.
- Existing levels of service (LOS) on rural roadways (i.e., those outside the sphere of influence of cities) in Fresno County. Table 4.4-1, lists those rural roadways that currently operate at LOS "D" or worse conditions. As this table shows, the only rural roadways currently operating at LOS "D" or worse conditions are State highways. All of the county roadways outside of the sphere of influence of cities operate at LOS "C" or better conditions.
- A description of existing truck and freight movements.
- Existing transit services and facilities.
- Bicycle, pedestrian and recreational facilities.
- Airport facilities and services.

REGULATORY SETTING

Several County standards and policies apply to the evaluation of transportation impacts of the Proposed Project.

Level of Service Policy

Fresno County has not adopted a comprehensive level of service standard. However, it is a well established County practice to maintain level of service "C" as a goal for development mitigation, and

as a threshold for County capacity-enhancing roadway projects. The cities of Fresno and Clovis have a level of service “D” standard for their roadway systems. The Draft General Plan has a proposed level of service policy, which is discussed in the following section under Plan Elements.

TABLE 4.4-1
EXISTING LEVEL OF SERVICE DEFICIENCIES
RURAL FRESNO COUNTY
(OUTSIDE THE SPHERES OF INFLUENCE OF CITIES)
1995

Roadway	Segment	Volume	Lanes	LOS
SR 41	Central to American	16,800	2 ¹	D
	American to Lincoln	17,500	2 ¹	F
	Adams to Manning	12,000	2	D
	Manning to Dinuba	12,000	2	D
	Dinuba to Mtn. View	9,500	2	D
	Mtn. View to Kamm	8,700	2	D
SR 43	SR 99 to Mtn. View	12,500	2	D
	Mtn. View to Kamm	12,500	2	D
	Kamm to Elkhorn	8,800	2	D
	Elkhorn to Harlan	11,100	2	D
	Harlan to Mt. Whitney	10,800	2	D
SR 269	Gale to Jayne	10,600	2	D
	Jayne to I-5	10,500	2	D

¹ These roadways were expanded to four lanes in 1998.
Source: DKS Associates, 1999.

Fresno County Roadway Development Standards

Fresno County’s standard cross-sections and access control policies for each roadway classification are contained in the County’s existing General Plan.

Fresno County Road Improvement Program

Fresno County’s Road Improvement Program (RIP) is a seven-year road construction programming schedule. This document is intended to be a guide to the Board of Supervisors’ road priorities. The RIP is updated as needed and should be viewed as a document which will self-adjust over time to match revenues, and allow the Board to respond to unforeseen needs.

The Regional Bikeways System Plan

The Council of Fresno County Governments (COFCG) originally prepared the Fresno Regional Bikeways Plan in 1974. The Fresno-Clovis Area Bikeways Plan was later adapted from this regional

plan and adopted by the cities of Fresno and Clovis with some modifications. The Fresno-Clovis Area Bikeways Plan is a subsection of the Fresno County General Plan Transportation Element.

The COFCG prepared an unpublished draft update to the Regional Bikeways Plan in 1991. This draft contained input from Fresno County on the rural bikeway system. The Draft General Plan includes a Rural Bikeways System Map and calls for COFCG to update and adopt the Regional Bikeways Plan.

Airports

Information regarding airports and airport safety is contained in Chapter 1.10, Land Use and Population, Airport Land Use Policy Plans and in Chapter 9.5, Safety, Airport Safety in the *General Plan Background Report (Background Report)*, which is hereby incorporated by reference and summarized below.

There are nine public and private airports within Fresno County. These include six public airports (Fresno-Yosemite International Airport, Fresno Chandler Downtown Airport, Coalinga Airport, Firebaugh Municipal Airport, Mendota Municipal Airport, and Reedley Municipal Airport) and three private airports (Harris Ranch Airport, Selma Aerodrome, and Sierra Sky Park Airport). Specific land use policy plans have been developed for Fresno-Yosemite International, Fresno Chandler Downtown, Coalinga, Harris Ranch, and Sierra Sky Park Airports. A single land use policy plan has been prepared for Firebaugh, Mendota, Reedley, and Selma Aerodrome. Land use and safety considerations pertaining to each of these facilities is discussed in more detail in Chapter 1, Land Use, and in Chapter 9, Safety, in the *Background Report*.

Federal Aviation Administration (FAA) regulations codified in Title 14 of the Code of Federal Regulations are administered at the state level by the Caltrans Division of Aeronautics. Neither the FAA nor Caltrans regulate land use adjacent to airports; however, Part 77 of the regulations requires agency notification when there is a change in land use that would involve the development of structures and roadways adjacent to the facility. The criteria for notification depends on the height of proposed structures relative to the location of runways and airport facilities.

Air safety zones, which are established at the end of each runway, are intended to restrict the type and intensity of activities that occur in each zone. The State Airport Land Use Planning Handbook allows jurisdictions flexibility in determining air safety zones. Restrictions correspond to the probability of an accident in each zone, based on data generated by the FAA. Each zone has certain acceptable and unacceptable land uses, which are determined by safety, noise, and airspace issues relative to runways, departure patterns, and overflight (common aircraft traffic). For example, residential, commercial, industrial, institutional, and parks are considered incompatible land uses within clear zones; however, golf courses and agricultural land uses, provided there are no structures, would be considered compatible. Certain types of residential, commercial, and institutional land uses are not allowed within the approach safety zone. General land use compatibility guidelines for air safety are presented in Appendix 9A in the *Background Report*.

The formation of airport land use commissions (ALUCs) was mandated in 1968 for all counties containing at least one public use airport (*Public Utilities Code* Section 21670 *et seq.*). The commissioners represent the county, its cities, and the public. Legislation passed in 1982 established a direct link between ALUCs comprehensive plans and land use plans and regulations prepared by cities and counties (*Public Utilities Code* Section 21676). In accordance with this legislation, ALUCs must review general and specific plans of local jurisdictions for consistency with the county's airport comprehensive land use plan (CLUP). Primary and Secondary Review Areas must be identified for each facility. Projects proposed within the geographic boundaries of the Primary Review Area are referred to the ALUC for review and evaluation. Within the Secondary Review Area, only those projects involving a structure or other object with a height that would exceed that permitted under adopted land use zoning would be referred to the ALUC for review.

PLAN ELEMENTS

Transportation impacts of the Draft General Plan Land Use Diagram were evaluated under the Year 2020 Preferred Growth Scenario, which reflects estimates of 2020 population and employment under the Draft Economic Strategy for Fresno County. Under the Proposed Project, the number of daily vehicle trips in Fresno County would increase by approximately 60 percent between 1995 and 2020. Conditions without the Proposed Project are projected to have the same 2020 population as the Proposed Project, but a smaller increase in employment by 2020. As a result, the Proposed Project would result in 6 percent more daily vehicle trips within the county than would occur without the project.

The “2020 Baseline Transportation System” (described in Table 4.4-2), which was used to evaluate conditions with and without the Proposed Project, includes a number of funded/committed roadway improvements within Fresno County. Even with the improvements identified in Table 4.4-2, the projected increase in travel demand under either of these two 2020 growth scenarios would place a significant burden on the County’s transportation system, especially within the Fresno-Clovis Metropolitan Area (FCMA). The amount of roadway in Fresno County that would operate at level of service (LOS) “D” or worse is projected to increase from about 391 lane-miles in 1995 to about 1,022 lane-miles in 2020 without the project, an increase of 161 percent. The higher level of employment anticipated under the Proposed Project would result in about 1,186 lane-miles that would operate at LOS “D” or worse. This represents an increase of 16 percent over the 2020 without project condition.

The Proposed Project anticipates about 93 percent of the 1996 to 2020 population and employment growth would occur within the spheres of influence of incorporated cities. Most of the projected 2020 traffic congestion would occur within the spheres of the cities of Fresno and Clovis.

TABLE 4.4-2				
ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
Regionally Significant System				
City of Fresno	Herndon	SR 99 to Grantland Diagonal	1.6	2 LU to 4 LD
		Brawley to Palm	2.9	4 LD to 6 LD
		Grantland Diagonal to Milburn	0.7	4 LD to 6 LD
	Shaw	SR 99 to Brawley	1.4	4 LD to 6 LD
		Hayes to SR 99	0.8	2 LU to 6 LD
		Grantland Diagonal to Hayes	0.8	2 LU to 6 LD
		Garfield to Grantland Diagonal	0.7	2 LU to 4 LD
	Ventura/Kings Canyon	Fowler to Temperance	1.0	2 LU to 4 LD
		R Street to Fowler	5.2	4 LD to 6 LD
	Friant	Ft. Washington to Audubon	0.8	4 LD to 6 LD
	Shields	Blythe to SR 99	1.5	2 LU to 6 LD
		Polk to Blythe	1.0	2 LU to 6 LU
		Grantland to Polk	1.5	2 LU to 6 LD
		SR 99 to Weber	0.2	Unconstructed to 6 LD
	Willow	Herndon to Alluvial	0.5	2 LU to 6 LD
		Alluvial to Nees	0.5	4 LU to 6 LD
	Grantland	Ashlan to Shields	1.0	2 LU to 6 LD
	Grantland Diagonal	Bullard Diagonal to Herndon	0.9	Unconstructed to 6 LD
		Shaw to SR 99	1.0	Unconstructed to 6 LD
		SR 99 to Bullard Diagonal	0.5	Unconstructed to 6 LD
		Ashlan to Shaw	1.1	Unconstructed to 6 LD
	Clovis	McKinley to Kings Canyon	2.0	4 LD to 6 LD
	Jensen	SR 99 to Clovis	4.0	4 LD to 6 LD

TABLE 4.4-2 ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
	Chestnut/Willow	Nees to Shepherd	1.0	2 LU to 6 LD
		Shepherd to Copper	2.0	2 LU to 6 LD
	Whitesbridge	Valentine to Fruit	2.0	2 LU to 4 LD
	Bryan	McKinley to Shaw	3.0	2 LU to 4 LU
City of Clovis	Herndon	Willow to Clovis	--	4 L Expwy to 6 L Expwy
Measure C - Urban	SR 41	Jensen to SR 99	1.4	Unconstructed to 4 L Freeway
		Adams to Jensen	4.6	Unconstructed to 4 L Freeway
		Floral to Adams	4.0	Unconstructed to 4 L Expwy
	SR 168	Gettysburg to Bullard	1.9	Unconstructed to 6 L Freeway
		Bullard to Temperance	4.0	Unconstructed to 4 L Freeway
		Temperance to Shepherd	2.1	Unconstructed to 4 L Expwy.
	SR 180	Chestnut to Clovis	2.9	Unconstructed to 6 L Freeway
		Including Peach, SR 180 to Belmont	0.5	2 LU to 4 LD
		Hughes/West to SR 99	1.4	Unconstructed to 2 L Expwy - Hughes/West to Tielman; Unconstructed to 6 L Freeway - Tielman to SR 99
		Clovis to Temperance	2.9	Unconstructed to 4 L Expwy
		Brawley to Hughes/West	1.7	Unconstructed to 2 L Expwy
	Hughes/West	½ mil N and S of SR 180 alignment	0.5	Unconstructed to 4 LD
	Hughes/West Diagonal	Whitesbridge to Nielson	1.2	Unconstructed to 4 LD

TABLE 4.4-2				
ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
Measure C - Urban & STIP	SR 41	Audubon O/C to Madera Co. Line	1.1	2 LU to 4 L Freeway
	SR 168	SR 180 to Shields	1.9	Unconstructed to 6 L Freeway
		Shields to Gettysburg	1.5	Unconstructed to 6 L Freeway
	SR 180	SR 41 to Chestnut	2.6	Unconstructed to 6 L Freeway
Measure C - Rural	SR 41	Elkhorn to Floral	6.0	Unconstructed to 2 L Expwy
	SR 43	Nebraska to Arrants St.	1.1	2 LU to 4 LD
	SR 201	SR 99 to Marion	1.3	2 LU to 4 LU
	Academy	SR 180 to Shaw Ave	5.0	2 L to 4 LD
		Shaw to SR 168	4.5	2 L improvements
		SR 99 to Manning	7.0	2 L Expressway
		Manning to SR 180	7.0	2 L to 4 L Expressway
	SR 180	Temperance to Academy	6.0	4 L Expressway
		Academy to Trimmer	3.4	2 L Expressway
		Trimmer to Frankwood	3.2	2 L Expressway
Caltrans	SR 99	0.2 mi South of Jensen to 0.2 mi South of Ventura	--	Add NB Auxiliary Lane
		Jensen to Ventura	--	Add SB Auxiliary Lane
		Mt. View to SR 43	3.4	4 L Freeway to 6 L Freeway
		Tulare Co line to Mt View	3.7	4 L Freeway to 6 L Freeway
		0.3 mi S of S Pacific & Biola Junction Bridge to Madera County line	5.0	4 L Freeway to 6 L Freeway
	SR 41	Kings County line to Adams	--	2 L Expwy to 4 L Expwy
Non-Regionally Significant System				
City of Fresno	Clinton	Brawley to Marks	1.0	2 LU to 4 LU
		Polk to Brawley	1.5	Unconstructed to 4 LU

TABLE 4.4-2
ROADWAY IMPROVEMENTS
IN THE 2020 BASELINE TRANSPORTATION SYSTEM

Facility		Limits	Length	Type of Improvement
		Hayes to Polk	0.5	2 LU to 4 LU
	Polk	Gettysburg to Shaw	0.5	2 LU to 4 LD
		Bullard to Herndon	1.0	2 LU to 4 LU
		Shields to Gettysburg	1.5	2 LU to 4 LD
		McKinley to Shields	1.0	2 LU to 4 LD
		Peach	Lane Ave to Jensen	1.8
		SR 168 R/W to Olive	0.5	2 LU to 4 LD
		Belmont to Butler	1.5	2 LU to 4 LD
		Butler to Jensen	1.5	2 LU to 4 LD
	Ashlan	Polk to Blythe	1.0	2 LU to 4 LD
		Grantland to Polk	1.5	2 LU to 4 LD
	Fresno	P Street to Divisadero	0.4	4 LD to 6 LD
	Fresno/Walnut	Fresno to Jensen	1.1	2 LU to 4 LU
	Shepherd	Millbrook to Chestnut	1.5	2 LU to 4 LD
		Chestnut to Willow	0.5	2 LU to 4 LD
	Maple	Behymer to International	0.5	2 LU to 4 LD
	Nees	Maple to Willow	1.0	2 LU to 4 LD
		Palm to Ingram	0.4	Unconstructed to 4 LD
	Alluvial	Maple to Willow	1.0	2 LU to 4 LU
		Ingram to Blackstone	0.6	2 LU to 4 LU
	Teague	Cedar to Chestnut	1.0	2 LU to 4 LU
		Chestnut to Willow	0.5	2 LU to 4 LU
	Cornelia	Dakota to Gettysburg	1.0	2 LU to 4 LU
		Shields to Dakota	0.5	2 LU to 4 LU
		McKinley to Shields	1.0	2 LU to 4 LU
	McKinley	Blythe to Marks	1.5	2 LU to 4 LD
		Polk to Blythe	1.0	2 LU to 4 LU
		Grantland to Polk	1.5	2 LU to 4 LD
	Marks	McKinley to Parkway	1.0	2 LU to 4 LD
		Belmont to McKinley	1.0	2 LU to 4 LD
	Weber	Ashlan to Clinton	2.1	2 LU to 4 LD
	Chestnut/Maple	Shepherd to Behymer	1.2	Unconstructed to 4 LD

TABLE 4.4-2
ROADWAY IMPROVEMENTS
IN THE 2020 BASELINE TRANSPORTATION SYSTEM

Facility		Limits	Length	Type of Improvement
	Church	Peach to Clovis	1.0	Unconstructed to 4 LU
		Clovis to Fowler	1.0	Unconstructed to 4 LU
		West to Golden State	1.2	2 LU to 4 LU
	Tulare	Fowler to Armstrong	0.6	Unconstructed to 4 LD
		Clovis to Fowler	1.0	Unconstructed to 4 LU
	Chestnut	Shaw to Bullard	1.0	2 LU to 4 LU
		Maple Diagonal to Copper	1.5	Unconstructed to 4 LU
	Bullard	Bullard Diagonal to Figarden	0.9	2 LD to 4 LD
	Bullard Diagonal	Bullard to Grantland Diagonal	0.5	Unconstructed to 4 LD
		Grantland Diagonal to Herndon	0.7	Unconstructed to 4 LD
	Shields	Sunnyside to Fowler	0.4	2 LU to 4 LD
	Valentine	Weber to Ashlan	0.3	2 LU to 4 LU
		McKinley to Dakota (Pkwy)	1.4	2 LU to 4 LU
	Fowler	Gould Canal to Clinton	1.4	2 LU to 4 LD
		Kings Canyon to Dakota	3.5	2 LU to 4 LD
		Kings Canyon to Clinton	3.5	2 LU to 4 LD
	Blythe	McKinley to Ashlan	2.0	2 LU to 4 LD
	San Jose	Gates to Bullard	0.6	Unconstructed to 4 LU
	Perrin	Maple to Chestnut	0.5	Unconstructed to 4 LU
	Geary (s/o California)	Clovis to Fowler	1.0	Unconstructed to 4 LU
	Sierra-Dante	Bullard Diagonal to Bullard	1.5	Unconstructed to 4 LU
	Santa Fe	Milburn to Figarden	0.5	2 LU to 4 LD
	Gettysburg	Polk to Cornelia	0.5	Unconstructed to 2 LU
		Grantland to Polk	1.5	Unconstructed to 2 LU
	Ft. Washington	Friant to Stratford	0.4	2 LU to 4 LU
	Barstow	Chestnut to Willow	0.5	2 LU to 4 LU

TABLE 4.4-2
ROADWAY IMPROVEMENTS
IN THE 2020 BASELINE TRANSPORTATION SYSTEM

Facility	Limits	Length	Type of Improvement
	Maroa to Blackstone	0.5	2 LU to 4 LU
Barstow/Parkway	Grantland Diagonal to Shaw	1.3	2 LU to 4 LU
Olive	Minnewawa to Clovis	0.5	2 LU to 4 LU
	Marks to SR 99	0.8	2 LU to 4 LU
	Hayes to Marks	3.0	2 LU to 4 LU
Butler	East to Peach	3.0	2 LU to 4 LU
Hayes	Shaw to Barstow	0.5	Unconstructed to 4 LU
	Grantland Diagonal to Spruce	0.6	Unconstructed to 4 LU
	Dakota to Shaw	1.5	2 LU to 4 LU
	McKinley to Dakota	1.5	2 LU to 4 LU
Palm	Herndon to Nees	1.1	Unconstructed to 4 LD
Behymer	Maple to Chestnut	0.5	Unconstructed to 4 LD
Brawley	Figarden to Herndon	0.5	2 LU to 4 LD
	Figarden to Herndon	0.5	2 LU to 4 LD
	McKinley to Ashlan	2.0	2 LU to 4 LU
North	Elm to Cedar	2.0	2 LU to 4 LD
	Cedar to Chestnut	1.0	2 LU to 4 LU
Armstrong	Kings Canyon to Church	1.5	2 LU to 4 LU
	Kings Canyon to Church	1.5	2 LU to 4 LU
Palo Alto/Cecilia	Polk to Bullard	1.0	Unconstructed to 4 LU
Bryan	Herndon to Spruce	0.3	Unconstructed to 4 LU
Spruce	Bryan to Herndon (at Polk)	1.0	Unconstructed to 4 LU
Dakota	Polk to Valentine	2.0	2 LU to 4 LU
West/Weber	Olive to Belmont	0.7	2 LU to 4 LU
Belmont	Clovis to Fowler	1.0	2 LD to 4 LD
	Fowler to Temperance	1.0	2 LU to 4 LD
	Brawley to Marks	1.0	2 LU to 4 LD
California	West to Martin Luther King	1.5	2 LU to 4 LD
Cherry	North to Church	1.5	2 LU to 4 LU

TABLE 4.4-2				
ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
	Cedar	Central to Golden State	1.2	2 LU to 4 LD
	Cedar/International	Copper to Chestnut	1.5	Unconstructed to 4 LU
	Chestnut	Maple Diagonal to Copper	1.5	Unconstructed to 4 LU
	Temperance	Belmont to Jensen	3.0	2 LU to 4 LD
		Belmont to Dakota	2.5	2 LU to 4 LD
	Grantland	Ashlan to Herndon	3.0	2 LU to 4 LD
	Orange	Jensen to Ventura	2.0	2 LU to 4 LU
	Copper	Friant to Willow	2.0	2 LU to 4 LD
	Dakota	Hayes to Polk	0.5	2 LU to 4 LU
	Perrin	Chestnut to Willow	0.5	Unconstructed to 4 LU
	Jensen	West to Martin Luther King	1.5	2 LU to 4 LD
Measure C - Rural	Manning	Ormsby to Contra Costa	13.0	Unconstructed to 2 LU
	Academy	SR 180 to SR 168	9.5	2 LU to 4 LU
County of Fresno	Shaw	Temperance to McCall	3.0	2 L to 4 L
		McCall to Academy	3.0	2 L to 4 LD
		Garfield to Dickerson	1.0	2 L to 4 LD
	Manning	Buttonwillow to Alta	2.0	2 L to 4 L
		Buttonwillow to Alta	2.0	2 L to 4 LD
		Alta to Hill	3.0	2 L to 4 LD
	Mt. View	Bethel to Smith	4.0	2 L to 4 L
		Bethel to Smith (Tulare Co. line)	4.0	2 L to 4 LD
	Friant	Fresno County Limits to Millerton Rd	5.0	2 L to 4 L
	Millerton	Friant to Table Mt. Rd.	4.3	2 L to 4 LD
	Academy	Sanger City limit to Manning	5.0	2 L to 4 LD
		Sanger City limit to SR 180	1.0	2 L to 4 LD
	Alta	Manning to Floral	2.0	2 L to 4 LD

TABLE 4.4-2 ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
	Central	Maple to Golden State	0.25	2 L to 4 LD
	Jensen	West to Brawley	2.0	2 L to 4 LD
	Mt. Whitney	Marks to Brawley (Riverdale)	1.0	2 LD to 4 LD
	Reed	Reedley City limit to Goodfellow	3.0	2 LD to 4 LD
City of San Joaquin	Colorado	Springfield to Manning	0.8	2 L to 4 L
	Manning	Placer to Yuba	0.5	2 L to 4 L
		Sutter to El Dorado	0.5	2 L to 4 L
		Sutter to El Dorado	0.5	2 L to 4 L
		Sutter to El Dorado	0.5	2 L to 4 L
	Main	California to Graham	0.5	2 L to 4 L
City of Kerman	Del Norte	Kearney to Whitesbridge	0.5	2 LU to 2 LD
		Kearney to California	0.5	2 L to 4 L
	Vineland	Kearney to E Street	0.3	2 LU to 2 LD
		Stanislaus to Whitesbridge	0.3	2 LU to 2 LD
		E Street to California	0.3	2 LU to 2 LD
	California	Madera to Vineland	0.5	2 LU to 2 LD
		Madera to Del Norte	0.5	2 LU to 2 LD
		Vineland to Goldenrod	0.5	2 LU to 2 LD
	Kearney	Vineland to 0.25 ft E of Vineland	0.3	2 LU to 2 LD
		Goldenrod to 0.25 mil W of Goldenrod	0.25	2 LU to 2 LD
	Siskiyou	Kearney to Stanislaus	0.25	2 LU to 2 LD
		Kearney to California	0.5	2 LU to 2 LD
	Goldenrod	California to Whitesbridge	1.0	2 LU to 2 LD
City of Clovis	Willow	Chennault to Nees	0.7	2 L to 4 L
		Nees to Shepherd	1.0	2 L to 4 L
		Shepherd to Behymer	1.0	2 L to 4 L
		Behymer to Copper	1.0	2 L to 4 L

TABLE 4.4-2
ROADWAY IMPROVEMENTS
IN THE 2020 BASELINE TRANSPORTATION SYSTEM

Facility		Limits	Length	Type of Improvement
	Peach	Nees to N/O	0.3	2 L to 4 L
		Sierra to Magill	0.4	2 L to 4 L
		Herndon to Magill	0.2	2 L to 4 L
		Teague to Shepherd	0.5	Unconstructed to 2 L
		Shepherd to Copper	2.0	Unconstructed to 4 L
	Nees	Willow to Chapel Hill	0.1	2 L to 4 L
		Armstrong to McKelvy	0.3	2 L to 4 L
		Fowler to Armstrong	0.5	2 L to 4 L
		McKelvy to Temperance	0.3	2 L to 4 L
		Temperance to Locan	0.5	2 L to 4 L
		Minnewawa to Fowler	1.5	2 L to 4 L
		Locan to Tollhouse	1.0	Unconstructed to 4 L
	Minnewawa	Fir to Decatur	0.6	2 L to 4 L
		Decatur to Nees	0.3	2 L to 4 L
		Teague to Shepherd	0.5	2 L to 4 L
		Shepherd to Behymer	1.0	2 L to 4 L
	Copper/Minnewawa Couplet	Increased Minnewawa instead of New Street	1.6	Unconstructed to 4 L
	Alluvial	Minnewawa to Dewitt	0.2	2 L to 4 L
		Armstrong to Temperance	0.5	2 L to 4 L
		Willow to Chapel Hill	0.3	2 L to 4 L
		Fowler to Armstrong	0.5	2 L to 4 L
	Clovis	Decatur to Nees	0.3	Unconstructed to 4 L
		Shaw to 5 th	1.5	4 L to 6 L
	Armstrong	Houston to Nees	0.1	2 L to 4 L
		Spruce to Herndon	0.3	2 L to 4 L
		Shaw to Gould Canal	1.1	2 L to 4 L
	Temperance	Sierra to Polson	0.3	2 L to 4 L
		Tollhouse to Nees	0.8	2 L to 4 L
		Shepherd to Nees	1.0	2 L to 4 L
		Herndon to Cromwell	0.7	Unconstructed to 4 L

TABLE 4.4-2
ROADWAY IMPROVEMENTS
IN THE 2020 BASELINE TRANSPORTATION SYSTEM

Facility		Limits	Length	Type of Improvement
	Herndon	Bullard to Sierra	0.5	2 L to 4 L
		Tollhouse to Temperance	0.5	2 L to 4 L
		Temperance to Locan	0.5	2 L to 4 L
		Locan to DeWolf	0.5	2 L to 4 L
		DeWolf to McCall	2.0	2 L to 4 L
	Fowler	Tollhouse to Herndon	0.4	2 L to 4 L
		Houston to Alluvial	--	3 L to 4 L (add final L to E side)
		Houston to Nees	0.1	2 L to 4 L
		Nees to Shepherd	0.5	2 L to 4 L
	Gettysburg	Fowler to Holly	0.6	2 L to 4 L
		Locan to Leonard	1.0	2 L to 4 L
		Leonard to Highland	0.5	Unconstructed to 4 L
		Highland to McCall	1.0	Unconstructed to 4 L
	Ashlan	Temperance to Locan	0.5	2 L to 4 L
		Fowler to Cypress	0.4	2 L to 4 L
		Locan to Leonard	1.0	2 L to 4 L
		Leonard to Highland	0.5	2 L to 4 L
		Highland to McCall	1.0	2 L to 4 L
	Locan	Holland to Gould Canal	0.7	2 L to 4 L
		Herndon to Finchwood	1.3	2 L to 4 L
		Shaw to Gettysburg	0.5	Unconstructed to 4 L
		Tollhouse to Shepherd	1.4	2 L to 4 L
	Shepherd	Armstrong to Temperance	0.5	2 L to 4 L
		Temperance to Tollhouse	2.0	2 L to 4 L
		Tollhouse to Del Rey	1.5	2 L to 4 L
		Willow to Armstrong	3.0	2 L to 4 L
	Tollhouse	McKelvy to Medical Cntr Dr	0.5	2 L to 4 L
		Locan to Shepherd	2.5	2 L to 4 L

TABLE 4.4-2				
ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
	Villa	Paul to Fir	0.5	2 L to 4 L
		Bullard to Ellery	0.8	2 L to 4 L
	Bullard	Carson to Locan	0.3	2 L to 4 L
		Locan to Leonard	1.0	2 L to 4 L
	DeWolf	Gettysburg to Ashlan	0.5	2 L to 4 L
		Ashlan to Gould Canal	0.5	2 L to 4 L
		Bullard to Shaw	1.0	2 L to 4 L
		Shaw to Gettysburg	0.5	2 L to 4 L
	Leonard	Gettysburg to Ashlan	0.5	2 L to 4 L
		Ashlan to Gould Canal	0.6	2 L to 4 L
		Shaw to Gettysburg	0.5	2 L to 4 L
		Shaw to 1.5 mi N of Shaw	1.5	2 L to 4 L
		1.5 mi N of Shaw to Tollhouse	1.5	Unconstructed to 4 L
	Shaw	Locan to Leonard	1.0	2 L to 4 L
		Leonard to McCall	1.5	2 L to 4 L
		Leonard to McCall	1.5	4 L to 6 L
	Teague	Willow to Peach	0.5	Unconstructed to 2 L
	Barstow	Locan to Leonard	1.0	2 L to 4 L
	Highland	Ashlan to Shields	1.0	2 L to 4 L
		Shaw to Ashlan	1.0	Unconstructed to 4 L
	Dakota	Leonard to Highland	0.05	Unconstructed to 4 L
	McCall	Shaw to Herndon	2.0	2 L to 4 L
		Herndon to Shepherd	3.0	Unconstructed to 4 L
		Shaw to Shields	2.0	2 L to 4 L
	Thompson	Shaw to Shields	2.0	Unconstructed to 4 L
	Behymer	Willow to Minnewawa	1.0	Unconstructed to 4 L
	Dockery	Herndon to SR 168	4.2	Unconstructed to 4 L
City of Reedley	Frankwood	I St. to Floral	1.0	2 L to 4 L
		Manning to North	0.24	2 L to 4 L
	Buttonwillow	Myrtle to Duff	0.7	2 L to 4 L

TABLE 4.4-2				
ROADWAY IMPROVEMENTS IN THE 2020 BASELINE TRANSPORTATION SYSTEM				
Facility		Limits	Length	Type of Improvement
		Duff to Floral	1.3	2 L to 4 L
		South to Myrtle	1.1	2 L to 4 L
	Columbia	Ponderosa to Parlier	0.4	2 L to 4 L
	Springfield	Buttonwillow to East SOI	0.5	Unconstructed to 4 L
	I Street	Dinuba to East Avenue	0.1	Unconstructed to 4 L
	South	Reed to East SOI	1.8	2 L to 4 L
	New Street	n/Floral 900' from Reed to East	0.8	Unconstructed to 4 L
		Herbert Alignment to E. SOI	1.3	Unconstructed to 4 L
	Reed	Manning to South	1.0	2 L to 4 L
		Olson to 11 th Street	0.5	2 L to 4 L
	Manning	I Street to Columbia	1.0	2 L to 4 L

Source: Project list in the 1999 Draft Air Quality Conformity Determination, COFCG, April 1999.

To address traffic congestion impacts, the Draft General Plan establishes a level of service policy (TR-A.3) for all roadways in the County, including a higher standard for rural roadways (i.e., those outside the spheres of influence of the cities of Fresno and Clovis) than urban roadways: LOS “C” versus LOS “D”. This policy allows exceptions where the County finds that improvements required to achieve the desired level of service are unacceptable based on established criteria. The policy is implemented through Implementation Measures TR-A.2 and TR-A.7, which include a Roadway Improvement Program and development of traffic impact fees. Policies also address traffic impacts by requiring new development to identify and construct or fund improvements that mitigate their traffic impacts (Policy TR-A.5), and require the County to pursue other regional, State and federal funding sources for transportation improvements (Policy TR-A.10).

Anticipated growth, with or without the Proposed Project, would increase the need for transit services, especially within the Fresno-Clovis Metropolitan Area (FCMA). The Draft General Plan includes policies to promote the use of transit in areas and corridors where adequate population and employment densities or concentrations exist, or could be achieved, to support the use of transit

services. Within the FCMA, *transit corridors* have been designated since this area has the best potential to achieve population and employment densities that could support “high capacity” transit services, such as express bus service or light rail. Policies call for the preservation of right-of-way and development of land use and design standards in these *transit corridors* to help make high-capacity transit viable. The Draft General Plan calls for transit services in rural areas to focus on the needs of transit dependents (i.e., seniors, disabled and low-income) and on incremental and cost-effective improvements to existing bus services.

The Draft General Plan also includes policies to promote transportation system management (TSM), travel demand management (TDM) within the FCMA and implementation of priority segments of the Regional Bikeways Plan.

The applicable Draft General Plan (December 27, 1999 version) policies that would reduce or eliminate impacts under the Proposed Project are as follows:

Street and Highways

Policy TR-A.1 The County shall plan and construct County-maintained streets and roads according to the County’s Roadway Design Standards. Roadway design standards for County-maintained roads shall be based on the American Association of State Highway and Transportation Officials (AASHTO) standards, and supplemented by California Department of Transportation (Caltrans) design standards and by County Public Works Department Standards. County standards include typical cross sections by roadway classification, consistent with right-of-way widths summarized in Table TR-1.

The County may deviate from the adopted standards in circumstances where conditions warrant special treatment of the roadway. Typical circumstances where exceptions may be warranted may include:

- a. Extraordinary construction costs due to terrain, roadside development, or unusual right-of-way needs; and
- b. Environmental constraints that may otherwise entirely preclude road improvement.

Policy TR-A.2 The County shall plan and design its roadway system in a manner that strives to meet level of service (LOS) D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county.

Roadway improvements to increase capacity and maintain LOS standards should be planned and programmed based on consideration of the total overall needs of the roadway system, recognizing the priority of maintenance, rehabilitation, and operation of the existing road system.

The County may, in programming capacity-increasing projects, allow exceptions to the level of service policy where it finds that the improvements or other measures required to achieve the LOS policy are unacceptable based on established criteria. In addition to consideration of the total overall needs of the roadway system, the County shall consider the following factors:

- The right-of-way needs and the physical impacts on surrounding properties;
- Construction and right-of-way acquisition costs;
- The number of hours that the roadway would operate at conditions below the standard;
- The ability of the required improvement to significantly reduce delay and improve traffic operations; and
- Environmental impacts upon which the County may base findings to allow an exceedance of the standards.

In no case should the County plan and design for worse than LOS D on rural County roadways, worse than LOS E on urban roadways within the spheres of influence of the cities of Fresno and Clovis, or in cooperation with Caltrans and the Council of Fresno County Governments, plan for worse than LOS E on State highways in the county.

- Policy TR-A.3 The County shall require that new or modified access to property abutting a roadway and to intersecting roads conform to access specifications in the Circulation Diagram and Standards section. Exceptions to the access standards may be permitted in the manner and form prescribed in the Fresno County Zoning and Subdivision Ordinances, provided that the designed safety and operational characteristics of the existing and planned roadway facility will not be substantially diminished.
- Policy TR-A.4 The County shall program road improvements on a countywide priority basis using technical assessment tools such as the Road and Traffic Evaluation (RATE) and Pavement Management System (PMS).
- Policy TR-A.5 The County shall require dedication of right-of-way or dedication and construction of planned road facilities as a condition of land development, and require an analysis of impacts of traffic from all land development projects including impacts from truck traffic. Each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefit to others through traffic impact fees.
- Policy TR-A.6 The County shall continue to participate with the Council of Fresno County Governments, the California Department of Transportation, and other agencies, to maintain a current Regional Transportation Plan, and to identify funding priorities and development expenditure plans for available regional transportation funds, in accordance with regional, State, and Federal transportation planning and programming procedures. Such regional programming may include improvements to State highways, city streets, and County roadways.
- Policy TR-A.7 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.
- Policy TR-A.8 The County shall ensure that land development that affects roadway use or operation or requires roadway access, plan, dedicate, and construct required improvements consistent with the criteria in the Circulation Diagram and Standards section.
- Policy TR-A.9 The County shall ensure that the funding of capacity-increasing projects on the Inter-regional Highway System (I-5, and rural portions of SR 99 and SR 41) utilizes State and Federal sources intended for improvements to that system. Fresno County and local development shall not be required to participate financially in the upgrading of the Inter-regional Highway System except as may affect local interchanges.
- Policy TR-A.10 The County shall actively seek all possible financial assistance, including grant funds available from regional, State, and Federal agencies for street and highway purposes when compatible with General Plan policies and long-term local funding capabilities.

- Policy TR-A.11 The County shall ensure that funds allocated directly or are otherwise available to the County for road fund uses shall be programmed and expended to maximize the use of Federal and other matching funds, and shall be based on the following sequence of priorities:
- a. Maintenance, rehabilitation, and operation of the existing County-maintained road system;
 - b. Safety improvements where physical modifications or capital improvements would reduce fatalities and the number and/or severity of injuries;
 - c. Capital capacity improvements to expand capacity or reduce congestion on roadways at or below County LOS standards, and to expand the roadway network.
- Policy TR-A.12 The County, where appropriate, shall coordinate the multi-modal use of streets and highways to ensure their maximum efficiency and shall consider the need for transit, bikeway, and recreational trail facilities when establishing the Ultimate Right-of-way Plan and Precise Plans of streets and highways.
- Policy TR-A.13 The County shall develop and maintain a program to construct bikeways and recreation trails in conjunction with roadway projects in accordance with the adopted Regional Bikeways Plan, the adopted Recreation Trails Plan, available dedicated funding for construction and maintenance, and a needs priority system.
- Policy TR-A.14 The County shall work with the cities of Fresno County in establishing a system of designated truck routes through urban areas.
- Policy TR-A.15 The County shall encourage street designs for interior streets within new subdivisions which protect neighborhoods from the intrusion of through traffic.
- Policy TR-A.16 The County shall require that plans for County road improvement projects consider the preservation of unique existing landscaping to the extent that it will be consistent with user safety.
- Policy TR-A.17 The County should utilize road construction methods that minimize the air, water, and noise pollution associated with street and highway development.
- Policy TR-A.18 The County shall accept classified roads, as defined in Figures TR-1a, TR-1b, and TR-1c, into the County-maintained road system following construction in unincorporated area, when constructed to County standards. The County may make exceptions for collector roads in the Millerton Specific or Shaver Lake Community Plan areas. The County shall not add local roads to the existing County-maintained road system. Provision of maintenance for newly constructed local public roads will be through a County Service Area zone of benefit or other means acceptable to the Board of Supervisors.
- Policy TR-A.19 The County may identify locations of needed future road rights-of-way, consistent with adopted functional classifications, through development and adoption of specific plan lines where appropriate. Circumstances where specific plan line development may be considered may include the following:
- a. Where major classified roadways or corridors are expected to require additional through lanes within a 20-year planning horizon;
 - b. Where the future alignment is expected to deviate from the existing alignment, or to be developed asymmetrically about the existing section or center line;
 - c. Where the adjacent properties are substantially undeveloped, so that property owners may benefit from prior knowledge of the location of rights-of-way of planned roadways before constructing improvements or developing property in a way which may ultimately conflict with identified transportation needs; and
 - d. Expressways and associated frontage roads.

Transit

- Policy TR-B.1 The County shall work with transit providers to provide transit services within the county that are responsive to existing and future transit demand and which can demonstrate cost-effectiveness by meeting minimum farebox recovery levels required by State and Federal funding programs.
- Policy TR-B.2 The County should promote transit services in designated corridors where population and employment densities are sufficient or could be increased to support those transit services, particularly within the spheres of influence of the cities and along existing transit corridors in the rural areas of the county.
- Policy TR-B.3 The County shall work with the Cities of Fresno and Clovis and other agencies to achieve land use patterns and densities that support transit services, preserve adequate rights-of-way, and enhance transit services in the designated transit corridors shown in Figure TR-3.
- Policy TR-B.4 The County shall work with the Council of Fresno County Governments and transit service providers to pursue all available sources of funding for transit services when consistent with General Plan policies and long-term funding capabilities.
- Policy TR-B.5 The County shall consider the transit needs of senior, disabled, low-income, and transit-dependent persons in making recommendations regarding transit services.
- Policy TR-B.6 The County shall encourage the development of facilities for convenient transfers between different transportation systems (e.g., train-to-bus, bus-to-bus).

Transportation Systems Management

- Policy TR-C.1 The County shall support all standards and regulations adopted by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) governing transportation control measures (TCMs).
- Policy TR-C.2 The County shall consider transportation system management (TSM) measures to increase the capacity of the existing roadway network prior to constructing new traffic lanes. Such measures may include traffic signal synchronization and additional turning lanes.
- Policy TR-C.3 The County shall work with the Cities of Fresno and Clovis to encourage new urban development within the FCMA to provide appropriate on-site facilities that encourage employees to use alternative transportation modes as air quality and transportation mitigation measures. The type of facilities may include bicycle parking, shower and locker facilities, and convenient access to transit, depending on the development size and location.

Bicycle Facilities

- Policy TR-D.1 The County shall implement a system of recreational, commuter, and inter-community bicycle routes in accordance with the Regional Bikeway System Plan described in the Circulation Diagram and Standards section and depicted in Figure TR-2. The plan designates bikeways between cities and unincorporated communities, to and near major traffic generators such as recreational areas, parks of regional significance, and other major public facilities, and along recreational routes.

- Policy TR-D.2 The County shall give priority to bikeways that will serve the most cyclists and destinations of greatest demand and to bikeways that close gaps in the existing system.
- Policy TR-D.3 The County shall implement Regional Bikeways Plan routes as Class II facilities unless otherwise designated.
- Policy TR-D.4 The County shall develop bikeways in conjunction with street improvement projects occurring along streets and roads designated on the Regional Bikeways Plan map.
- Policy TR-D.5 The County shall require that adequate rights-of-way or easements are provided for designated bikeways or trails as a condition of land development.
- Policy TR-D.6 The County should promote bicycle safety programs through education and awareness programs aimed at both cyclists and motorists.
- Policy TR-D.7 The County shall construct and maintain bikeways to minimize conflict between bicyclists and motorists.
- Policy TR-D.8 The County shall support development of facilities that help link bicycling with other modes of transportation.

Rail Transportation

- Policy TR-E.1 The County supports consolidation of the Burlington Northern Santa Fe main line traffic onto the Union Pacific right-of-way from Calwa to the San Joaquin River.
- Policy TR-E.2 The County shall support improvements to at-grade crossings on the Burlington Northern Santa Fe and Union Pacific mainline and spur or branch line tracks within the county.
- Policy TR-E.3 The County shall support acquisition by local agencies of railroad rights-of-way that are: 1) in the designated transit corridors in Figure TR-3; and 2) required for public health, safety, and welfare.
- Policy TR-E.4 The County shall work cooperatively with the railroads on the long-term protection of railroad rights-of-way.
- Policy TR-E.5 The County shall support multi-modal stations at appropriate locations to integrate rail transportation with other transportation modes.
- Policy TR-E.6 The County shall support the development of a State-wide high-speed rail service through the Central Valley that serves downtown Fresno and that parallels the Burlington Northern/Santa Fe corridor south of the City of Fresno, the Union Pacific corridor through the City of Fresno, and is capable of accommodating the rapid movement of freight during nighttime, non-passenger usage hours.

Air Transportation

- Policy TR-F.1 The County shall continue to support Federal and State regulations governing operations and land use restrictions related to airports in the county.
- Policy TR-F.2 The County shall continue its membership on and support of the Fresno County Airport Land Use Commission.

Policy TR-F.3 The County shall support the concept of a regional cargo airport on the County's west side to serve the growing needs of agricultural commerce.

Implementation of the Draft General Plan would also increase the number of people in existing incorporated areas, primarily Fresno, Clovis, and their spheres of influence. Development in western Fresno County and other unincorporated areas would be limited. The General Plan would result in residential, commercial, industrial, and public uses being constructed in areas subject to the potential aircraft crash hazards described above. The General Plan contains the following policies that address airport safety.

Policy HS-E.1 The County shall review the Fresno County Airport Land Use Commission's Airport Land Use Policy Plans (CLUPP) to determine the appropriate land uses around airports. The County shall limit land uses in airport safety zones to those uses listed in the applicable CLUPPs as compatible uses. Exceptions shall be made only as provided for in the CLUPPs. Such uses shall also be regulated to ensure compatibility in terms of location, height, and noise.

Policy HS-E.2 The County shall ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, or fuel storage in violation of adopted safety standards.

Policy HS-E.3 The County shall ensure that development, including public infrastructure projects, within the airport approach and departure zones complies with Part 77 of the Federal Aviation Administration Regulations (Objects Affecting Navigable Airspace).

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The identification of future transportation system needs and impacts is based on the Fresno County Peak Period Travel Model that was used by the Council of Fresno County Governments (COFCG) to prepare the 1998 Regional Transportation Plan for Fresno County. The model translates land use and development information into traffic volume projections. The land use development inputs to the model are estimates of the amount and location of existing and future housing units and employment by type, as well as detailed descriptions of the existing and planned roadway systems. The model covers all of Fresno County, including its cities and unincorporated areas.

The transportation impact analysis focuses on year 2020 travel demand and needs. The projected 2020 population and employment used to estimate future travel demand under the Proposed Project is described in Chapter 2, Project Description and Demographic Information, of this Draft EIR.

The 1996 to 2020 development estimates for each city sphere of influence and each major rural area of the county were then allocated to about 1,300 "traffic analysis zones" (TAZs) used in COFCG's travel demand model. This allocation was based on COFCG's development estimates by TAZ for 1995, 2000, 2005, 2010, 2015 and 2020.

The evaluation of transportation problems and needs for 2020 began with the development of a 2020 Baseline Transportation System which includes existing facilities and only those roadway improvements contained in the "financially constrained project list" in the 1998 Regional Transportation Plan (RTP)

and the COFCG's 1999 Air Quality Conformity Determination. This list of projects includes only funded/committed regional and local improvement projects. Table 4.4-2 outlines the roadway improvement projects that are included in the 2020 Baseline Transportation System.

Level of Service

Roadway needs under 2020 conditions were identified through a "level of service" analysis. Level of service is a qualitative assessment that measures the effect of a number of transportation related factors, including speed and travel time, interruptions, freedom to maneuver, safety, driving comfort and convenience, and operation costs. Level of service cover the entire range of traffic operations that are designated from "A" (best conditions) to "F" (worst conditions). Level of service "E" describes conditions approaching or at maximum capacity.

This analysis of the Fresno County's roadway system employs a level of service methodology developed by the Transportation Research Board's 1994 *Highway Capacity Manual*. The specific version used was developed by the Florida Department of Transportation (FDOT), called the "Florida Tables". FDOT's methodology provides level of service and volume thresholds for freeway, arterial, and highway facilities using speed, saturation flow, signalization, and a number of other variables.

For the evaluation of this EIR, roadways were grouped by the development characteristics in either urbanized, or rural areas based on the urban/rural boundary defined in COFCG's 1998 Regional Transportation Plan. Table 4.4-3 describes the facility types that are found in the Florida Tables, including a correlation between these facility types and the functional classification system employed by Fresno County.

Tables 4.4-4 through 4.4-6 summarize the level of service definitions for each of the functional classification categories. A review of these tables indicate that traffic operations start to deteriorate (i.e., level of service "D") at a volume-to-capacity ratio of 0.72 and 0.80 for freeways and arterial roadways, respectively. On two-lane rural highways, however, level of service "D" begins at a much lower volume-to-capacity ratio (0.36). This level of service distinction recognizes that two-lane rural highways are used for long-distance travel and that drivers must frequently pass slower vehicles in order to maintain high travel speeds. Driver frustration grows since frequent passing on two-lane highways becomes increasingly difficult at relatively low volume-to-capacity ratios.

To determine roadway level of service, relationships have been developed between daily traffic volumes and level of service based on facility type, number of lanes, temporal distribution of traffic, regional setting, and volume-to-capacity ratio. Table 4.4-7 summarizes approximate maximum daily traffic volumes for each facility/level of service combination that were used to evaluate the Fresno County roadway system. Note that level of service represents peak hour conditions although it is based on daily traffic and capacity estimates.

The qualitative analysis of airport safety issues was performed by comparing areas with potential aircraft crash hazards with areas that would be developed under the General Plan.

TABLE 4.4-3

FDOT FACILITY TYPES

Area Type	Facility Type	Description	Fresno County Facility
Urbanized	Freeway	within urbanized area over 500,000 population or near CBD ¹	Freeway
	Arterials		
	Type A	fewer than 0.50 signals/mile	Expressway/Arterial
	Type B	0.50 to 2.49 signals/mile	Expressway/Arterial/Collector
Rural	Freeway	within Rural Undeveloped Area	Freeway
	Highway	more than 1 lane per direction	Expressway/Arterial
	2-lane Highway	no more than 1 lane per direction	Expressway/Arterial/Collector

1. CBD = Central Business District

Source: Florida DOT and DKS Associates, 1999.

TABLE 4.4-4
FREEWAY LEVEL OF SERVICE DESCRIPTIONS
RURAL OR URBAN

LOS	V/C Ratio	Description
A	0.00-0.30	Free Flow: Vehicles completely unimpeded to maneuver in traffic stream. Average speeds near 60 mph.
B	0.31-0.48	Free Flow: Ability to maneuver in traffic stream only slightly restricted. Average speeds over 57 mph.
C	0.49-0.71	Stable Flow: Freedom to maneuver in traffic stream noticeably restricted. Average speeds over 54 mph.
D	0.72-0.87	Approaching Unstable Flow: Freedom to maneuver in traffic stream is severely limited. Average speeds over 46 mph.
E	0.88-1.00	Unstable Flow: Volumes at or near capacity. Maneuvering is extremely limited. Average speeds over 30 mph.
F	>1.00	Forced Flow: Queues form behind breakdown points. Average speeds less than 30 mph.

Source: *Highway Capacity Manual*, Transportation Research Board, 1994.

TABLE 4.4-5
ARTERIAL LEVEL OF SERVICE DESCRIPTIONS
URBANIZED AREAS

LOS	V/C Ratio By Arterial Type ¹					Description
	A	B	C	D	E	
A	0.00 to 0.33	n/a	n/a	n/a	n/a	Free Flow/Insignificant Delays: No approach phase at a signalized intersection is fully utilized by traffic and no vehicle waits longer than one red signal indication.
B	0.34 to 0.55	0.00 to 0.70	n/a	n/a	n/a	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles.
C	0.56 to 0.75	0.71 to 0.89	0.00 to 0.36	n/a	n/a	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted.
D	0.76 to 0.89	0.90 to 0.97	0.37 to 0.82	0.00 to 0.61	0.00 to 0.76	Approach Unstable/Tolerable Delays: Drivers may have to wait through more than one red signal indication. Queues may develop but dissipate rapidly, without excessive delays.
E	0.90 to 1.00	0.98 to 1.00	0.83 to 0.93	0.62 to 0.87	0.77 to 0.87	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
F	more than 1.00	more than 1.00	more than 0.93	more than 0.88	more than 0.88	Forced Flow/Excessive Delays: Represents jammed conditions. Intersection operates below capacity with low volumes. Queues may block upstream intersections.
1. Level of service is not achievable where "n/a" is shown. Source: <i>Highway Capacity Manual</i> , Transportation Research Board, 1994.						

TABLE 4.4-6

2-LANE HIGHWAY LEVEL OF SERVICE DESCRIPTIONS
RURAL AREAS

LOS	V/C Ratio	Description
A	0.00-0.11	Free Flow: Almost no platoons of three or more cars. Drivers delayed no more than 30% by slow moving vehicles.
B	0.12-0.24	Free Flow: Some platoons form. Drivers delayed no more than 45% by slow moving vehicles.
C	0.25-0.39	Stable Flow: Noticeable increase in platoon formation and size. Drivers delayed no more than 60% by slow moving vehicles.
D	0.40-0.62	Approaching Unstable Flow: Heavy platooning. Passing becomes difficult. Drivers delayed no more than 75% by slow moving vehicles.
E	0.63-1.00	Unstable Flow: Intense platooning. Passing is virtually impossible. Drivers delayed more than 75% by slow moving vehicles.
F	>1.00	Forced Flow: Queues form behind breakdown points.
Note: Assumed conditions include 60/40 directional split, 5% heavy vehicles, and 20%, 40%, and 60% no passing zones for level, rolling, and mountainous terrain, respectively. Source: <i>Highway Capacity Manual</i> , Transportation Research Board, 1994.		

TABLE 4.4-7						
EVALUATION CRITERIA FOR LEVEL OF SERVICE						
No.	Description	Approximate Maximum Daily Traffic Volume Per Lane by LOS Category				
		A	B	C	D	E
1	Rural Freeway	4,500	7,250	10,650	13,050	14,900
2	Rural Multi-lane Highway	4,200	7,050	9,800	11,700	13,550
3	Rural 2-lane Highway	1,300	2,650	4,300	6,800	11,000
4	Urban Freeway	5,600	9,000	13,250	16,200	18,525
5	Urban Arterial	n/a	6,375	7,900	8,475	8,550
Source: DKS Associates, 1999.						

Standards of Significance

The Proposed Project is considered to have a significant impact if one or more of the following could occur:

- projected 2020 traffic volumes under the Proposed Project would result in a roadway segment exceeding the thresholds in the proposed level of service policy (TR-A.3). This policy states that the County shall strive to meet level of service (LOS) “D” on urban roadways (i.e., within the spheres of influence of the cities of Fresno and Clovis) and LOS “C” on all other roadways in the County. The proposed policy allows exceptions where the County finds that improvements or other measures required to achieve the LOS policy are unacceptable based on established criteria;
- the County would be unable to adequately maintain pavement conditions on the rural roadway system to meet projected growth in traffic, especially truck traffic;
- transit service providers would be unable to provide adequate transit services to meet projected demand;
- implementation of planned bikeways would not adequately meet the demand for bicycling;
- result in a substantial public safety hazard for aircraft operations or for people and property on the ground; or
- conflict with adopted airport land use plans.

Impacts and Mitigation Measures

4.4-1 Development under the Draft General Plan would increase traffic volumes on rural Fresno County roadways outside the spheres of influence of the cities, causing some of these roadway segments to operate at an unacceptable level of service.

Table A-1 in Appendix C provides daily traffic volumes and levels of service on the major urban and rural roadways throughout Fresno County for 1995 and for 2020 conditions with and without the Proposed Project, assuming the “2020 Baseline Transportation System” (described in Table 4.4-2).

The rural Fresno County roadways that would not achieve the proposed level of service policy in the Draft General Plan (i.e., those projected to operate at LOS “D” or worse) are shown in Table 4.4-8.

With the Proposed Project, 12 rural Fresno County roadway segments would operate at unacceptable levels of service in 2020 if only funded/committed roadway improvements (those included in the “2020 Baseline Transportation System”) are implemented. However, 2020 traffic volumes under the Proposed Project would be only marginally greater than without the project on most of the Fresno County roadway system. Even without project traffic, nine roadways would operate at LOS “D” or worse. That is, only a few rural roadway segments that would operate at acceptable levels of service in 2020 if the Draft General Plan is **not** adopted would operate at unacceptable levels under the Proposed Project.

Two of the rural roadway segments that would not meet the proposed level of service policy under the Proposed Project already have four travel lanes: Clovis Avenue and Jensen Avenue. The County design policies do not provide for six-lane roadways in rural areas. The proposed level of service policy would allow an exception if the required roadway improvement would result in more than four through travel lanes and the roadway would operate at LOS “D” conditions. Jensen Avenue from Temperance Avenue to Highland Avenue would operate at LOS “D” conditions. Clovis Avenue would operate at LOS “F” conditions from Jensen Avenue to North Avenue and at LOS “D” conditions from North Avenue to Central Avenue. While the County could consider an exception to its level of service policy on segments of Jensen Avenue and Clovis Avenue that would operate at LOS “D” conditions, it could also consider an exception to its design policy that would allow the rural portion of Clovis Avenue that would operate at LOS “F” conditions to be widened to six lanes. Exceptions to the proposed level of service policy would likely not apply to the other rural Fresno County roadways shown in Table 4.4-8.

The number of rural Fresno County roadways that would not meet the County’s proposed level of service policy is limited and would be reduced by policies contained in the Draft General Plan. The Draft General Plan requires new development to identify and construct or fund improvements that mitigate their traffic impacts (Policies TR-A.5 and TR-A.7), and calls for the development of traffic impact fees for areas outside the spheres of influence of cities in the County (Implementation Measure TR-A.B). The Draft General Plan also requires the County to pursue other regional, State and federal funding sources for transportation improvements (Policies TR-A.6 and TR-A.10). These measures may or may not provide adequate funding by 2020 to improve all the rural Fresno County roadways that would not meet the proposed level of service policy. Therefore, this impact is considered **significant**.

TABLE 4.4-8 RURAL FRESNO COUNTY ROADWAYS¹ THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS D OR WORSE)									
Roadway Segment	1995 Base			2020 Without Project			2020 with Proposed Project		
	Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Auberry (Millerton to Copper)	2,300	2	A	11,000	2	D	11,500	2	D
Bethel (SR 180 to California)	5,500	2	C	9,500	2	D	10,100	2	D
Clovis (Jensen to North)	23,600	4	B	39,800	4	F	44,300	4	F
Clovis (North to Central)	17,000	4	B	29,500	4	C	32,500	4	D
Dinuba (Pederson to Alta)	7,200	2	C	10,500	2	D	11,900	2	D
Elm (American to Jefferson)	17,500	2	F	16,600	2	E	17,100	2	F
Jensen (Temperance to Highland)	12,800	4	B	31,000	4	C	31,800	4	D
Mt. Whitney (Marks to Fruit)	3,900	2	B	8,000	2	C	8,700	2	D
Mt. Whitney (Valentine to Marks)	6,700	2	C	8,800	2	D	9,100	2	D
1. Represents Fresno County roadways (including expressways, super arterials, arterials and collectors, but not roadways classified as outside the spheres of influence of cities and excludes State routes).x									
Source: DKS Associates, 1999.									

Mitigation Measure

4.4-1 *None available beyond Draft General Plan Policies TR-A.5 through TR-A.7 and TR-A.10.*

The number of rural Fresno County roadways that would not meet the County's proposed level of service policy is limited and would be reduced by policies and implementation measures in the Draft General Plan. Nonetheless, even with the implementation of General Plan policies, funding for roadway improvements may not always be available before deficiencies occur. Therefore, the impact is considered significant and unavoidable.

4.4-2 Development under the Draft General Plan would increase traffic volumes on rural State highways outside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.

Table A-1 in Appendix C provides daily traffic volumes and levels of service on the major urban and rural roadways throughout Fresno County for 1995 and for 2020 conditions with and without the Proposed Project assuming the "2020 Baseline Transportation System" (described in Table 4.4-2).

The rural State highways that would not achieve the proposed level of service policy in the Draft General Plan (i.e., those projected to operate at LOS “D” or worse) are shown in Table 4.4-9. Of the roadway segments analyzed, 13 would operate at LOS “D” or worse under existing conditions. Funded and/or committed roadway improvements (those included in the “2020 Baseline Transportation System”) would mitigate congestion on some State highways that were operating at unacceptable levels of service in 1995. Nonetheless, by 2020, 28 of the analyzed segments are expected to operate at LOS “D” or worse. Growth under the Proposed Project would cause one additional rural State highways segment to operate at unacceptable levels of service in 2020, and would increase congestion along most other segments. About 93 percent of the 1996 to 2020 population and employment growth in Fresno County would occur within the spheres of influence of incorporated cities. Thus, most of the traffic increase on rural State highway would be due either to (1) travel between these growing cities and the State highway “gateways” to Fresno County, or (2) growth in “through” travel that does not have an origin or destination in the County (especially on SR 99 and SR 41).

Policy TR-A.9 states that funding for capacity-increasing projects on the Inter-regional Highway System in Fresno County (I-5, SR 41 and SR 99) shall rely on State and federal sources intended for that system. It also states that Fresno County and local development shall not be required to participate financially in the upgrading of the Inter-regional Highway System. Under the Proposed Project, development in the rural areas (outside the spheres of influence of the cities) of Fresno County would contribute a very small portion of the growth in traffic volumes on the Inter-regional Highway System.

The analysis shown in Table 4.4-9 assumes that only those funded/committed roadway improvements contained in the 2020 Baseline Transportation System would be implemented by 2020. Improvements to the regional roadway system in this baseline system reflect the 1998 Regional Transportation Plan (RTP), which includes only programmed improvements. The majority of State regional funding in the 1998 Fresno County RTP is allocated to the State highway system. State and regional funding programs generally cover only a seven-year period (1997 to 2004 in the latest funding cycle). A major source of funding regional projects in the RTP is the Measure “C” program, the half-cent sales tax that is dedicated for transportation improvements in Fresno County. The RTP reflects the Measure “C” Expenditure Plan, which extends through fiscal year 2006/2007.

Additional funding for regional transportation improvements would likely be available from regional, State and federal sources for the 2005 to 2020 time frame. If a significant amount of funding were available and allocated to the rural State highway system, than the traffic congestion levels shown in Table 4.4-9 would be reduced. However, the level of funding for regional improvements beyond 2004 is uncertain, and the Council of Fresno County Governments (COFCG) Policy Board would allocate such funding. Both State highways and other regionally significant roadways in the urban and rural areas of Fresno County would be eligible for regional funds. Funding may not be available to mitigate all of the level of service impacts on the rural State highway shown in Table 4.4-9. Therefore, this impact is considered **significant**.

TABLE 4.4-9 RURAL STATE ROUTES¹ THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS D OR WORSE)										
Roadway Segment		1995 Base			2020 Without Project			2020 with Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
SR 33	Coalinga to Jayne	7,300	2	C	9,900	2	D	10,600	2	D
SR 41	Central to American	16,800	2	D	39,600	4	F	40,600	4	F
	Dinuba to Mtn. View	9,500	2	D	18,300	4	D	19,800	4	D
	Elkhorn to Mt. Whitney	8,400	2	C	17,000	4	C	18,900	4	D
SR 43	SR 99 to Mtn. View	12,500	2	D	20,000	2	E	21,300	2	E
	Mtn. View to Kamm	12,500	2	D	20,500	2	E	22,000	2	E
	Kamm to Elkhorn	8,800	2	D	16,400	2	E	18,000	2	E
	Elkhorn to Harlan	11,100	2	D	21,400	2	E	23,000	2	F
	Harlan to Mt. Whitney	10,800	2	D	21,100	2	E	22,900	2	F
SR 99	Fresno/Madera Co Line to Herndon	51,400	4	C	159,600	6	F	186,800	6	F
	Cedar to Central	62,000	6	C	107,300	6	E	111,700	6	E
	Central to Chestnut	49,000	6	B	91,000	6	D	94,900	6	D
	Chestnut to American	57,000	6	C	105,500	6	E	112,100	6	E
	SR-201 to Fresno/Tulare Co Ln.	37,900	4	C	100,400	6	F	114,800	6	F
SR 145	Fresno/Madera Co Line to Shaw	4,800	2	B	13,100	2	D	14,900	2	E
	Shaw to Ashlan	6,400	2	C	14,600	2	E	16,000	2	E
	Ashlan to Shields	5,200	2	B	12,000	2	D	13,300	2	D
	Shields to McKinley	7,000	2	C	12,600	2	D	14,000	2	E
	McKinley to SR 180	8,500	2	C	16,700	2	E	17,400	2	E
SR 180	Belmont to Panoche	3,600	2	B	11,700	2	D	12,100	2	D
	Panoche to San Mateo	2,400	2	A	10,300	2	D	10,200	2	D
	San Mateo to James	4,100	2	B	13,300	2	D	13,300	2	D
	James to Lake	5,900	2	C	15,100	2	E	15,200	2	E
	Lake to Kerman SOI	3,200	2	B	9,600	2	D	9,700	2	D
	Kerman SOI to Howard	7,300	2	C	15,100	2	E	15,400	2	E
	Howard to Dickenson	6,900	2	C	14,300	2	E	14,300	2	E
	Dickenson to Chateau Fresno	7,500	2	C	13,500	2	D	13,400	2	D
SR 269	Gale to Jayne	10,600	2	D	18,600	2	E	20,300	2	E
	Jayne to I-5	10,500	2	D	18,100	2	E	19,900	2	E
1.	Represents State Routes outside the spheres of influence of cities.									
Note:	The per-lane capacities for freeway segments vary depending on whether they are classified as urban or rural. For example, some segments of SR99 in Fresno County were classified as urban while others were classified as rural.									
Source:	DKS Associates, 1999.									

Mitigation Measure

4.4-2 *None available beyond TR-A.9.*

The recommended measure would provide some funding for rural State highways and would thereby help reduce the level of service impacts identified in Table 4.4-9. However, under the Proposed Project, development in areas outside the spheres of influence of the cities in Fresno County would contribute a small portion of the growth in traffic volumes on most of the rural State highways. Therefore, most of the funding for improvements to the rural State highways must come from other sources, which may or may not be available. Policy TR-A.9 states that Fresno County and local development shall not be required to participate financially in the upgrading of the Inter-regional Highway System. Caltrans must implement improvements to State highways and the County cannot guarantee that they would be implemented. There are no reasonable mitigation measures available for the County alone to implement that would reduce this impact to a less than significant level. Therefore, this impact would remain significant and unavoidable.

4.4-3 Development under the Draft General Plan would increase traffic volumes on local urban roadways inside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.

Table A-1 in Appendix C provides daily traffic volumes and levels of service on the major urban and rural roadways throughout Fresno County for 1995 and for 2020 conditions with and without the Proposed Project assuming the “2020 Baseline Transportation System” (described in Table 4.4-2).

The roadways that are inside the spheres of influence of the cities in Fresno County that would not achieve the proposed level of service policy in the Draft General Plan are shown in Table 4.4-10. This includes roadways projected to operate at LOS “E” or worse within the spheres of influence of the cities of Fresno and Clovis and LOS “D” or worse in the spheres of influence of other cities in the county. This table indicates that the cities of Clovis, Fresno and Reedley currently have roadways operating at unacceptable service levels (LOS “E” or worse). Funded and/or committed roadway improvements (those included in the “2020 Baseline Transportation System”) would mitigate congestion on some roadways that were operating at unacceptable levels of service, but most of the roadway segments analyzed would operate at LOS “F” by 2020, and both Sanger and Selma would have roadways operating at LOS “E”. Growth under the Proposed Project would cause additional urban roadway segments to operate at unacceptable levels of service in 2020.

Draft General Plan Implementation Program TR-A.B states that the County would require new development within an unincorporated area of a city sphere of influence to pay the traffic impact fees of that city. It would be the responsibility of the cities to develop and maintain their roadway capital improvement programs and adequate funding mechanisms to maintain their adopted level of service programs for the entire sphere of influence. It is uncertain whether the cities would fund and implement improvements that would mitigate the level of service deficiencies identified in Table 4.4-10. Therefore, this impact is considered **significant**.

Table 4.4-10, p.1

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Clovis SOI										
Ashlan	east of Clovis	17,400	2	F	18,500	2	F	19,300	2	F
	west of Clovis	18,600	2	F	17,500	2	F	17,700	2	F
Clovis	south of Ashlan	50,300	6	D	56,000	6	F	60,500	6	F
	north of Bullard	19,700	4	B	32,100	4	D	36,800	4	F
Fifth	east of Clovis	11,200	2	B	18,200	2	F	18,200	2	F
	west of Clovis	13,100	2	C	18,600	2	F	19,000	2	F
Fowlers	south of Ashlan	15,600	2	C	22,000	2	F	22,400	2	F
Herndon	east of Clovis	22,400	4	B	44,500	4	F	47,500	4	F
	west of Clovis	25,700	4	C	65,100	6	F	71,900	6	F
	east of Minnewawa	25,700	4	C	49,300	6	D	55,500	6	F
	west of Minnewawa	34,700	4	F	50,300	6	D	55,800	6	F
	east of Peach	35,500	4	F	51,500	6	F	57,300	6	F
	west of Peach	36,500	4	F	49,300	6	D	54,400	6	F
	east of Temperance	5,000	2	B	15,500	2	C	17,100	2	F
Shaw	west of Clovis	46,200	6	C	59,500	6	F	62,400	6	F
	east of Peach	57,900	6	F	64,600	6	F	66,300	6	F
	west of Peach	54,700	6	F	72,000	6	F	75,000	6	F
	east of Willow	58,000	6	F	75,700	6	F	77,800	6	F
	west of Willow	53,400	6	F	69,900	6	F	71,700	6	F
Willow	north of Shaw	34,500	6	B	55,200	6	F	59,200	6	F
Fowler SOI										
Temperance	north of Adams	6,100	2	C	12,800	2	D	13,800	2	E
	south of Adams	4,400	2	B	10,100	2	D	11,000	2	D
Fresno SOI										
Ashlan	east of Blackstone	28,200	4	C	33,600	4	D	34,100	4	E
	east of Brawley	18,700	2	F	38,700	4	F	40,700	4	F
	east of Cedar	33,800	4	D	54,300	4	F	54,100	4	F
	west of Cedar	33,800	4	D	39,700	4	F	41,400	4	F
	east of Palm	19,200	2	F	23,500	2	F	23,200	2	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment	1995 Base			2020 Without Project			2020 With Proposed Project			
	Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS	
	west of Palm	18,900	2	F	23,300	2	F	21,900	2	F
	west of SR 41	40,400	4	F	45,800	4	F	45,600	4	F
	east of Willow	48,300	4	F	40,100	4	F	41,300	4	F
Blackstone	north of Herndon	39,000	6	C	63,500	6	F	70,100	6	F
	south of Herndon	28,600	6	B	48,100	6	D	56,100	6	F
	north of Nees	18,500	6	B	54,400	6	F	73,200	6	F
	north of Shaw	39,400	6	C	49,100	6	D	54,700	6	F
Brawley	north of Shaw	14,700	2	C	18,000	2	F	19,300	2	F
Bullard	east of Blackstone	38,400	4	F	45,500	4	F	48,600	4	F
	west of Blackstone	30,200	4	C	34,800	4	F	36,700	4	F
	east of Cedar	25,900	4	C	29,700	4	C	34,400	4	F
	west of Cedar	29,600	4	C	33,900	4	D	37,600	4	F
	east of First	30,800	4	C	36,400	4	F	40,500	4	F
	west of First	34,600	4	F	39,800	4	F	43,200	4	F
	east of Fresno	32,800	4	D	37,800	4	F	40,900	4	F
	west of Fresno	37,900	4	F	44,500	4	F	48,200	4	F
	west of Marks	16,400	4	B	31,300	4	C	35,300	4	F
	east of Palm	25,800	4	C	34,600	4	F	37,500	4	F
	west of Palm	24,500	4	B	36,000	4	F	40,100	4	F
	west of SR 41	38,900	4	F	46,800	4	F	50,200	4	F
	east of West	24,400	4	B	36,400	4	F	40,500	4	F
Cedar	south of Alluvial	10,000	2	B	15,700	2	C	17,700	2	F
	north of Ashlan	34,000	4	E	40,100	4	F	43,200	4	F
	south of Ashlan	35,200	4	F	29,900	4	C	33,900	4	D
	north of Belmont	23,700	4	B	35,000	4	F	36,500	4	F
	north of Bullard	30,600	4	C	36,800	4	F	39,400	4	F
	south of Bullard	28,800	4	C	35,200	4	F	36,500	4	F
	south of Central	9,000	2	B	14,600	2	C	18,200	2	F
	south of Herndon	27,600	4	C	35,400	4	F	39,100	4	F
	north of Shaw	33,000	4	D	34,900	4	F	38,500	4	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Chestnut	south of Shaw	34,100	4	E	36,500	4	F	39,400	4	F
	south of Ashlan	40,400	4	F	29,700	4	C	31,700	4	D
	south of Alluvial	10,300	2	B	19,100	2	F	19,500	2	F
	north of Belmont	25,200	4	B	42,300	4	F	45,600	4	F
	south of Belmont	22,900	4	B	33,000	4	D	35,200	4	F
	south of Nees	8,900	2	B	16,900	2	D	17,300	2	F
	north of SR 180	36,000	4	F	37,300	4	F	39,000	4	F
	south of SR 180	26,800	4	C	31,000	4	C	34,500	4	F
Clovis	north of Belmont	46,100	4	F	67,100	6	F	70,500	6	F
	south of Belmont	39,500	4	F	56,900	6	F	60,000	6	F
	north of Church	28,200	4	C	44,700	4	F	47,700	4	F
	south of Church	28,200	4	C	39,300	4	F	42,400	4	F
	north of Geary	28,200	4	C	44,900	4	F	47,800	4	F
	north of McKinley	43,700	6	C	52,200	6	F	58,800	6	F
	south of McKinley	46,500	4	F	67,600	6	F	72,800	6	F
	north of Olive	43,800	4	F	63,100	6	F	67,600	6	F
	south of Olive	47,200	4	F	65,100	6	F	71,300	6	F
	north of Shields	50,800	6	D	58,100	6	F	62,200	6	F
First	south of Shields	55,500	6	F	59,100	6	F	62,400	6	F
	north of SR 180	32,000	4	D	48,100	6	D	51,800	6	F
	south of SR 180	34,800	4	F	50,000	4	F	52,600	4	F
	north of Tulare	39,900	4	F	55,500	6	F	58,600	6	F
	south of Tulare	37,700	4	F	48,100	6	D	51,800	6	F
	north of Ashlan	29,800	4	C	32,600	4	D	35,800	4	F
	north of Bullard	30,500	4	C	34,900	4	F	38,600	4	F
	north of Herndon	19,800	4	B	31,500	4	C	38,500	4	F
	south of Herndon	17,400	4	B	29,300	4	C	35,000	4	F
	south of Shaw	26,600	4	C	32,000	4	D	35,800	4	F
	south of Shields	31,900	4	D	36,000	4	F	38,600	4	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Fowler	north of McKinley	0	0	0	47,900	4	F	51,200	4	F
	south of McKinley	0	0	0	44,400	4	F	46,600	4	F
	south of Shields	15,000	2	C	40,200	4	F	42,800	4	F
	north of Tulare	17,100	2	F	31,700	4	D	34,000	4	E
	south of Tulare	17,100	2	F	26,100	4	C	28,100	4	C
Fresno	north of Bullard	22,100	4	B	29,700	4	C	34,400	4	F
	north of Herndon	22,700	4	B	39,100	4	F	44,100	4	F
	south of Nees	18,600	4	B	31,300	4	C	36,600	4	F
Friant	north of Audubon	36,200	4	F	68,800	6	F	72,400	6	F
	south of Audubon	37,500	6	B	66,700	6	F	69,500	6	F
	south of Shepherd	15,700	4	B	48,300	6	D	51,900	6	F
H St.	north of Fresno	17,800	2	F	20,300	2	F	20,700	2	F
Herndon	east of Blackstone	50,200	6	D	75,400	6	F	79,100	6	F
	west of Blackstone	41,800	6	C	58,300	6	F	61,400	6	F
	east of Cedar	45,300	4	F	56,000	4	F	59,300	4	F
	west of Cedar	60,300	6	F	72,300	6	F	75,500	6	F
	east of Chestnut	53,600	4	F	63,700	4	F	64,900	4	F
	west of Chestnut	45,200	4	F	57,300	4	F	58,900	4	F
	east of First	47,800	6	D	61,600	6	F	67,400	6	F
	west of First	53,000	6	F	68,500	6	F	74,400	6	F
	east of Fresno	53,000	6	F	68,500	6	F	74,400	6	F
	west of Fresno	57,800	6	F	77,000	6	F	85,300	6	F
	east of Maple	45,200	4	F	57,300	4	F	58,900	4	F
	west of Maple	46,000	4	F	56,700	4	F	60,000	4	F
	east of Marks	36,100	4	F	72,700	6	F	75,500	6	F
	west of Marks	34,500	4	F	74,200	6	F	78,400	6	F
	east of Palm	66,600	6	F	81,500	6	F	85,200	6	F
	west of Palm	43,700	4	F	81,600	6	F	85,300	6	F
	east of West	40,800	4	F	79,100	6	F	81,700	6	F
	west of West	43,500	4	F	80,900	6	F	83,700	6	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Jensen	west of Willow	40,000	4	F	50,100	4	F	51,300	4	F
	east of Cedar	38,600	4	F	54,800	6	F	58,400	6	F
	west of Cedar	41,000	4	F	57,200	6	F	61,000	6	F
	east of Clovis	37,500	4	F	54,300	4	F	56,700	4	F
	west of Clovis	32,300	4	D	50,200	6	D	53,200	6	F
	east of Fowler	32,200	4	D	41,600	4	F	43,400	4	F
	west of Fowler	33,600	4	D	41,200	4	F	43,400	4	F
	west of SR 41	6,700	4	B	32,300	4	D	34,000	4	E
McKinley	east of Blackstone	30,500	4	C	36,700	4	F	38,900	4	F
	west of Blackstone	29,300	4	C	34,500	4	F	35,500	4	F
	east of Cedar	31,700	4	D	40,900	4	F	43,900	4	F
	east of Chestnut	34,600	4	F	28,900	4	C	31,500	4	C
	west of First	53,500	4	F	46,200	4	F	49,000	4	F
	west of SR 41	28,000	4	C	40,200	4	F	44,900	4	F
	west of West	29,700	4	C	39,400	4	F	41,800	4	F
	Dr north of Bullard	8,900	2	B	18,400	2	F	19,000	2	F
N Motel	Dr south of Bullard	9,500	2	B	16,800	2	D	18,500	2	F
	Dr north of Herndon	20,900	2	F	35,000	2	F	46,000	2	F
	Dr north of Shaw	10,000	2	B	16,700	2	D	18,500	2	F
	Dr south of Shaw	13,200	2	C	17,700	2	F	19,300	2	F
	east of Blackstone	8,500	4	B	34,600	4	F	43,600	4	F
Nees	west of Blackstone	11,800	4	B	37,600	4	F	39,300	4	F
	west of Cedar	12,200	4	B	34,200	4	F	38,300	4	F
	east of First	16,300	4	B	41,700	4	F	45,700	4	F
	west of First	12,900	4	B	33,500	4	D	39,700	4	F
	east of Fresno	14,700	4	B	35,500	4	F	41,600	4	F
	west of Fresno	8,500	4	B	36,100	4	F	44,400	4	F
	north of Herndon	0	0	0	34,500	4	F	37,700	4	F
Palm	north of Belmont	11,400	2	B	32,100	4	D	35,000	4	F
Peach	north of SR 180	7,700	2	B	17,200	2	F	18,100	2	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Shaw	south of SR 180	13,100	2	C	23,900	2	F	24,800	2	F
	east of Cedar	49,600	6	D	52,000	6	F	55,300	6	F
	east of Chestnut	54,500	6	F	80,000	6	F	83,900	6	F
	west of Chestnut	54,600	6	F	67,500	6	F	69,200	6	F
	east of First	50,200	6	D	53,900	6	F	57,600	6	F
	west of First	60,000	6	F	64,100	6	F	69,500	6	F
	east of Marks	48,800	6	D	68,100	6	F	73,000	6	F
	west of Marks	46,100	6	C	70,400	6	F	76,100	6	F
	east of Palm	49,700	6	D	61,100	6	F	64,100	6	F
	west of Palm	44,900	6	C	56,300	6	F	62,000	6	F
Shields	east of Polk	21,400	2	F	50,500	6	D	54,100	6	F
	west of SR 41	70,600	6	F	80,300	6	F	84,000	6	F
	west of West	32,000	6	B	47,300	6	C	51,500	6	F
	east of Blackstone	37,100	4	F	46,000	4	F	47,600	4	F
	west of Blackstone	39,000	4	F	47,200	4	F	49,100	4	F
	west of Clovis	10,800	4	B	30,700	4	C	35,400	4	F
	east of First	31,100	4	C	35,600	4	F	38,000	4	F
	west of First	30,500	4	C	32,800	4	D	36,000	4	F
	east of Fowler	13,600	2	C	15,900	2	D	17,400	2	F
	east of Marks	0	0	0	57,300	6	F	59,200	6	F
Temperance	east of Palm	30,900	4	C	39,900	4	F	42,100	4	F
	west of Palm	28,200	4	C	38,700	4	F	40,800	4	F
	west of SR 41	50,700	4	F	59,500	4	F	61,000	4	F
	west of West	11,300	4	B	33,500	4	D	35,700	4	F
	north of McKinley	24,500	4	B	36,200	4	F	40,500	4	F
	south of McKinley	21,900	2	F	32,500	4	D	37,400	4	F
	north of Shields	18,500	4	B	31,400	4	C	35,500	4	F
	south of Shields	24,300	4	B	33,500	4	D	36,200	4	F
	north of Shields	22,000	2	F	44,300	4	F	48,100	4	F
	north of Ashlan	31,600	4	C	35,100	4	F	38,800	4	F

TABLE 4.4-10										
URBAN ARTERIALS AND EXPRESSWAYS ¹										
THAT WOULD NOT MEET THE DRAFT LEVEL OF SERVICE POLICY (LOS E or Worse)										
Roadway Segment		1995 Base			2020 Without Project			2020 With Proposed Project		
		Volume	Lanes	LOS	Volume	Lanes	LOS	Volume	Lanes	LOS
Willow	south of Alluvial	11,100	6	B	43,500	6	C	50,900	6	E
	north of Herndon	15,900	6	B	50,700	6	D	58,500	6	F
Reedley SOI										
North	east of Reed	15,000	2	E	19,700	2	E	20,500	2	E
Bridge	Hwy of Reed	14,500	2	E	20,800	2	E	22,000	2	E
Sanger SOI										
9th	east of Bethel	6,400	2	C	9,400	2	D	9,300	2	D
Academy	north of North	8,800	2	D	15,600	4	A	16,800	4	A
Annadale	east of Academy	7,600	2	C	8,800	2	D	8,600	2	C
Bethel	north of Jensen	6,300	2	C	10,300	2	D	10,900	2	D
	south of Jensen	11,400	2	D	15,300	2	E	15,600	2	E
Selma SOI										
2nd St.	west of McCall	9,200	2	D	14,100	2	E	15,200	2	E
Floral	west of McCall	8,600	2	C	10,100	2	D	10,000	2	D
McCall	south of Manning	10,800	2	D	15,400	2	E	16,300	2	E
¹ Represents arterials, super arterials and expressways inside the spheres of influence of cities and excludes State routes.										
Source: DKS Associates 1999										

Mitigation Measure

4.4-3 *None available beyond Draft General Plan Implementation Program TR-A.B.*

Improvements to roadways within the sphere of influence of a city must be implemented by that city. The County's policies would place most future development within city spheres, and the level of service impacts shown in Table 4.4-10 would stem from this growth. Aside from the policy in the Draft General Plan that requires new development within an unincorporated area of a city sphere of influence to pay the traffic impact fees of that city, there are no reasonable mitigation measures available for the County alone to implement that would reduce this impact to a less-than-significant level. Therefore, this impact would remain significant and unavoidable.

4.4.4 Development under the Draft General Plan would increase traffic volumes on State highways inside the spheres of influence of cities in Fresno County, and cause some of these roadway segments to operate at an unacceptable level of service.

Table A-1 in Appendix C provides daily traffic volumes and levels of service on the major urban and rural roadways throughout Fresno County for 1995 and for 2020 conditions with and without the Proposed Project assuming the "2020 Baseline Transportation System" (described in Table 4.4-2).

The State highways that are inside the spheres of influence of the cities and would not achieve the proposed level of service policy in the Draft General Plan are shown in Table 4.4-11. This includes roadways projected to operate at LOS "E" or worse within the spheres of influence of the cities of Fresno and Clovis and LOS "D" or worse in the spheres of influence of other cities in the County.

As shown in Table 4.4-11, most analyzed segments of SR 33, SR 41 and, in the City of Fresno, SR 99 currently operate at acceptable service levels. SR 99 outside the City of Fresno, and SR 145, SR 180 and SR 201 generally operate at unacceptable service levels. While funded/committed roadway improvements (those included in the "2020 Baseline Transportation System") would mitigate congestion on some State highways that were operating at unacceptable levels of service in 1995, the Proposed Project would increase congestion and cause additional rural State highways segments to operate at unacceptable levels of service. About 93 percent of the 1996 to 2020 population and employment growth in Fresno County would occur within the spheres of influence of incorporated cities, so most of the traffic increase on urban State highway would be due either to (1) travel within or between these growing cities or (2) growth in "through" travel that does not have an origin or destination in the County (especially on SR 99 and SR 41).

Policy TR-A.9 states that funding for capacity-increasing projects on the Inter-regional Highway System in Fresno County (I-5, SR 41 and SR 99) shall rely on State and federal sources intended for that system. It also states that Fresno County and local development shall not be required to participate financially in the upgrading of the Inter-regional Highway System. Under the Proposed Project, development in the rural areas (outside the spheres of influence of the cities) of Fresno County would contribute a very small portion of the growth in traffic volumes on the Inter-regional Highway System, especially within the spheres of influence in the cities.

TABLE 4.4-11
URBAN STATE ROUTES¹

Roadway Segment		Sphere of Influence	1995 Base			2020 Without Project			2020 With Proposed Project		
			Volume	Lanes	LOS	Volume	Lanes	LOS	Volumes	Lanes	LOS
SR 33	north of 12th	Firebaugh	12,400	2	D	16,900	2	E	17,400	2	D
	south of 12th		7,700	2	C	12,200	2	D	12,800	2	D
	north of SR 180	Mendota	5,000	2	B	8,500	2	C	8,900	2	D
SR 41	Fresno/Madera Co Line to Friant	Fresno	12,300	1	B	132,300	4	F	178,900	4	F
	Friant to Herndon		47,500	6	B	134,800	6	F	149,000	6	F
	Herndon to Bullard		75,000	6	C	143,600	6	F	150,900	6	F
	Bullard to SR-168		98,000	6	E	148,700	6	F	155,600	6	F
	SR-168 to McKinley		118,000	6	F	138,800	6	F	142,100	6	F
	McKinley to Divisadero		107,000	8	D	157,500	8	F	165,700	8	F
	Divisadero to M		73,500	6	C	134,500	6	F	144,300	6	F
	North to Central		16,100	2	D	12,000	4	B	13,900	4	B
SR 99	Herndon to Shaw		39,000	4	C	102,500	4	F	112,000	4	F
	Shaw to Ashlan		41,000	4	C	99,900	4	F	110,400	4	F
	Ashlan to Shields		57,600	6	C	117,100	6	F	128,100	6	F
	Shields to Clinton		56,000	6	C	100,300	6	D	109,000	6	E
	Clinton to McKinley		61,000	6	C	115,100	6	F	124,100	6	F
	McKinley to Olive		68,000	6	C	132,900	6	F	142,600	6	F
	Olive to Belmont		71,000	6	C	140,700	6	F	149,500	6	F
	Belmont to SR-180		63,000	6	C	129,300	6	F	138,300	6	F
	SR-180 to Fresno		64,100	6	C	112,700	6	F	122,000	6	F
	Fresno to Ventura		64,000	6	C	116,600	6	F	126,200	6	F
	Ventura to SR-41		92,000	6	D	127,800	4	F	133,700	4	F
	SR-41 to North		66,000	6	C	117,000	6	F	125,900	6	F
	North to Cedar		59,000	6	C	100,300	6	E	102,300	6	E
	American to Clovis	Fowler	56,000	6	C	103,600	6	F	109,300	6	F
	Clovis to Adams		66,000	6	D	123,400	6	F	130,800	6	F

TABLE 4.4-11
URBAN STATE ROUTES¹

Roadway Segment		Sphere of Influence	1995 Base			2020 Without Project			2020 With Proposed Project		
			Volume	Lanes	LOS	Volume	Lanes	LOS	Volumes	Lanes	LOS
	Adams to Merced	Selma	67,100	6	D	123,600	6	F	130,800	6	F
	Merced to Manning		61,000	6	C	116,500	6	F	123,700	6	F
	Manning to SR-43		65,900	6	D	109,700	6	F	118,200	6	F
	SR-43 to 2nd		44,000	4	D	97,800	6	F	107,800	6	F
	2nd to Mountain	Kingsburg	43,000	4	D	100,600	6	F	111,900	6	F
	Mountain to Bethel		41,500	4	C	96,900	6	F	107,300	6	F
	Bethel to SR-201		40,500	4	C	97,500	6	F	110,200	6	F
SR 145	north of SR 180	Kerman	10,300	2	D	17,800	2	E	18,600	2	E
	south of SR 180	Fresno	14,000	2	E	21,800	2	E	22,300	2	F
	SR180 to McKinley		0	0	N/A	106,200	6	E	108,400	6	E
SR 168	McKinley to Shields	Fresno	0	0	N/A	133,500	6	F	138,700	6	F
	Shields to Ashlan		0	0	N/A	147,200	6	F	153,400	6	F
	Ashlan to Shaw		0	0	N/A	138,200	6	F	144,200	6	F
	Shaw to Bullard		0	0	N/A	100,100	6	D	109,200	6	E
	Bullard to Herndon	Clovis	0	0	N/A	71,300	4	E	79,900	4	F
	Herndon to Fowler		0	0	N/A	43,500	4	C	49,500	4	D
SR 180	west of Cedar	Fresno	45,500	4	F	40,400	6	C	41,500	6	C
	east of Chestnut		37,500	4	F	43,700	6	C	45,300	6	C
	west of Chestnut		36,000	4	F	31,600	6	B	33,600	6	B
	east of First		44,000	4	F	38,300	6	C	39,500	6	C
	west of First		39,500	4	F	35,600	6	B	36,800	6	B
	east of Fowler		17,000	2	D	23,600	4	B	24,000	4	B
	east of Peach		36,300	4	F	40,400	6	C	41,500	6	C
	west of Peach		32,800	4	D	37,000	6	B	39,200	6	C
	east of SR 145		8,700	2	D	16,700	2	E	17,300	2	E
	west of SR 145	Fresno	7,300	2	C	15,200	2	E	15,500	2	E
	Brawley to Marks		0	0	N/A	20,600	2	F	22,100	2	F

TABLE 4.4-11
URBAN STATE ROUTES¹

Roadway Segment		Sphere of Influence	1995 Base			2020 Without Project			2020 With Proposed Project		
			Volume	Lanes	LOS	Volume	Lanes	LOS	Volumes	Lanes	LOS
	Marks to Teilman		0	0	N/A	26,500	2	F	27,300	2	F
	SR 99 to Fulton		41,300	6	B	97,700	6	D	104,400	6	D
	Fulton to Blackstone		42,200	6	B	100,400	6	D	105,800	6	D
	Blackstone to SR 41		35,700	6	B	107,900	6	E	112,300	6	E
	SR 41 to Cedar		0	0	N/A	194,300	6	F	198,500	6	F
	Cedar to Chestnut		0	0	N/A	109,700	6	F	112,800	6	F
	Chestnut to Peach		0	0	N/A	118,600	4	F	122,100	4	F
	Clovis to Fowler		0	0	N/A	61,300	4	F	62,300	4	F
	Fowler to Temperanec		0	0	N/A	50,600	4	F	51,400	4	F
SR 201	east of Academy	Kingsburg	9,500	2	D	15,900	4	C	17,100	4	C
	west of Academy		11,800	2	D	19,800	4	D	21,200	4	D

1. Represents
 Note: The per-lane capacities
 Source: DKS

The analysis used to generate Table 4.4-11 assumes that only those funded/committed roadway improvements contained in the 2020 Baseline Transportation System would be implemented by 2020. Improvements to the regional roadway system in this baseline system reflect the 1998 Regional Transportation Plan (RTP), which only includes programmed improvements. The majority of State regional funding in the 1998 Fresno County RTP is allocated to the State highway system. State and regional funding programs generally do not cover the lifetime (2020) of the Proposed Project. A major source of funding regional projects in the RTP is the Measure “C” program, the half-cent sales tax that is dedicated for transportation improvements in Fresno County. The RTP reflects the Measure “C” Expenditure Plan, which extends through fiscal year 2006/2007.

Additional funding for regional transportation improvements would likely be available from regional, State and federal sources for the 2005 to 2020 time frame. If a significant amount of funding were available and allocated to the urban State highway system, than the impacts shown in Table 4.4-11 would be reduced. However, the level of funding for regional improvements beyond 2004 is uncertain, and the Council of Fresno County Governments (COFCG) Policy Board would allocate such funding. Both State highways and other “regionally significant” roadways in the urban and rural areas of Fresno County would be eligible for regional funds. Funding may not be available to mitigate all of the level of service impacts on the urban State highways shown in Table 4.4-11. Therefore, this impact is considered **significant**.

Mitigation Measure

4.4-4 *None available beyond Draft General Plan Policy TR-A.9.*

Caltrans must implement improvements to urban State highways. The County’s policies would place most future development within city spheres, and the level of service impacts on urban State highways shown in Table 4.4-11 would not stem from growth in the rural areas of the County. There are no reasonable mitigation measures available for the County alone to implement that would reduce this impact to a less than significant level. Therefore, this impact would remain significant and unavoidable.

4.4-5 Development under the Draft General Plan would increase truck traffic on rural Fresno County roadways outside the spheres of influence of the cities, reducing the County’s ability to maintain pavement conditions on the rural roadway system.

Pavement conditions are already deficient on a significant portion of the rural roadway system and the County’s funds for rehabilitation and reconstruction have not been adequate to repair these existing deficiencies. A survey (State Resolution 8) performed by all cities and counties state-wide shows that Fresno County’s annual shortfall to maintain roads in their current conditions would require \$31.1 million. Fresno County estimates that the current shortfall to provide preventative maintenance service to the County’s road system is approximately \$31 million annually. Preventative maintenance expenditures are essential for the efficient use of available roadway funding in order to avoid more costly repairs or reconstruction if pavement is allowed to deteriorate beyond a maintainable level. Studies show that reconstruction costs are approximately five times the cost per mile of preventative maintenance.

Trucks have a much greater impact on the deterioration of roadway pavement than automobiles. Engineering studies show that typical 18-wheel semi-trailer trucks have the equivalent loading effect of between 3,000 and 6,000 passenger vehicles. The number of truck trips from Fresno County's *existing* agricultural industries is expected to grow. As many of the rural, less structurally sound roads are exposed to increases in heavy truck traffic, significant damage to the rural roadway system would occur.

The Proposed Project would result in higher employment levels, especially within the spheres of influence of the cities in the County. Some of the higher employment levels in the rural areas under the Proposed Project would result from new agricultural processing centers and other high truck generators. Thus, these new rural employment areas would not only increase the need for traffic capacity improvements, but also increase the need for roadway maintenance and rehabilitation.

The Draft General Plan has policies that would reduce the project effect on roadway maintenance. These include a policy that requires each land development project to analyze their traffic impacts, including truck-related impacts, and construct or fund improvements necessary to mitigate the effects of traffic from the project (TR-A.5). This policies would reduce the impacts that trucks from new development would have on the rural roadway system. The Plan also requires that maintenance, rehabilitation and reconstruction of existing roadways be considered as important priorities in the County's Road Improvement Program (TR-A.4). However, due to existing deficiencies and deferred maintenance, pavement conditions on a significant portion of the County's rural roadway system would likely be deficient during the life of this Plan (2020). Therefore, this impact is considered **significant**.

Mitigation Measure

4.4-5 *None available beyond Draft General Plan Policies TR-A.4 and TR-A.5.*

4.4-6 Development under the Draft General Plan would increase transit demand throughout Fresno County, especially inside the spheres of influence of cities.

Under the Proposed Project the number of daily person trips generated in Fresno County would increase from 3.4 million to 5.5 million between 1995 and 2020, a 62 percent increase. About 93 percent of this increase in daily person trips would occur inside the spheres of influence of cities. With the projected increase in person trips there would be an equivalent increase in the demand for transit services. It should be noted that a substantial majority of the increase in transit demand would occur even if the Proposed Project is not adopted.

The primary provider of rural general public transportation is the Fresno County Rural Transit Agency (FCRTA). This Joint Powers Agency was formed in 1979 to address transit needs of the rural areas and includes the rural incorporated cities (all of the cities in the county except the cities of Fresno and Clovis) and Fresno County. The Rural Consolidated Transportation Service Agency (CTSA) coordinates transportation provided by social service agencies in rural Fresno County. The assessment of transit need in the rural areas of the County is a function of the Council of Fresno County

Government's (COFCG) annual "unmet needs" process. Plans for improving transit services in rural areas are contained in the Rural Short Range Transit Plan (SRTP) and the Regional Transportation Plan (RTP), both of which must be approved by the COFCG Policy Board. Thus, Fresno County's role in implementing transit services in the rural areas of the county is only as a participant in FCRTA and COFCG.

The providers of urban public transportation in Fresno County are Fresno Area Express (FAX), a department of the City of Fresno, and Clovis Transit. The County's role in implementing transit services in the Fresno-Clovis Metropolitan Area is only through its participation in COFCG, which must adopt the SRTP for the Fresno-Clovis Metropolitan Area (FCMA) and the RTP.

The 1998-2003 Rural SRTP, adopted in June 1998, calls for a continuation of public transportation services within and between incorporated cities reflective of service levels. Under this plan, expansion may include increased service hours and weekend services on existing routes, while requests for expansion to new areas should be accommodated within existing available operations. The Rural SRTP calls for special attention to be exercised to ensure that existing transit services are not diluted or jeopardized as service expansion requests to new areas are received. Those subsystems exhibiting the weakest performance will continue to be monitored under the Plan for possible adjustments in service. The adjustments may take the form of service revisions, new service or service extension, consolidation through new institutional arrangements or termination of service.

The impact of increased transit demand in the rural areas of the County would be reduced by policies contained in the Draft General Plan. The Plan calls for the County to work with transit providers to implement transit services that are responsive to existing and future transit demand and which can demonstrate cost-effectiveness by meeting minimum farebox recovery levels required by State and federal funding programs (TR-B.1). Another policy emphasizes transit services in existing transit corridors in the rural areas of the County (TR-B.2). These policies would be implemented through the County's participation in the Short Range Transit Plan process and are generally consistent with the current SRTP. The Plan also calls for the County to work with transit providers and the COFCG to pursue all available sources of funding for transit services (TR-B.4).

The County's proposed land use policies would place most of the 1996 to 2020 development in urban areas where transit service could be much more cost-effective than in rural areas. These land use policies would make more efficient the provision of transit services in the County. The Draft General Plan contains other policies that would also reduce the impacts of increased transit demand in urban areas, including the designation of transit corridors in the Fresno-Clovis Metropolitan Area (TR-B.3). Transit corridors were designated within the FCMA since this area has the best potential to achieve population and employment densities to support "high-capacity" transit services (i.e., light rail or express bus service). The Plan calls for the County to support development of land use and design standards in these transit corridors.

The land use and transportation policies in the Draft General Plan represent a substantial contribution by the County to reducing impacts of increased transit demand in both the rural and urban areas of the

County. However, it is uncertain whether the funding for transit services would be able to keep pace with increases in transit demand through the year 2020, especially within urban areas. Therefore, this impact is considered **significant**.

Mitigation Measure

4.4-6 *None available beyond Draft General Plan Policies TR-B.1, TR-B.2, TR-B.3, and TR-B.4.*

Transit providers together with the COFCG must implement improvements to transit service. There are no reasonable mitigation measures available for the County alone to implement that would reduce this impact to a less than significant level. Therefore, this impact would remain significant and unavoidable.

4.4-7 Development under the Draft General Plan would increase the demand for bicycle facilities throughout Fresno County, especially inside the spheres of influence of cities.

Under the Proposed Project the population of Fresno County would increase by about 46 percent between 1996 and 2020, which would substantially increase the number of people using bicycles and the associated demand for bicycle facilities. Except for recreational trips and exercise, bicycling is best suited for short-distance travel. About 93 percent of population growth would occur within the spheres of influence of incorporated cities. With higher densities and shorter travel distances, the average number of daily bicycle trips per household would be a much greater in the urban areas than in the rural areas of the County. Therefore, development under the Proposed Project would increase the demand for bicycling in the urban areas far more than the rural areas. It should be noted that most of the increase in demand for bicycle facilities would occur with or without approval of the Proposed Project.

The Draft Regional Bikeways Plan prepared by the Council of Fresno County Governments (COFCG) defines a planned bikeway system for Fresno County. The Regional Bikeways Plan needs to be updated and adopted. Fresno County has provided COFCG with its proposed roadway-related bikeway system (Class I and Class II) for the rural area of the county. This proposed system is shown on the Rural Bikeways System Map in the Draft General Plan, and the Recreation Trails Map in the Open Space Element of the Draft General Plan. The Rural Bikeways System Map is intended to guide bikeway planning and to ensure that a bike lane, or a parallel bike path, is included in any right-of-way dedication or improvement of the roadways contained on this map. The Regional Bikeways Plan is a long-range plan, and it may be unrealistic to fund and construct all of the urban and rural bikeways on the Plan during the life of the Fresno County General Plan (2020). However, it would be important to implement those bikeways that would serve significant numbers of cyclists.

The Rural Bikeways System Map focuses on connecting communities and thus includes on-street (Class II) bike lanes on long stretches of rural roads. Few of these bike lanes currently exist. The primary use of most of the rural bikeway facilities would be recreational trips. The limited amount of population

growth in the rural areas of the county would likely not create a substantial increase in the demand for bicycling on the rural roadway system. However, growing recreational bicycling in the eastern foothill area could increase demand for bicycle facilities in this area. Yet the lack of an existing inter-community bikeway system does not meet current demands.

Bicycling would be a more important form of transportation within urban areas than the rural areas due to higher demand for commute, shopping and school trips. Other than school trips, bicycling would not represent a large share of the travel demand in urban areas. Yet with higher densities and shorter travel distances, there would be a much greater potential for bicycling to have some impact on reducing vehicle trips, and thereby reducing air quality impacts, in the urban areas than in the rural areas.

The Draft General Plan has policies that would reduce the impacts caused by new development in the rural areas of the county. Policies TR-A.13 and TR-D.4 require the County to develop bikeways in conjunction with any improvement project occurring along roadways designated on the Regional Bikeways Plan. Policy TR-D.5 requires adequate right-of-way or easements be provided for designated bikeways or trails as a condition of development. Other policies give priority to bikeways that would serve the most cyclists and destinations of greatest demand (TR-D.2).

Many of the designate bikeways on the Rural Bikeways System Map are located on State highways. Some of these bikeways will be constructed as part of programmed improvements to the State highway system, including designated bikeways on portions of SR 41, SR 43 and SR 180. In urban areas, the cities of Fresno and Clovis have included bike lanes in their design standards for collectors and arterials in newly developing areas. Between 1990 and 1996, local agencies have added over 40 miles of bikeways to the 78 miles created since 1979, for a total of 118 miles. The Transportation Development Act requires that 2 percent of the Local Transportation Fund be set aside each year for bicycle and pedestrian purposes.

The above measures should provide for a substantial amount of the bikeways on the Regional Bikeways Plan by 2020. However, it is uncertain whether the funding and implementation of planned bikeways through the year 2020 would adequately meet the demand for bicycling in the county, especially within urban areas. Therefore, this impact is considered **significant**.

Mitigation Measure

4.4-7 *None available beyond Draft General Plan Policies TR-A.13, TR-D.1, TR-D.2, TR-D.4 and TR-D.5.*

Most of the designate bikeways on the Rural Bikeways System Map are located on State highways and must be implemented by Caltrans. Bikeways within spheres of influence would be the responsibility of cities. There are no reasonable mitigation measures available for the County alone to implement that would reduce this impact to a less-than-significant level. Therefore, this impact would remain significant and unavoidable.

4.4-8 Development under the Draft General Plan would increase the number of people and amount of property that could be exposed to aircraft crash hazards.

Safety issues associated with airports and airstrips are primarily concerned with hazards posed to departing and landing aircraft and hazards to people on the ground. Hazards to aircraft may be physical, such as tall structures that would obstruct airspace; visual, such as the glare caused by lights; or electronic, which could include any electronic uses that interfere with aircraft instruments or communication systems.

Airport operations increase with urban growth, and this increased activity creates an increased risk of aircraft crash hazards that could affect people on the ground. However, these risks can be reduced through proper land use planning, as required by Draft General Plan Policies TR-F.1 and HS-E.1 through HS-E.3, and adherence to applicable federal and State aviation regulations. These policies and regulations are intended to minimize or avoid incompatible land uses in the vicinity of airports so that the number of people and structures that could be affected would be limited.

The increase in population that could be exposed to aircraft hazards on the ground would be identical with or without adoption of the Proposed Project. Although the locations of development could vary, only development allowed under applicable federal, State, and local airport safety regulations would occur within the Airport Safety Zones delineated in the land use plan of each airport. These regulations would apply regardless of whether the development is within incorporated areas subject to local (city) policies or within unincorporated areas of the county. Implementation of the Draft General Plan would, therefore, not conflict with the adopted land use plans or local policies for each airport, and safety hazards to people and property would not be substantially greater than existing conditions. Therefore, impacts related to air traffic safety and hazards to people on the ground would be ***less than significant***.

Mitigation Measures

4.4-8 *None required.*

Cumulative Impacts

The cumulative context is regional transportation network as defined by the Baseline Transportation System of the FCMA through the year 2020. Project and non-project development in Fresno County would contribute to increased traffic volumes elsewhere in the Central Valley and Sierra Nevada foothills, particularly in Madera and Merced Counties. The impacts discussed above take into consideration cumulative development, because the traffic model accounts for regional development beyond Fresno County.

4.4-9 Development under the Draft General Plan, in combination with cumulative development, would increase traffic volumes on State and local roadways within the spheres of influence, on rural Fresno County roadways outside the spheres of influence, including increased truck traffic, and on roadways that provide access to and from Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.

As indicated in Impacts 4.4-1 through 4.4-6, the Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the County by 2020, and an even smaller increment of growth in the greater Central Valley, because the population growth would be unchanged by the project. Nonetheless, the increase in traffic could be considered cumulatively considerable, because it would add to demand on facilities that are at or near capacity.

As discussed above, the project would contribute considerably to cumulative impacts on local roadways.

Ambient and project-specific traffic volume increases would be partially offset by roadway widening (see Table 4.4-2), and other improvements such as roadway geometrics and traffic signal coordination programs that will be implemented during the planning horizon. As discussed in Impacts 4.4-1 through 4.4-6, Draft General Plan Policies would also reduce the effects of project traffic. However, the net result would be increasing congestion on specific roadways in the region. Therefore, these cumulative impacts are considered **significant**.

4.4-9 *None available beyond Draft General Plan Policies TR-A.4, TR-A.5, TR-A.7, TR-A.9, TR-A.13, TR-B.1 through TR-B.4, and TR-D.1, TR-D.2, TR-D.4, and TR-D.5 and Implementing Program TR-A.B.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.5 WASTEWATER, STORM DRAINAGE, AND FLOODING

INTRODUCTION

This section addresses the potential wastewater, storm drainage, and flooding impacts resulting from development under the Draft General Plan. The discussion is focused on how development intensities specified in the Draft General Plan would affect the need for new wastewater and storm drainage facilities and potential impacts resulting from installation of new facilities that may be required. The potential wastewater and storm drainage impacts of development under the Draft General Plan are assessed against the background of existing conditions, and are also compared with potential impacts of growth through 2020 without the Proposed Project. The analysis also considers potential flood hazards. Surface and groundwater quality issues associated with wastewater and stormwater runoff are addressed in Section 4.8, Water Resources. Other water-related issues, such as water supply and distribution, are also addressed in Section 4.8.

WASTEWATER

ENVIRONMENTAL SETTING

Detailed background information on wastewater collection and treatment is provided in Chapter 5.5, Public Facilities and Services, Wastewater Collection and Treatment in the *General Plan Update Background Report (Background Report)*, which is hereby incorporated by reference. This information is summarized below.

Cities and special districts own and operate numerous wastewater collection and treatment systems throughout the County. All these agencies must obtain permits from the Regional Water Quality Control Board (Regional Board) to discharge treated plant effluent and dispose of biosolids (sludge). Likewise, industries that are not connected to centralized systems are required to provide treatment of their wastewater and obtain individual discharge permits from the Regional Board. Residents in rural areas that are not served by centralized systems use on-site septic systems subject to regulation by the County. There are 362 permitted dischargers in Fresno County, not including individual residential septic systems.

All incorporated cities within Fresno County are served by local sewage collection and treatment systems. The majority of treated wastewater is domestic, with a small amount generated by industrial discharges. Most treatment plants provide secondary treatment, but some smaller cities still rely on primary treatment facilities only. Most of the cities in Fresno County generally have adequate treatment capacity for the foreseeable future. However, Firebaugh and Sanger typically experience wastewater flows that meet or exceed current design capacities for their systems. Efforts are currently underway in both of these cities to upgrade facilities to accommodate anticipated flows. The Fresno-Clovis

Regional Wastewater Treatment and Reclamation Facility was recently upgraded and now has a treatment capacity of approximately 80 millions gallons per day (mgd). The current average flows of 68 to 70 mgd are well within this design capacity.

Many unincorporated communities have elected to form special districts to provide sewage collection and treatment services. Approximately 30 of these districts provide wastewater services. The County owns and operates 11 wastewater treatment facilities on behalf of water works districts and County service areas.

Most treatment facilities currently use evaporation/percolation ponds for effluent disposal. Percolation ponds achieve some level of nutrient reduction and disinfection by filtering effluent through soil. The Regional Board recognizes this as a viable disposal solution, although reclamation and recycling of treated effluent for irrigation purposes is preferred in order to reduce potential impacts to groundwater. Effluent recycling requires tertiary treatment, however, and the cost of this advanced level of treatment is prohibitive to most small communities.

Industries in the unincorporated areas, which primarily consist of food processing plants, also provide wastewater treatment subject to discharge permits issued by the Regional Board. These systems also typically discharge to evaporation/percolation ponds. Other agricultural wastewater is also disposed of in this manner.

Rural residential development that is not served by centralized wastewater systems relies on individual septic systems for wastewater treatment and disposal. Septic systems are regulated by the Fresno County Planning & Resource Management Department, which enforces standards and criteria for on-site systems.

REGULATORY SETTING

Federal, State, and local governments have developed programs and regulations designed to ensure protection of water quality in conjunction with private development. These programs and regulations are briefly described below.

Federal and State

The federal *Clean Water Act (CWA)* established the *National Pollutant Discharge Elimination System (NPDES)* to regulate municipal and industrial discharges (point sources) to surface waters of the United States. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB/Regional Board) are responsible for ensuring implementation of and compliance with the provisions of the federal CWA, including administration of the NPDES permitting process for point source discharges.

In 1967, California's *Porter-Cologne Water Quality Control Act* established the SWRCB and nine regional boards as the primary state agencies with regulatory authority over water quality. The Porter-Cologne

Act provides authority to establish *Water Quality Control Plans (Basin Plans)* which designate beneficial uses for specific surface water and groundwater resources, and establish water quality objectives and implementation programs to meet the stated objectives and to protect the beneficial uses of water. The water quality objectives of the San Joaquin River and its tributaries are set forth in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin. The Kings River and its tributaries are subject to the basin plan for Tulare Hydrologic Basin.

The Regional Boards issue Waste Discharge Requirements (permits) in compliance with the applicable basin plans for the major point-source dischargers such as municipal wastewater treatment plants and industrial facilities. Fresno County is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (CVRWQCB).

Local

The installation of individual septic systems in the unincorporated areas of the County is regulated under *Fresno County Ordinance Title 15*, which adopts the provisions of the *Uniform Plumbing Code* for septic systems. Applicants for septic system permits must also comply with the *Manual of Septic Tank Practice*. These requirements are intended to preclude the creation of health hazards and nuisance conditions and to protect surface and groundwater quality. Percolation tests are required to determine the suitability of on-site soils to accept wastewater effluent to determine the amount of lineal feet of leach line required. The systems are required to be set back a minimum distance from well, creeks, reservoirs, and springs. In problem soils, individual septic systems must be designed by an engineer and include an expansion area that is equivalent in size to at least 100 percent of the required original system.

The County of Fresno's *Mandatory Sewer Connection Ordinance* requires connection to public sewer systems, where they are available, and precludes the issuance of permits for installation individual septic systems in such areas. In areas where public systems become available where they did not previously exist, structures served by individual septic systems must be connected to the public system within three years, or sooner if the existing facilities pose a health risk. In the event that required connections are not made within the required three year period, the County may cause such a connection to be made, with the cost of the connection assessed to the landowner.

PLAN ELEMENTS

Development under the Draft General Plan would result in additional development in the urban and rural areas of the County. It is estimated that a total of approximately 24,100 acres of additional residential development and 13,700 acres of additional non-residential development would be accommodated under the Draft General Plan. Of these totals, approximately 1,500 acres of residential and 540 acres of non-residential development would occur in the unincorporated areas of the County.

Some portion of this new development would consist of rural residential development served by individual septic systems for wastewater treatment, and some would consist of agricultural industries that are also responsible for their own wastewater treatment and disposal. The remainder of this new development would increase demands on centralized wastewater collection and treatment facilities in the urbanized areas of the County, and would result in the need for localized installation and/or expansion of facilities such as sewage collection pipelines, pump stations, treatment plants, and evaporation/percolation ponds.

The Draft General Plan Public Facilities and Services Element, Open Space and Conservation Element, and Land Use Element contains the following policies to ensure the safe disposal of wastewater by promoting efficient water use and reduced wastewater system demand and ensuring safe development, operation, and maintenance of on-site disposal systems.

General Public Facilities and Services

- Policy PF-A.2 The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.
- Policy PF-A.3 The County shall require new urban commercial and urban-density residential development to be served by community sewer, stormwater, and water systems.

Water Conservation

- Policy PF-C.25 The County shall require that all new development within the County use water conservation technologies, methods, and practices as established by the County.
- Policy PF-C.27 The County shall adopt, and recommend to all cities that they also adopt, the most cost-effective urban best water conservation management practices circulated and updated by the California Urban Water Agencies, California Department of Water Resources, or other appropriate agencies.
- Policy PF-C.29 The County shall, in order to reduce excessive water usage, require tiered water pricing within County Service Areas and County Waterworks Districts.

Wastewater Collection, Treatment, and Disposal

- Policy PF-D.1 The County shall encourage the installation of public wastewater treatment facilities in existing communities that are experiencing repeated septic system failures and lack sufficient area for septic system repair or replacement and/or are posing a potential threat to groundwater.
- Policy PF-D.2 The County shall require that any new community sewer and wastewater treatment facilities serving residential subdivisions be owned and maintained by a County Service Area or other public entity approved by the County.
- Policy PF-D.4 The County shall limit the expansion of unincorporated, urban density communities to areas where community wastewater treatment facilities can[not] [sic] be provided.
- Policy PF-D.5 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.

- Policy PF-D.6 The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be provided.
- Policy PF-D.7 The County shall require preparation of sewer master plans for wastewater treatment facilities for areas experiencing urban growth.

Water Quality

- Policy OS-A.20 The County shall not approve the creation of new parcels that rely on the use of septic systems of a design not found in the California Plumbing Code.
- Policy OS-A.26 The County shall only approve new wastewater treatment facilities that will not result in degradation of surface water or groundwater. The County shall generally require treatment to tertiary or higher levels.

Land Use

- Policy LU-A.9 The County may allow creation of homesite parcels smaller than the minimum parcel size required by Policy LU-A.6, if the parcel involved in the division is at least twenty (20) acres in size, subject to the following criteria:

- a. The minimum lot size shall be sixty thousand (60,000) square feet of gross area, except that a lesser area shall be permitted when the owner submits evidence satisfactory to the Health Officer that the soils meet the Water Quality Control Board Guidelines for liquid waste disposal, but in no event shall the lot be less than one (1) gross acre; and
- b. One of the following conditions exists:
 1. A lot less than twenty (20) acres is required for financing construction of a residence to be owned and occupied by the owner of abutting property; or
 2. The lot or lots to be created are intended for use by persons involved in the farming operation and related to the owner by adoption, blood, or marriage within the second degree of consanguinity, there is only one (1) lot per related person, and there is no more than one (1) gift lot per parcel of twenty (20) acres or more; or
 3. The present owner owned the property prior to the date these policies were implemented and wishes to retain his/her homesite and sell the remaining acreage for agricultural purposes.

Each homesite created pursuant to this policy shall reduce by one (1) the number of residential units otherwise authorized on the remainder parcel created from the original parcel.

- Policy LU-B.7 The County may allow creation of homesites smaller than the minimum parcel size required by Policy LU-B.5 in areas designated Westside Rangeland if the parcel involved in the division is at least forty (4) acres in size and subject to the following criteria:
- a. The minimum lot size shall be sixty thousand (60,000) square feet of gross area, except that a lesser area shall be permitted when the owner submits evidence satisfactory to the Health Officer that the soils meet the Water Quality Control Board Guidelines for liquid waste disposal, but in no event shall the lot be less than one (1) gross acre, and
 - b. One of the following conditions exists:
 1. A lot less than forty (40) acres is required for financing construction of a residence to be owned and occupied by the owner of abutting property, or

2. The lot or lots to be created are intended for use by persons involved in the farming or ranching operations and related to the owner by adoption, blood, or marriage within the second degree of consanguinity, there is only one (1) lot per related person, and there is no more than one (1) gift lot per each forty (40) acres, or
3. The present owner owned the property prior to the date that these policies were implemented by adoption of the exclusive agriculture zone district and wishes to retain his homesite and sell the remaining acreage for grazing or other agricultural purposes.

Each homesite created pursuant to this policy shall reduce by one (1) the number of residential units otherwise authorized on the remainder parcel created from the original parcel.

Policy LU-E.6 The County shall allow planned residential developments consisting of a minimum two (2) acre lot in areas designated for rural residential development subject to the following conditions:

- a. The buildable portion of the lot shall be a minimum of thirty-six thousand (36,000) square feet.
- b. Dwellings shall be limited to single family structures.
- c. The ratio of lot depth to width shall not exceed four (4) to one (1).
- d. Individual wells and septic systems shall be required.
- e. The size and configuration of the buildable portion of the lot shall be based on sufficient geological and hydrological investigations.
- f. Common open space areas that provide a portion of the two-acre lot should not include road and canal rights-of-way, reservations, permanent water bodies, and common use areas that are occupied by buildings, streets, maintenance sheds, tennis courts, parking lots, and similar uses that are not of an open character.
- g. Common open space areas that provide a portion of the two-acre lot shall be vested in fee title ownership to each individual property owner, but may be used for common use purposes.

Policy LU-E.22 The County may approve land divisions in areas designated Rural Settlement Area when the following criteria are met:

- a. The minimum net lot size shall be two (2) acres, except as allowed by LU-E.22c below.
- b. The ratio of lot depth width shall not exceed four (4) to one (1).
- c. A minimum of thirty-six thousand (36,000) square feet per lot shall be permitted if community water facilities are available and soils are suitable for individual septic systems.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

This analysis is programmatic and largely qualitative in nature, because the specific projects resulting from development of the Draft General Plan can only be approximated and cannot be predicted with precision. However, the analysis is based on the overall quantitative allocation of land use development between urban and rural areas, which allows a meaningful comparison of potential impacts with development impacts with and without the Proposed Project through the year 2020.

Standards of Significance

For purposes of this EIR, an impact is considered significant if the implementation of the Proposed Project would:

- result in the construction of new or expanded wastewater collection or treatment facilities, the construction or operation of which would cause potentially significant environmental effects.

Impacts and Mitigation Measures

4.5-1 Increased development intensity in urban areas and added industrial users under the Draft General Plan could increase sewage treatment demand beyond the capacities of existing wastewater treatment facilities. This could result in the construction of new or expanded wastewater collection and treatment facilities.

The Draft General Plan objective of focusing development in existing urban areas would accelerate growth in those areas and necessitate expansion of existing collection and treatment facilities or the development of new facilities. Likewise, the Draft General Plan economic development goal of increasing food processing industry in the County would result in increased wastewater flows because these users generally are high-volume wastewater dischargers. The demand on existing systems, as well as the need for future systems would be minimized through implementation of Draft General Plan Policy PF-D.1, which encourages the installation of public wastewater treatment facilities in existing communities that are experiencing repeated septic system failures, Policy PF-D.2, which requires that any new community sewer and wastewater treatment facilities be maintained by a County Service Area or other public entity approved by the County, and Policy OS-A.26, which only allows the approval of new wastewater treatment facilities that will not result in the degradation of surface and groundwater.

Policies PF-A.2 and PF-A.3 include requirements for new industrial, urban commercial, and urban-density residential development to be served by community sewer systems, where such systems are available or can be provided. Policy PF-D.7 requires preparation of a sewer master plan for areas undergoing rapid growth. This would provide a coordinated approach to managing wastewater in unincorporated areas within the County. Similarly, Policy PF-D.4 would limit the expansion of unincorporated, urban-density communities to areas where community wastewater collection and treatment systems can be provided. In addition, Policies PF-C.25, PFF-C.27, PF-C.29, and PF-D.5 encourage efficient water use and water conservation, which would help reduce wastewater inflow. Such measures would reduce impacts to less-than-significant levels for areas within the County's jurisdiction.

The need for additional wastewater facilities would occur with or without the Proposed Project and would not, in and of itself, result in any significant effects. However, because the nature and magnitude of urban growth or future siting of industrial, commercial, and residential users relative to existing wastewater facilities cannot be predicted with accuracy, the specific wastewater system improvements (e.g., sanitary sewers, pump stations, new or expanded treatment facilities, percolation/evaporation ponds) that would be required cannot be identified at this time. It should be noted, however, the vast

majority of the demand for new facilities would occur in the incorporated cities. Consequently, the environmental impacts of such improvements cannot now be determined. To the extent that wastewater facility modifications or new construction could be necessary to accommodate future growth under the Draft General Plan, the potential physical impacts resulting from expansion of wastewater collection and treatment facilities resulting from Draft General Plan implementation would be considered **significant**. In addition, wastewater management programs similar to those that would be implemented in accordance with the Draft General Plan policies described above may not exist or have not been fully implemented within all incorporated areas where most of the future growth, with or without the project, would occur.

Mitigation Measures

4.5-1 *No mitigation is available beyond Draft General Plan Policies PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4, PF-D.6, PF-D.7, PF-A.2, PF-A.3, and OS-A.26. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would provide for a coordinated approach to managing wastewater flows in the unincorporated areas through a combination of planning and water use and would reduce impacts to less-than-significant levels for the County, the effects of expansion or construction of wastewater facilities to accommodate future growth under the Proposed Project cannot be determined at this time. In addition, implementation of the measures addressed in the Draft General Plan policies within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact would remain significant and unavoidable.

4.5-2 Development under the Draft General Plan would increase the number of individual septic systems.

Development under the Draft General Plan would result in increased development in the incorporated and unincorporated areas. Such growth would occur with or without the project. Most new development would occur within planned urban areas that would be served by municipal sewer and wastewater treatment facilities, as directed by Draft General Plan Policies PF-A.2, PF-A.3, PF-D.2, PF-D.4, and PF-D.7. However, in the unincorporated areas not served by community systems, or within SOIs where development not served by community systems could occur, development under the Draft General Plan would increase the number of individual septic systems, as compared to existing conditions. Draft General Plan Policies PF-D.6, LU-A.9, LU-B.7, LU-E.9, and LU-E.22, and OS-A.20 supports continued use of individual septic systems in areas where groundwater quality would not be affected by their use. The overall number of lots where individual septic systems could be installed would be reduced, as compared to growth that would occur without the Proposed Project, because the Draft General Plan would prohibit the designation of new Rural Residential areas where septic systems would otherwise be used, but there would still be an increase in individual septic systems.

Septic system use may affect groundwater quality, as further discussed in Impact 4.8-7 in Section 4.8, Water Resources. However, the installation (construction) of individual septic systems does not involve the types of activities or extent of ground disturbance that could result in significant adverse

environmental effects, and the use of individual septic systems would not preclude the continued use of existing or construction of new wastewater collection and treatment systems in the incorporated and unincorporated areas. Therefore, impacts related to the increased use of septic systems as part of wastewater collection and treatment service related to growth that would occur without or without the project in both the unincorporated and incorporated areas is considered a ***less-than-significant impact***.

Mitigation Measure

4.5-2 *None required.*

STORM DRAINAGE AND FLOODING

ENVIRONMENTAL SETTING

Chapter 5.3, Public Facilities and Services, Storm Drainage and Flood Control in the *Background Report* contains additional background information on storm drainage and flood control. Chapter 9.3, Safety, Flood Hazards, describes dam failure flood inundation hazards. Chapter 5.3 and 9 of the *Background Report* are hereby incorporated by reference, and information from the *Background Report* is summarized below.

Storm Drainage and Flooding

During winter and spring months, river and stream flows in Fresno County increase with heavy rainfall and snow-melt runoff. Flood protection efforts include active management of a complex system of flood control facilities operated by local, state and federal agencies. This includes strategic management of reservoir releases and the use of canals to reduce likelihood of flooding by rerouting stormwater around populated areas. The urban areas of the County include storm drainage systems composed of street gutters, underground storm drains, retention/detention basins, pumping stations, and open channels to collect and control stormwater runoff.

Most of Fresno County's 15 cities operate their own storm drainage and flood control systems. However, for the cities of Fresno and Clovis, storm drainage and flood control is managed by the Fresno Metropolitan Flood Control District (FMFCD). Some cities also rely on levee maintenance by the U.S. Army Corps of Engineers (Corps) and irrigation districts to provide flood protection from certain creeks and rivers.

The western area of Fresno County between the Coast Range and Fresno Slough is sparsely populated, with land uses primarily consisting of agriculture and grazing land. A complex system of streams drain the eastern slope of the Coast Range toward the Fresno Slough on the valley floor. Due to their large drainage areas, many small creeks are prone to high flows and contribute to flooding in the western area of the valley. Urban areas in western Fresno County that are subject to flooding include the cities of Coalinga, Huron, and Mendota. Major facilities such as the California Aqueduct and I-5 are also subject

to flooding during large storm events and can sustain physical damage as a result. The stormwater runoff typically carries high volumes of sediment and naturally-occurring minerals such as selenium, arsenic and asbestos, which can also be washed into the Aqueduct. Important wetland habitat in the Mendota Wildlife Management Area is also subject to flooding and may be adversely affected by sediments and naturally-occurring minerals carried by flood flows.

The central area of Fresno County on the valley floor is the most heavily populated, so storm drainage and flood control facilities are largely designed to protect urban development. The major flood issues are associated with the San Joaquin River, the Kings River, and their tributaries. Three major dams have been constructed to control flows on the rivers, including Friant and Mendota Dams on the San Joaquin River and Pine Flat Dam on the Kings River. In addition, a number of reservoirs, detention basins, and canals have been constructed on streams east of the Fresno-Clovis area to prevent flooding and to convey flows around developed areas.

The storage capacity at Millerton Lake (impounded by Friant Dam) is inadequate for full flood protection during wet years, and emergency releases have resulted in levee breaks and flooding along the San Joaquin River. From Friant Dam to Gravelly Ford, the San Joaquin River is part of the Designated Floodway Program administered by the State Reclamation Board. Land use restrictions and river management practices allow the river to meander, flood over the banks, and remain in a relatively natural state. Between Gravelly Ford and the Chowchilla Bypass, the river is confined by a levee system. Erosion, seepage, and prolonged high water levels compromise levee integrity. Downstream of the Chowchilla Bypass, the river is not confined by levees and has limited capacity, resulting in uncontrolled flooding north into Madera County.

Pine Flat Dam on the Kings River is operated by the Corps for the primary purpose of flood control and emergency spillage is usually avoided. During storm events, excess flows are diverted to sloughs and irrigation canals. Flow management on the Kings River is carefully coordinated and considers factors such as anticipated weather, upstream flows, and the ability of downstream users to receive water.

The flooding potential from creeks and streams between the San Joaquin and Kings Rivers in the east has been substantially eliminated in the last few years with the completion of the Redbank-Fancher Creeks Flood Control Project. Constructed by the Corps and managed by the FMFCD, this project consists of two dams and three detention basins located in the Fresno-Clovis vicinity. The FMFCD also manages a system of 135 stormwater ponding basins, 350 miles of storm drain pipelines, and 44 pumping plants.

In eastern Fresno County, located primarily in the Sierra Nevada, precipitation falls mainly as snow. The region is characterized by smaller local watersheds draining to reservoirs upstream of Millerton and Pine Flat Lakes. Due to relatively low levels of population and urban development, flooding is not a major issue in this area. However, streamflows originating from this area contribute significantly to flooding potential on the valley floor.

Dam Failure Inundation

Four major dams that could cause substantial flooding in Fresno County in the event of a failure are Friant Dam, Big Dry Creek Dam, Pine Flat Dam and Redbank-Fancher Creek Project Dam. Identified dam failure-flood inundation areas in Fresno County are shown in Figure 9-8 in the *Background Report*.

An inundation study completed in 1997 by the Bureau of Reclamation redefined a worst-case scenario dam break of Friant Dam to include inundation of a significant portion of the City of Fresno and a much larger portion of Fresno County than previously described. In addition, failure of upstream dams such as Shaver Lake, Lake Thomas A. Edison, Huntington, and Florence, and Mammoth Pool Reservoir, Wishon, and Courtright Reservoir, could contribute to flooding conditions on the San Joaquin and Kings Rivers, respectively, if downstream dam capacity of the major dams is exceeded.

However, comprehensive analysis of the potential for dam failure and possible downstream effects for these upstream dams has not been undertaken. Dam failure evacuation plans are in the preparation process for 23 dams located within Fresno County.

REGULATORY SETTING

Federal, State, and local governments have developed programs and regulations designed to ensure control of stormwater and protection against flooding hazards in conjunction with private development. These programs and regulations are briefly described below.

Federal

The primary federal involvement with local flood control is in the preparation of *Flood Insurance Rate Maps (FIRMs)* by the Federal Emergency Management Agency (FEMA). These maps classify flood-prone areas according to degree of susceptibility to flooding during the 100-year event, with 'Zone A' representing the most flood-prone areas. The FIRMs are used to set insurance rates for property lying within flood-prone areas, and are also used by local jurisdictions, including Fresno County, in implementing flood control ordinances which govern new development.

Another federal directive, *Executive Order 11988 (Floodplain Management)* applies only to projects undertaken by federal agencies or constructed with federal funding or subject to major federal permitting. EO 11988 requires that such projects reduce the risks of flood losses, restore and preserve the natural and beneficial values served by floodplains, and minimize flood impacts on human safety, health, and welfare.

State

Portions of the San Joaquin River in Fresno County are part of the Designated Floodway Program administered by the State Reclamation Board. Section 8710 of the *California Water Code* requires that a Reclamation Board permit be obtained prior to start of any work, including excavation and construction activities, if projects are located within floodways or project levee sections. Structures for human habitation are not permitted within designated floodways.

The State Division of Safety of Dams has specific requirements pertaining to dam operation, including inspections and implementation of corrective actions to correct deficiencies, and the California Government Code requires contingency plans for dam failure and evacuation. Fresno County has the responsibility for developing such plans for State-designated dams affecting unincorporated areas. The incorporated cities are responsible for preparing plans for State-designated dams affecting incorporated city areas. The plans should be updated every two years and submitted to the State Office of Emergency Services for review and comment.

Local

The County requires that flooding issues for new development proposals be addressed in the planning and design stage of development review. The *Fresno County Flood Plain Management Ordinance* applies to all development proposed within any area of special flood hazard. This ordinance requires that a development permit be obtained from the Director of the Planning & Resources Management Department prior to construction. Information required with the permit application includes base flood elevations, whether watercourses would be altered, and interpretation of Flood Insurance Rate Map (FIRM) boundaries. The County requires that certain construction standards be met in order to reduce flood hazards (e.g., finished floor elevations must be above 100-year flood elevations; development may not result in a net reduction of flood conveyance capacity or obstruct flood flows).

The design of drainage and flood control facilities in the County is governed by the *Fresno County Drainage and Flood Control Design Standards*, which is part of the *Improvement Standards for Fresno County*. This document contains criteria for storm design capacities for artificial surface drainage facilities, underground storm sewers, and roadway culverts, and specifies other criteria for natural drainage channels.

The Fresno Metropolitan Flood Control District has adopted a *Storm Drainage and Flood Control Master Plan* which is intended to mitigate the impacts of land development in the Fresno-Clovis area in a comprehensive and integrated manner through the District's regional system of flood and stormwater management facilities. The plan sets forth a specific program for the construction of new facilities as needed and the ongoing restoration and maintenance of channel hydrology.

PLAN ELEMENTS

Development under the Draft General Plan would result in additional development in the urban and rural areas of the County. It is estimated that a total of approximately 24,100 acres of additional residential development and 13,700 acres of additional non-residential development would be accommodated under the Proposed Project. Of these totals, approximately 1,500 acres of residential and 540 acres of non-residential development would occur in the unincorporated areas of the County. This new development would increase the volume and rate of stormwater flows and much of this new

construction would require the installation of additional facilities such as surface drainage channels, underground storm drains, pump stations, and retention basins to control and convey this added drainage. Development under the Draft General Plan would also increase the number of people and structures that could be exposed to hazards associated with 100-year flooding and dam failure inundation.

The Draft General Plan contains the following policies that address potential storm drainage and flooding impacts associated with incremental development under the Proposed Project.

- Policy PF-E.1 The County shall coordinate with the agencies responsible for flood control or storm drainage to assure that construction and acquisition of flood control and drainage facilities are adequate for future urban growth authorized by the County General Plan and city general plans.
- Policy PF-E.2 The County shall encourage the agencies responsible for flood control of storm drainage to coordinate the multiple use of flood control and drainage facilities with other public agencies.
- Policy PF-E.3 The County shall encourage the Fresno Metropolitan Flood Control District to spread the cost of construction and acquisition of flood control and drainage facilities in the most equitable manner consistent with the growth and needs of this area.
- Policy PF-E.4 The County shall encourage the local agencies responsible for flood control or storm drainage to require that storm drainage systems be developed and expanded to meet the needs of existing and planned development.
- Policy PF-E.5 The County shall only approve land use-related projects that will not render inoperative any existing canal, encroach upon natural channels, and/or restrict natural channels in such a way as to increase potential flooding damage.
- Policy PF-E.6 The County shall require that drainage facilities be installed concurrently with and as a condition of development activity to insure the protection of the new improvements as well as existing development that might exist within the watershed.
- Policy PF-E.7 The County shall require new development to pay its fair share of the costs of Fresno County storm drainage and flood control improvements within unincorporated areas.
- Policy PF-E.8 The County shall encourage the local agencies responsible for flood control or storm drainage to precisely locate drainage facilities well in advance of anticipated construction, thereby facilitating timely installation and encouraging multiple construction projects to be combined, reducing the incidence of disruption of existing facilities.
- Policy PF-E.9 The County shall require new development to provide protection from the 100-year flood as a minimum.
- Policy PF-E.10 In growth areas within the jurisdiction of a local agency responsible for flood control or storm drainage, the County shall encourage to design drainage facilities as if the entire areas of service were developed to the pattern reflected in the adopted General Plan to assure that the facilities will be adequate as the land use intensifies.
- Policy PF-E.11 The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.
- Policy PF-E.13 The County shall encourage the use of natural storm water drainage systems to preserve and enhance natural drainage features.

- Policy PF-E.19 The County shall encourage the local agencies responsible for flood control or storm drainage discharge of runoff from local drainage areas directly into major canals and other natural water courses within the limits of the capacity of the channels to carry such runoff in cases where areas are so highly urbanized as to not permit the acquisition and use of retention-recharge basins or where drainage areas are otherwise not suited to the use of retention-recharge basins.
- Policy HS-C.1 The County should control foreign waters originating in streams of the Fresno County Stream Group generally located east and north of the Fresno urban area by check dams or other means prior to entering the Fresno-Clovis Metropolitan area.
- Policy HS-C.2 The County shall require that the design and location of dams and levees be in accordance with applicable design standards and specifications and accepted design and construction practices.
- Policy HS-C.3 The County shall promote a floodplain management approach in flood hazard areas that are presently undeveloped by giving priority to regulation of land uses over development of structural controls as a method of reducing flood damage.
- Policy HS-C.4 The County shall encourage the performance of appropriate investigations to determine the 100-year water surface elevations for the San Joaquin River, taking into account recent storm events and existing channel conditions, to identify the potential extent and risk of flooding. New development, including public infrastructure projects, shall not be allowed along the river until the risk of flooding at the site has been determined and appropriate flood risk reduction measures identified.
- Policy HS-C.5 Where existing development is located in a flood hazard area, the County shall require that construction of flood control facilities proceed only after a complete review of the environmental effects and a project cost/benefit analysis.
- Policy HS-C.6 The County shall promote flood control measures that maintain natural conditions within the 100-year floodplain of rivers and streams and, to the extent possible, combine flood control, recreation, water quality, and open space functions. Existing irrigation canals shall be used to the extent possible to remove excess stormwater. Retention-recharge basins should be located to best utilize natural drainage patterns.
- Policy HS-C.7 The County shall continue to participate in the Federal Flood Insurance Program by ensuring compliance with applicable requirements.
- Policy HS-C.8 During the building permit review process, the County shall ensure project compliance with applicable Federal Emergency Management Agency (FEMA) standards pertaining to residential and non-residential development in the floodplain, floodway, or floodway fringe.
- Policy HS-C.9 The County shall prohibit the construction of essential facilities in the 100-year floodplain, unless it can be demonstrated that the facility can be safely operated and accessed during flood events.
- Policy HS-C.10 The County shall require that all placement of structures and/or floodproofing be done in a manner that will not cause floodwaters to be diverted onto adjacent property, increase flood hazards to property located elsewhere, or otherwise adversely affect other property.
- Policy HS-C.11 The County shall encourage open space uses in all flood hazard areas. Land Conservation contracts and open space and scenic easements should be made available to property owners.
- Policy HS-C.12 The County shall consider dam failure inundation maps of all reservoirs in making land use and related decisions.

Policy HS-C.13 The County shall continue public awareness programs to inform the general public and potentially affected property owners of flood hazards and potential dam failure inundation.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

This analysis is programmatic and largely qualitative in nature, since the development pattern resulting from implementation of the Proposed Project can only be approximated and cannot be predicted with precision. However, the analysis is based on the overall quantitative allocation of land use development between urban and rural areas, which allows a meaningful comparison of potential impacts with development impacts through the year 2020 without the Proposed Project.

The effects of development under the Draft General Plan are evaluated in the context of existing programs and regulations that address flood control. A primary consideration is the effectiveness of proposed General Plan policies in mitigating drainage and flooding impacts associated with incremental development, and in supporting comprehensive storm drainage and flood control programs implemented by other agencies.

Standards of Significance

For purposes of this EIR, an impact is considered significant if development under the Draft General Plan would:

- substantially change absorption rates, drainage patterns, or the rate and amount of surface runoff, so that existing drainage capacity is exceeded;
- result in the construction of new or expanded storm drainage facilities, the construction or operation of which would cause potentially significant environmental effects; or
- expose people or property to flood hazards due to locating development within the 100-year flood plain as defined by FEMA or within an area subject to inundation due to dam failure.

Impacts and Mitigation Measures

4.5-3 Development under the Draft General Plan would increase potential downstream flooding through the addition of impervious surfaces and resulting increases in stormwater runoff from development sites, which could require expansion or construction of storm drainage facilities.

Additional development accommodated under the Draft General Plan would increase the rates and volumes and alter the timing of stormwater runoff relative to existing conditions. Unless mitigated, this

increased runoff would result in potential downstream flooding impacts. Because the Draft General Plan would focus growth in existing urban areas, these potential impacts would mainly occur in existing cities and unincorporated communities. The runoff from more intensive urban development would be more concentrated compared with runoff from lower density development in the rural areas.

Draft General Plan Policies PF-E.1 through PF-E.11, PF-E.13, and PF-E.19 provide a comprehensive policy framework for ensuring that private development proposed in the unincorporated areas of the County minimizes incremental volume and rates of stormwater runoff, that flood control facilities be planned in a comprehensive manner and be installed in conjunction with or in advance of private development, and that new development be protected from flood hazard. When applied in conjunction with federal and State flood control efforts, and stormwater management initiatives carried out by local flood control districts, and development standards required in County ordinances, these policies would reduce the potential drainage and flooding impacts of development in the unincorporated areas of the County. Although the major urban centers such as Fresno-Clovis have comprehensive flood control facilities and programs as well as effective development requirements in place to mitigate the increased runoff, some of the other incorporated cities in Fresno County would not be as likely to ensure that increased downstream flooding potential from new development would be mitigated.

Increases in stormwater runoff resulting from incremental development under the Draft General Plan would require installation of stormwater drainage and flood control system improvements such as surface drainage channels, underground storm drains, pump stations, and retention basins. Since the precise nature and location of such improvements have not been established, the secondary impacts resulting from installation and operation of such improvements cannot be identified at this time.

Without the Draft General Plan, development through 2020 would result in relatively less urban growth and commensurately more rural residential development which would result in overall less on-site impervious coverage and greater opportunity for on-site percolation of rainwater and storm drainage.

Thus the overall potential for drainage and flooding impacts would be lower without the Proposed Project. However, when effective implementation of urban drainage and flood control programs and development mitigation requirements is considered, along with the Draft General Plan policies that support and enhance those programs, there would be little difference in the net drainage and flooding impacts between the Proposed Project and development through 2020 without the Proposed Project.

However, the relative impacts under the Draft General Plan may be slightly greater due to the increase in unmitigated downstream flooding potential from incremental development in some smaller cities, an impact which would not occur with development through 2020 without the Draft General Plan.

The County cannot ensure that similar storm drainage management policies and practices would be enforced for development in some incorporated cities in Fresno County, and the environmental effects of expanded or new storm drainage facilities are uncertain. Therefore, impacts related to the construction and operation of storm drainage facilities are considered **significant**.

Mitigation Measures

- 4.5-3 *No mitigation is available beyond Draft General Plan Policies PF-E.1 through PF-E.11, PF-E.13, and PF-E.19 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would provide for a coordinated approach to managing storm drainage in the unincorporated areas, the effects of expansion or construction of storm drainage facilities to accommodate future growth under the Proposed Project cannot be determined at this time.

In addition, although implementation of the measures addressed in the Draft General Plan policies would reduce impacts to less-than-significant levels for unincorporated areas within the County, implementation of such policies within the incorporated areas to address storm drainage is not within the County's jurisdiction to monitor and enforce. Therefore, the impact remains significant and unavoidable.

4.5-4 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within flood-prone areas associated with 100-year flooding.

Any new development proposed within special flood hazard areas as delineated by FEMA on the FIRMs would be subject to the County's Flood Plain Management Ordinance, which specifies development standards to avoid flood damage and minimize loss of flood conveyance or storage volume. The application of this ordinance to new projects, together with the Draft General Policies PF-E.9 and HS-C.1 through HS-C.11 and HS-C.13, which provide a comprehensive approach to managing floodplain risks, and would minimize potential flooding impacts to new development in the unincorporated areas. The relatively greater increment of rural growth that would occur through 2020 without the Proposed Project would also be subject to the County's floodplain management ordinance and policies. There is some potential that siting of development in flood hazard areas could result in minor cumulative losses of flood conveyance and storage capacity. Draft General Plan Policies HS-C.5 and HS-C.10 require that the potential environmental effects of such losses would be accounted for in the sizing of downstream flood control facilities. Therefore, the Proposed Project would not result in any significant impacts with respect to exposure of new development in unincorporated areas to flood hazard or in terms of cumulative losses of flood conveyance and storage capacity due to incremental development in flood hazard areas.

The County's floodplain management ordinance would apply equally to new development that would occur with or without the Proposed Project. The only possible difference would be that the Draft General Plan would result in relatively more development within the incorporated cities not subject to County jurisdiction. If the community participates in the FEMA flood mapping and insurance program, development would be required to comply with FEMA regulations for development in special flood hazard areas. However, not all incorporated cities may be subject to FEMA regulations and may

not have floodplain management ordinances similar in scope to the County's that would call for flood protection of new development proposed in flood hazard areas. Because the County cannot compel the cities to develop ordinances or adopt policies similar to those identified in the Draft General Plan, people could be exposed to flooding hazards, which is considered a **significant impact**.

Mitigation Measure

4.5-4 *No mitigation is required beyond Draft General Plan Policies PF-E.9, and HS-C.1 through HS-C.11, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of the measures addressed in the Draft General Plan policies within the incorporated areas to address 100-year floodplain hazards would reduce impacts to less-than-significant levels. However, such measures are not within the County's jurisdiction to monitor and enforce. Therefore, the impact remains significant and unavoidable.

4.5-5 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within areas subject to dam failure inundation.

As shown in Figure 9-8 in the *Background Report*, several locations within the unincorporated County (and some cities) are situated within areas that could be subject to flooding in the event of dam failure inundation. In particular, failure or overtopping of Friant Dam, Big Dry Creek Dam, Redbank-Fancher Creek Project Dam, and Pine Flat Dam could cause substantial flooding. For Friant Dam, recent (1997) studies have shown that a much larger portion of Fresno County could be inundated than previously described in the event of a worst-case scenario dam break. Other locations may also be subject to dam failure inundation from other upstream dams, but comprehensive studies to identify the risk and extent of flooding have not been completed.

Dam failure can result from a number of natural or human-made causes such as earthquake, erosion, improper siting, rapidly rising flood waters, and structural or design flaws. Flooding due to dam failure can cause loss of life and injury and damage to property and infrastructure. Dam failure would not be attributable to the Draft General Plan, but development of the Proposed Project would increase the number of people and structures that may be at risk in the unlikely event of dam failure. Such effects would occur with or without the Proposed Project.

The Division of Safety of Dams has specific requirements pertaining to dam operation, including inspections and implementation of corrective actions to correct deficiencies, and the California Government Code requires contingency plans for dam failure and evacuation. Fresno County has the responsibility for developing such plans for State-designated dams affecting unincorporated areas. The incorporated cities are responsible for preparing plans for State-designated dams affecting incorporated city areas. The plans should be updated every two years and submitted to the State Office of Emergency Services for review and comment. In addition, Draft General Plan Policies HS-C.2 and

HS-C.13 reinforce the need to comply with applicable dam safety regulations and related emergency response programs, and Policy HS-C.12 requires that dam failure inundated areas be considered during the development process. These policies, combined with policies that limit placement of structures in identified flood hazard areas along major channels (as described in Impact 4.5-4), would ensure that the number of people and structures that could be at risk of flooding from dam failure inundation would be minimized, regardless of whether development occurs within the cities or unincorporated areas. However, as noted above, not all areas subject to dam failure inundation have been clearly delineated, so it is possible that the siting of new development or adoption of emergency planning actions may not be in place in some locations within the County. Consequently, people could be exposed to increased risk of flood hazard. Therefore, impacts related to dam failure inundation would be considered **significant**.

Mitigation Measures

4.5-5 *No mitigation is required beyond Draft General Plan Policies HS-C.2, HS-C.12, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of Draft General Plan policies would reduce impacts in areas within the County's jurisdiction to less-than-significant levels. However, implementation of the Draft General Plan policies to address dam failure inundation hazards within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact would remain significant and unavoidable.

Cumulative Impacts

The cumulative context is county-wide development and adjacent areas with hydrologic connects to Fresno County through the year 2020. Because of the surrounding foothills, most of the Central Valley is hydrologically connected.

4.5-6 Increased development density, industrial development, and incremental development overall under the Draft General Plan would increase demand for wastewater treatment and conveyance and would increase stormwater runoff from development sites, resulting in increased potential downstream flooding through the addition of impervious surfaces, and could expose new development in flood-prone areas.

As discussed in Impacts 4.5-1 through 4.5-6, the project would contribute considerably to these impacts. Furthermore, the project and non-project development in Fresno County would contribute to flooding and water quality conditions elsewhere in the Central Valley, Coast Range and Sierra Nevada foothills, and the Sierra Nevada.

The Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the

project. Where a significant and unavoidable impact has been identified for county-wide growth, the project contribution to that impact would be considered cumulatively considerable, even if on a project-specific level, it may be considered less than significant. Because the effect of expansion or construction of wastewater treatment facilities, drainage control facilities, and the concomitant impact on water quality cannot be determined, these impacts are considered **significant**.

Mitigation Measure

4.5-6 *None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4 through PF-D.7, PF E.1 through PF-E.11, PF-E.13, PF-E.19, LU-A.9, LU-B.7, LU-E.9, LU-E.22, HS-C.1 through HS-C.13, OS-A.20, and OS-A.26.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.6 PUBLIC SERVICES

INTRODUCTION

This section of the EIR addresses the public facilities in Fresno County, including law enforcement, fire protection and emergency services, parks and recreation, schools, solid waste, and libraries.

The following discussions of potential impacts to public services are based on the population and employment estimates for the Proposed Project (see Chapter 2, Project Description). The analyses also consider impacts from the shift of some areas and population from unincorporated to incorporated areas of the County. Although the overall population will increase, this shift could result in future populations in unincorporated areas that are lower than the existing populations. This would reduce the demand for County services, such as Sheriff's patrol and County Fire Districts protection. However, it would also reduce the funding from taxes provided to these services.

PLAN ELEMENTS

The following are general public services goals, policies and programs from the Draft General Plan that would apply to all the public services analyzed in this section.

Fresno County Draft General Plan

General Public Facilities and Services

- | | |
|---------------|---|
| Policy PF-A.1 | The County shall ensure through the development review process that public facilities and services will be developed, operational, and available to serve new development. The County shall not approve new development where existing facilities are inadequate unless the applicant can demonstrate that all necessary public facilities will be installed or adequately financed and maintained (through fees or other means). (See Policy LU-H.1) |
| Policy PF-A.5 | The County shall oppose the creation of new governmental entities within cities and their spheres of influence and will support efforts to consolidate existing special purpose districts. |
| Policy PF-A.6 | The County shall encourage the cities to consult the County on policy changes which may have an impact on growth or the provision of urban services. |

Funding

- | | |
|---------------|---|
| Policy PF-B.1 | The County shall require that new development pay its fair share of the cost of developing new facilities and services and upgrading existing public facilities and services; exceptions may be made when new development generates significant public benefits (e.g., low income housing) and when alternative sources of funding can be identified to offset foregone revenues. |
|---------------|---|

Policy PF-B.2	The County shall seek broad-based funding sources for public facilities and services that benefit current and future residents of the county.
Policy PF-B.3	The County shall require that future development pay the costs of mitigating impacts on existing County facilities to the extent capacity is provided through existing infrastructure networks.
Policy PF-B.4	The County shall require a public financing plan be in place to ensure that all required public improvements are adequately funded and provided in a timely manner.
Policy PF-B.5	The County shall ensure that public financing be equitable, financially feasible, and consistent with County guidelines, policies, and existing fee programs.
Policy PF-B.6	If the County forms public financing districts, the County shall efficiently utilize bond proceeds, subject to the requirements of the County's policy for the use of public financing for private development projects.
Policy PF-B.7	The County shall allocate the cost of public improvements to all benefitting properties and, to the extent that a landowner is required to pay for facility oversizing, the County shall utilize reimbursement mechanisms to maintain equity among all benefitting property owners.

LAW ENFORCEMENT

ENVIRONMENTAL SETTING

Background information regarding public services can be found in Chapter 5, Facilities and Services, of the *Fresno County General Plan Background Report (Background Report)*. Chapter 5.6, which describes law enforcement services in Fresno County, is hereby incorporated by reference and summarized below.

The Fresno County Sheriff's Department serves the unincorporated population of Fresno County with 329 sworn officers for a ratio of 1.09 officers per 1,000 residents. The Sheriff's Department has 544 non-sworn clerical and support people. According to the *Background Report*, the Fresno County Sheriff's Department considered the most pressing concerns to be a critical lack of bed space in the County jail, increasing numbers of call for service with no commensurate increase in patrol staff, and a critical lack of patrol vehicles. In addition, comments received on the Notice of Preparation (NOP) included existing concerns about the amount of time it takes for a deputy to respond in the mountain area.

REGULATORY SETTING

There are no specific federal or State regulations pertaining to police protection that would reduce environmental impacts associated with the Proposed Project. The planning goals and policies of the Draft General Plan relating to law enforcement are discussed below.

PLAN ELEMENTS

By 2020, the County's population is projected to increase to approximately 1,115,000, including a population in unincorporated areas of 143,000. The Draft General Plan includes an Economic Development Strategy to increase employment within the County. Most of this growth would occur in incorporated areas, and city spheres of influence, which would increase the service area of local police departments and decrease the service area of the County Sheriff's office.

The following policies from the Draft General Plan (December 27, 1999 version) apply to police protection services:

Law Enforcement

- | | |
|---------------|--|
| Policy PF-G.1 | The County shall ensure the provision of effective law enforcement services to unincorporated areas in the County. |
| Policy PF-G.2 | The County shall identify and establish funds for acquisition of adequate sheriff facility sites in unincorporated locations of the County. |
| Policy PF-G.3 | The County shall require new development to pay its fair share of the costs for providing law enforcement facilities and equipment to maintain service standards. |
| Policy PF-G.4 | The County shall provide police support to adequately maintain its service standards, within the County's budgetary constraints. |
| Policy PF-G.5 | The County shall promote the incorporation of safe design features (e.g., lighting, adequate view from streets into parks) into new development by providing Sheriff Department review of development proposals. |

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The current ratio of approximately 1.09 officers per 1,000 residents was applied to the projected 2020 population of 142,492 residents within the unincorporated area of the County.

Standards of Significance

Implementation of the Draft General Plan would result in a significant impact if it:

- would allow new development without increases in staffing and equipment needed to maintain acceptable levels of service; or
- would result in a substantial need for new, altered, or expanded police protection services not met by the Proposed Project.

Impacts and Mitigation Measures

4.6-1 Development under the Draft General Plan would increase the demand for protection from the Fresno County Sheriff's Department.

By 2020, the population in the unincorporated areas of the County is projected to increase by approximately 25,500. The increased population would require an increase in the number of sworn officers assigned to patrol and investigative duties. To meet the current ratio of 1.09 officers to residents, an increase of 25,500 residents would require approximately 28 additional patrol officers. It should be noted that the projected increase in population for the unincorporated portions of the County would be identical with or without the project (approximately 25,500). In addition, the Proposed Project would include new commercial buildings in the unincorporated areas of the County, which would need to be served by the Sheriff's Department.

General Plan Policies PF-G.1 through PF-G.5 would ensure that adequate facilities and funds are provided to serve residents in unincorporated areas of the County. Policies PF-G.1 and PF-G.2, in particular, address the adequate provision of services in unincorporated areas. These areas include rural and mountainous portions of Fresno County, which are currently areas of concern for timely service. Future buildout in these areas should be accompanied with additional sheriff facilities. Policy PF-G.5 would allow Sheriffs' Department input into new development design to promote safe design features by reviewing Specific Plans, Community Plans, and tentative maps.

Adherence to the General Plan policies and local regulations would ensure that adequate sheriff protection is provided to serve residents in the unincorporated areas of Fresno County. Therefore, this would be considered a ***less-than-significant impact***.

Mitigation Measures

4.6-1 *None required beyond Draft General Plan Policies PF-G.1 through PF-G.5.*

4.6-2 Development under the Draft General Plan would increase the demand for police protection in incorporated jurisdictions of the County.

By 2020, the increase in population is projected to be approximately 318,600 people in incorporated portions of the County. This increase would result in a need for additional police protection in incorporated jurisdictions. The need for additional police protection services would be provided by the incorporated cities. The ratio of police personnel to resident would vary as would policies and approaches to ensure adequate police protection service. New development would contribute revenues from property taxes to each jurisdictions general fund. This revenue could be used to fund additional law enforcement services, if deemed necessary, in each jurisdiction. However, the County cannot control the funding or implementation timing of adequate police protection services in incorporated cities of the County; therefore, the impact would be ***significant*** within those jurisdictions.

Mitigation Measures

4.6-2 *No mitigation is available to the County to reduce this impact.*

FIRE PROTECTION AND EMERGENCY SERVICES

ENVIRONMENTAL SETTING

Background information regarding public services can be found in Chapter 5, Facilities and Services, of the *Fresno County General Plan Background Report (Background Report)*. Chapter 5.6, which describes fire protection services in Fresno County, is hereby incorporated by reference and summarized below.

The unincorporated areas of Fresno County are served by the Fresno County Fire Protection District (FCFPD), North Central Fire Protection District, Orange Cove Fire Protection District, Bald Mountain Fire Protection District, Laton Community Service District, Riverdale Public Utilities District, County Service Area 31B (Shaver Lake), and the California Department of Forestry and Fire Protection (CDF).

These Districts include a combined total staffing of approximately 220 full-time and 445 volunteer personnel. The FCFPD response standard is five minutes in commercial and residential areas near Fresno and Clovis and 20 minutes in the rural areas. The District normally meets these standards unless multiple incidents are occurring or the incidents are located in a few areas that cannot be reached within the referenced time standard.¹

Table 4.6-1 includes a list of the Fresno County fire protection districts in the unincorporated areas, including number of personnel, Insurance Services Office (ISO) rating, and population served for selected districts. ISO ratings are used by insurance companies to determine fire insurance rates. The rating takes into account the number of firefighting personnel and equipment available to an area and the average emergency response times. Ratings range from 1 through 10, with one indicating excellent fire service and ten indicating minimal or no protection.

Fresno County is served by six ambulance services or agencies: American, which serves the Fresno/Clovis areas; Coalinga, which serve the Coalinga area; Selma, which serves the Selma area; Sanger, which serves the Sanger area; Sequoia Safety Council, which serves the Reedley area; and Kingsburg, which serves the Kingsburg region. The average response time for emergency calls ranges from five minutes in the Sanger area to eight minutes in the Fresno/Clovis area.

REGULATORY SETTING

There are no specific federal or State regulations pertaining to fire or ambulance protection that would reduce environmental impacts associated with the Proposed Project.

PLAN ELEMENTS

The Draft General Plan would include an Economic Development Plan to increase employment and population within the County. This would result in a buildout population of approximately 1,115,000 in the County by 2020. The Draft General Plan includes the incorporation of several areas in the County, which would increase the service area of local fire departments and decrease the service area of the County fire protection districts.

TABLE 4.6-1			
FIRE PROTECTION DISTRICTS WITHIN FRESNO COUNTY			
Fire District	Number of Personnel	ISO Rating	Population served
FCFPD	102 Full-time 250 volunteers	West of SR 99: 6 East of SR 99: 5 in residential and industrial areas around Fresno and Clovis, 6 to 8 in rural areas Eastern Foothill Area: 9	3,800 miles ² 175,000
Laton Community Service District	1 Full-time 10 volunteers	8	1,750
Riverdale Public Utilities District	1 Full-time 10 volunteers	6	
County Service Area 31B (Shaver Lake)	1 Full-time 25 volunteers	7	1,500 permanent, plus 2,000 seasonal
Fig Garden Fire Protection District	7 Full-time		approximately 600 acres
North Central Fire Protection District	39 Full-time 30 Paid call volunteers	Residential area: 5 Rural area: 6 to 8	250 miles ² 32,000
Bald Mountain Fire Protection District	16 volunteer	7	14 miles ² 74 miles ² sphere of influence
California Department of Forestry and Fire Protection, Fresno/Kings Ranger Unit	65 Full-time 80 Seasonal		1,432 miles ²
Orange Cove Fire Protection District	2 Full-time 26 volunteer	City: 5 Rural: 8	22.5 miles ²
Total	218 full-time 431 volunteer/seasonal		
Source: Fresno County General Plan Background Report, Draft, May 1997.			

The following goals and policies from the Draft General Plan apply to fire protection and emergency services:

Fire Protection And Emergency Medical Services

- Policy PF-H.1 The County shall work cooperatively with local fire protection districts to ensure the provision of effective fire and emergency medical services to unincorporated areas within the County.
- Policy PF-H.2 Prior to the approval of development projects, the County shall establish the need for fire protection services. New development in unincorporated areas of the County shall not be approved unless adequate fire protection facilities are provided.
- Policy PF-H.3 The County shall require that new fire stations be located to achieve and maintain a service level capability consistent with services for existing land uses.
- Policy PF-H.4 The County shall reserve adequate sites for fire and emergency medical facilities in unincorporated locations in the County.
- Policy PF-H.5 The County shall require that new development is designed to maximize safety and minimize fire hazard risks to life and property.
- Policy PF-H.6 The County shall limit development to very low densities in areas where emergency response times will be more than 20 minutes.
- Policy PF-H.7 The County shall encourage local fire protection agencies in the County to maintain the following as minimum fire protection standards (expressed as Insurance Service Organization (ISO) ratings):
 - a. ISO 4 in urban areas;
 - b. ISO 6 in suburban areas; and
 - c. ISO 8 in rural areas.
- Policy PF-H.8 The County shall encourage local fire protection agencies in the County to maintain the following as minimum standards for average first alarm response times to emergency calls:
 - a. 5 minutes in urban areas;
 - b. 15 minutes in suburban areas; and
 - c. 20 minutes in rural areas.
- Policy PF-H.9 The County shall require new development to develop or to pay its fair share of the costs to fund fire protection facilities that, at a minimum, maintain the service level standards in the preceding policies.
- Policy PF-H.10 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 State and local ordinances.
- Policy PF-H.11 The County shall encourage local fire protection agencies to provide and maintain advanced levels of emergency medical services (EMS) to the public, consistent with current practice.

Emergency Management and Response

- Policy HS-A.1 The County shall, through the Fresno County Operational Area Master Emergency Services Plan, maintain the capability to effectively respond to emergency incidents, including maintenance of an emergency operations center.
- Policy HS-A.2 The County shall, within its authority and to the best of its ability, ensure that emergency dispatch centers, emergency operations centers, communications systems, vital utilities, and other essential public facilities necessary for the continuity of government are designed in a manner that will allow them to remain operational during and following an earthquake or other disaster.
- Policy HS-A.3 The County shall ensure that the siting of critical emergency response facilities such as hospitals, fire stations, sheriffs' offices and substations, dispatch centers, emergency operations centers, and other emergency service facilities and utilities are sited and designed to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, avalanche, and explosions, as required by State regulations. Exception to this policy shall only be allowed if the only alternative location would be so distant as to jeopardize the safety of the community, given that adequate precautions are taken to protect the facility.
- Policy HS-A.4 The County shall continue to conduct programs to inform the general public of emergency preparedness and disaster response procedures.

Fire Hazards

- Policy HS-B.1 The County shall review project proposals to identify potential fire hazards and to evaluate the effectiveness of preventive measures to reduce the risk to life and property.
- Policy HS-B.2 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. Special consideration shall be given to the use of fire-resistant construction in the underside of eaves, balconies, unenclosed roofs and floors, and other similar horizontal surfaces in areas of steep slopes.
- Policy HS-B.3 The County shall require that development in high fire hazard areas have fire-resistant vegetation, cleared fire breaks separating communities or clusters of structures from native vegetation, or a long-term comprehensive vegetation and fuel management program. Fire hazard reduction measures shall be incorporated into the design of development projects in fire hazard areas.
- Policy HS-B.4 The County shall require that foothill and mountain subdivisions of more than four (4) parcels provide for safe and ready access for fire and other emergency equipment, for routes of escape that will safely handle evacuations, and for roads and streets designed to be compatible with topography while meeting fire safety needs.
- Policy HS-B.5 The County shall require development to have adequate access for fire and emergency vehicles and equipment. All major subdivisions shall have a minimum of two (2) points of ingress and egress.
- Policy HS-B.6 The County shall work with local fire protection agencies, the California Department of Forestry and Fire Protection, and the U.S. Forest Service to promote the maintenance of existing fuel breaks and emergency access routes for effective fire suppression and in managing wildland fire hazards.
- Policy HS-B.7 The County shall require that community fire breaks be coordinated with overall fire break plans developed by the mountain and foothill fire agencies. Firebreak easements in subdivisions of more than four parcels or in built-up areas shall include access for firefighting personnel and motorized equipment. Easements shall be dedicated for this purpose.

- Policy HS-B.8 The County shall refer development proposals in the unincorporated County to the appropriate local fire agencies for review of compliance with fire safety standards. If dual responsibility exists, both agencies shall review and comment relative to their area of responsibility. If standards are different or conflicting, the more stringent standards shall apply.
- Policy HS-B.9 The County shall require that provisions for establishing year-round fire protection in foothill and mountain areas are developed where concentrations of population are such that structural fire protection is needed.
- Policy HS-B.10 The County shall ensure that existing and new buildings of public assembly incorporate adequate fire protection measures to reduce potential loss of life and property in accordance with State and local codes and ordinances.
- Policy HS-B.11 The County shall require new development to have water systems that meet County fire flow requirements. Where minimum fire flow is not available to meet County standards, alternate fire protection measures, including sprinkler systems, shall be identified and may be incorporated into development if approved by the appropriate fire protection agency.
- Policy HS-B.12 The County shall encourage and promote installation and maintenance of smoke detectors in existing residences and commercial facilities that were constructed prior to the requirement for their installation.
- Policy HS-B.13 The County shall work with local fire agencies to develop high-visibility fire prevention programs, including education programs and voluntary home inspections.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The existing fire personnel to population ratios were compared to the projected 2020 ratios within Fresno County as a whole, and within the unincorporated area of the County. The total population in Fresno County, under the Proposed Project, would be approximately 1,115,000 in 2020. The portion living in unincorporated areas would be 142,492 residents in 2020. The fire districts were evaluated for their ability to absorb future growth based on their current ISO rating and population and area served. Future specific development proposals would require a project-specific analysis to determine the staffing and equipment needs to serve new growth or to relieve existing deficiencies.

The assessment of emergency ambulance service is a qualitative review of the existing services available to the project area and a determination of whether they are adequate to serve the needs of the Proposed Project.

Standards of Significance

Fire districts with ISO ratings of 5 or more for urbanized areas and 7 or more for rural area were identified as having fire protection services which would require substantial staffing, equipment, or other fire protection service augmentation to accommodate future growth. Implementation of the Proposed Project would result in a significant impact to fire services if the Proposed Project would:

- allow new development without increases in staffing and equipment needed to maintain acceptable levels of service; or
- result in a substantial need for new, altered or expanded fire protection service not met by the Proposed Project.

Implementation of the Proposed Project would result in a significant impact to emergency services if the Proposed Project would:

- result in a new need for substantial emergency response service in an area not currently served by facilities of adequate size and capacity.

Impacts and Mitigation Measures

4.6-3 Development under the Draft General Plan would increase the demand for fire protection services from districts serving the unincorporated area of the County.

The current (1997) estimate of the population and areas served by the FCFPD is approximately 210,250 (4 districts).² Development under the Draft General Plan would result in a population increase of approximately 25,500 in unincorporated areas of Fresno County. It should be noted that the increase in population would occur with or without the project.

As discussed in the *Background Report*, the FCFPD has been adversely affected by annexation of land to the cities of Fresno and Clovis, which affect revenue generation to the District, and by tax shifts from the establishment of the Educational Revenue Augmentation Fund, which resulted in tax reductions. Future annexations would continue to decrease the tax revenue of the fire districts; however, they would also decrease the population and area of service.

As described in the Environmental Setting, the FCFPD's response standard differs for areas near Fresno and Clovis from the rural areas. As shown in Table 4.6-1, the FCFPD maintains an ISO rating of 5 to 6 in urban areas, 6 to 8 in suburban areas, and 9 in the eastern foothill area. Because these ISO ratings currently exceed the standards listed above, it would be difficult for the FCFPD to absorb future growth without an increase in personnel and facilities. Similarly, the remainder of the Fire Protection Districts that serve unincorporated portions of the County currently exceed an ISO rating of 4 in urbanized areas and 6 in rural areas (see Table 4.6-1). The expected population increase in unincorporated areas of the County would require additional fire protection services (including staff and equipment) to maintain or improve the current levels of service. Additional fire personnel and facilities would be required to serve any population increase.

The CDF contracts with a variety of other agencies within Fresno County for fire protection services. They range from full service, which is provided to the FCFPD, to fire dispatch-only agreements.

During the non-fire season period, CDF is not funded for fire protection staffing. As a result, Fresno County has contracted for winter time fire protection at various locations. These contracts provide a minimum level of fire protection at a significantly reduced cost to the County.³

The Draft General Plan does not include the specific provision of additional fire protection stations and personnel. However, General Plan Policies PF-H.1 and PF-H.2 would ensure that adequate fire protection services are provided to the unincorporated areas within the County. Policies PF-H.2 through PF-H.6, PF-H.9, and PF-H.10 would ensure that new developments are not implemented or constructed until adequate fire protection services are secured or ensured. This would ensure that new development in unincorporated areas that would require County fire protection services would not be completed until adequate services are funded and provided.

The proposed policies in the Draft General Plan would ensure that additional services and personnel are provided and that new development would not proceed until sufficient fire protection services are ensured. Therefore, this would be a ***less-than-significant impact***.

Mitigation Measure

4.6-3 *None required beyond Draft General Plan Policies PF-H.1 through PF-H.6, PF-H.9, and PF-H.10.*

4.6-4 Development under the Draft General Plan would increase the demand for fire protection services from the districts serving incorporated areas of the County.

Buildout under the Draft General Plan would result in an increase in population of incorporated portions of the County of approximately 318,600 people, including the Cities of Fresno and Clovis. This increase in population would result in a need for additional fire protection services (including staff and equipment) to maintain or improve current levels of service provided by local fire districts. The need for additional fire protection services would be provided by the Districts serving the incorporated cities. Policies and approaches to ensure adequate fire protection services are provided would be under the incorporated jurisdiction (including the cities of Fresno and Clovis). New development would contribute revenues from property taxes to each jurisdiction's general fund. This revenue could be used to fund additional facilities, if deemed necessary, in each jurisdiction. However, the County cannot control the funding or implementation timing of these services and facilities in incorporated cities; therefore, the impact would be ***significant*** within those jurisdictions.

Mitigation Measures

4.6-4 *No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.*

4.6-5 Development under the Draft General Plan would increase the demand for emergency response services.

The service population for the six ambulance agencies in Fresno County range from approximately 20,000 in the Kingsburg region to 450,000 in the Fresno/Clovis area. As discussed in the Environmental Setting above, the average response times for emergency calls range from five minutes in the Sanger area to eight minutes in the Fresno/Clovis area. It is anticipated that most of the population increase would occur in incorporated areas of the County, with the majority of that increase occurring in Fresno (230,782 residents) and Clovis (42,274 residents).

According to the *Background Report*, the Fresno County Department of Community Health does not have concerns or problems providing services to Fresno County, and the Department does not anticipate problems providing adequate emergency response service to the County residents. General Plan Policy HS-A.1 would require the County to maintain the capability to effectively respond to emergency incidents. Effective response would include the continued coordination with various other entities, including special districts, voluntary organizations, surrounding cities and counties, and State and federal agencies. General Plan Policies HS-A.2 and A.3 would ensure that emergency services are designed, located and operated to maintain service during emergencies, including earthquakes, flood, and other natural emergencies. Implementation Program HS-A.A would ensure that agreements with other local, State and federal agencies are maintained to provide for coordinated disaster response. Continued compliance with the Draft General Plan policies would ensure that this would be a less-than-significant impact in the County. However, the County cannot control the funding or implementation timing of these services and facilities in incorporated cities; therefore, the impact would be **significant** within those jurisdictions.

Mitigation Measures

4.6-5 *None required beyond Draft General Plan Policies HS-A.1 through HS-A.3 for development under the jurisdiction of Fresno County. No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. Similar measures are available to, and required by some of the cities in the County. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact may be significant and unavoidable within those jurisdictions.

PARKS AND RECREATION

ENVIRONMENTAL SETTING

Background information regarding parks and recreational services can be found in Chapter 6, Recreation, Historical and Archaeological Resources, of the *Fresno County General Plan Background Report*

(Background Report). Chapter 6.2, which describes the parks and recreation facilities in Fresno County, is hereby incorporated by reference and summarized below.

Fresno County has several regional parks, in addition to state and national parks, national forest, wilderness areas, and ecological reserves. The Fresno County Parks Division provides, develops and maintains regional parks and landscaped areas. Regional recreational facilities maintained by the division include ten developed and three undeveloped parks sites, five fishing access areas, and one boat launching ramp. The Parks Division also maintains street medians. County parks include approximately 1,165 acres of parkland, approximately 800 acres of which is developed.

Fresno County does not own or operate any golf courses, nor does it provide or manage any organized sports, education, or special events programs. County Parks Division staff is limited to park maintenance, with 13 full-time staff members, and 14 additional seasonal/summer employees. In addition to County facilities, Fresno County benefits from many other significant recreational opportunities. The County also contains several state and federal operated parks, forest lands, and recreational facilities associated with dams, reservoirs, and reserves.

REGULATORY SETTING

Fresno County Recreation and Park Plan

In 1964 the County established park standards in the *Fresno County Recreation and Park Plan*, which is also incorporated into the Fresno County General Plan, Parks and Recreation Element. According to the General Plan Background Report, the majority of the park and recreational facilities under County jurisdiction provide services for uses such as picnicking, boating and water sports, swimming, hiking, camping, and general sports. The Parks and Recreation element does not include a standard for the number of park acres or facilities per person for these uses. The Background Report stated that the unincorporated areas of Fresno County have approximately 1,165 acres of parkland and serve approximately 174,200 persons. The ratio of parkland and facilities to population for unincorporated Fresno County is approximately 6.7 acres per 1,000 population.⁴

PLAN ELEMENTS

The Draft General Plan would include an Economic Development Plan to increase employment and population within the County. This would result in a buildout population of approximately 1,115,000 in the County by 2020. The Draft General Plan includes the incorporation of several areas in the County.

The following goals and policies from the Draft General Plan (December 27, 1999 version) apply to recreational resources.

Public Recreation and Parks

- Policy OS-H.1 The County shall promote the continued and expanded use of national forest, national park, and other recreational areas to meet the recreational needs of County residents.
- Policy OS-H.2 The County shall strive to maintain a standard of five (5) to eight (8) acres of County-owned improved parkland per one thousand (1,000) residents in the unincorporated areas.
- Policy OS-H.3 The County shall require the dedication of land and/or payment of fees, in accordance with local authority and State law (e.g., Quimby Act), to ensure funding for the acquisition and development of public recreation facilities. The fees are to be set and adjusted, as necessary, to provide for a level of funding that meets the actual cost to provide for all the public parkland and park development needs generated by new development.
- Policy OS-H.4 The County shall consider the creation of assessment districts, County service areas, community facilities districts, or other types of districts to generate funds for the acquisition and development of parkland and/or historical properties as development occurs in the County.
- Policy OS-H.5 The County shall encourage Federal, State, and local agencies currently providing recreation facilities to maintain, at a minimum, and improve, if possible, their current levels of service.
- Policy OS-H.6 The County shall encourage the development of parks near public facilities such as schools, community halls, libraries, museums, prehistoric sites, and open space areas and shall encourage joint-use agreements whenever possible.
- Policy OS-H.7 The County shall encourage the development of public and private campgrounds and recreational vehicle parks where environmentally appropriate. The intensity of such development should not exceed the environmental carrying capacity of the site and its surroundings.
- Policy OS-H.8 The County shall encourage development of private recreation facilities to reduce demands on public agencies.
- Policy OS-H.9 The County shall plan for further development the Friant-Millerton area as a recreation corridor. (See Policy LU-H.8, Administration.)
- Policy OS-H.10 The County shall develop a recreation plan for the Kings River as a part of the update to the Kings River Regional Plan. The plan shall be funded with mining mitigation fees. (See Policy OS-C.10 and Program LU-C.A.)
- Policy OS-H.11 The County shall support the policies of the San Joaquin River Parkway Plan to protect the San Joaquin River as an aquatic habitat, recreational amenity, aesthetic resource, and water source. (See Policy OS-A.7.)
- Policy OS-H.12 The County shall in conjunction with the San Joaquin River Conservancy rehabilitate and improve existing recreation areas and facilities along the San Joaquin River at the earliest possible time, particularly Lost Lake and Skaggs Bridge Regional Parks.
- Policy OS-H.13 The County shall encourage the development of recreation facilities in western Fresno County.
- Policy OS-H.14 The County shall utilize retention-recharge basins as open space areas for parks and recreation purposes.

Recreational Trails

- Policy OS-I.1 The County shall develop a county-wide Recreational Trail Master Plan, integrated with existing County facilities, similar facilities in cities and adjoining counties, and on State and Federal land. The recreational trail system shall be oriented to providing safe, off-street access from urban areas to regional recreation facilities of county-wide importance.
- Policy OS-I.2 The County shall develop recreational trails in County recreation areas.
- Policy OS-I.3 The County shall encourage the preservation or advance acquisition of desirable trail routes, including linear open space along rail corridors and other public easements.
- Policy OS-I.4 The County shall require that adequate rights-of-way or easements are provided for designated trails or bikeways as a condition of land development approvals.
- Policy OS-I.5 The County shall provide for the separation of different types of users in multiple-purpose trail corridors when desirable for safety reasons or trail type needs.
- Policy OS-I.6 The County shall coordinate development of its Recreational Trail Master Plan with the San Joaquin River Conservancy concerning the proposed multi-purpose trail between Highway 99 and Friant Dam in the San Joaquin River Parkway.
- Policy OS-I.7 The County shall maintain and enforce regulations prohibiting the use of all County-developed and maintained recreational trails by motorized vehicles, except for maintenance vehicles.
- Policy OS-I.8 The County shall use the following principles in the siting of recreational trails:
- a. Recreational trail corridors should connect urban areas to regional recreational amenities, follow corridors of scenic or aesthetic interest, or provide loop connection to such routes or amenities;
 - b. Recreational trails should be located where motor vehicle crossings can be eliminated or minimized;
 - c. Recreational trails should provide for connectivity to other transportation modes such as bus stops, train stations and park-and-ride sites when feasible to enhance intermodal transportation opportunities;
 - d. Recreational trails should provide for connectivity to the on-street walkway and bikeway network when feasible to enhance non-motorized transportation opportunities; and
 - e. Recreational trails shall whenever possible make maximum use of existing public land and right-of-way.
- Policy OS-I.9 The County shall follow design guidelines published by the California Department of Transportation (Caltrans) in the Highway Design Manual, Chapter 1000 (Bikeway Planning and Design), for recreational trails.
- Policy OS-I.10 Pending adopting a Recreational Trail Master Plan, the County shall review development proposals for consistency with and accessibility to the trails in the Conceptual Recreational Trail Corridor Map (see Figure OS-1 and text box below; see also Policy OS-I.1).
- Policy OS-I.11 The County shall seek the provision of recreation trails in future foothill and mountain developments.

Fresno County Conceptual Recreational Trail List	
1. Millerton Trail	Multiple purpose trail and bikeway along the San Joaquin River/Friant Road corridor from Alluvial Avenue to Friant Road to Friant Dam.
2. Friant-Kern Trail	Multiple purpose trail along the Friant-Kern Canal from Millerton Lake to Orange Cove/Tulare County Line.
3. Copper-Auberry Trail	Multiple purpose trail from Copper Road at Friant Road to Auberry Road to the Friant-Kern Canal.
4. Auberry Bikeway	Bikeway from Millerton Road at the Friant-Kern Canal to Auberry Road to the Friant-Kern Canal.
5. Enterprise Trail	Multiple purpose trail using portions of Copper Avenue, Minnewawa Avenue, the Enterprise Canal, and Shaw Avenue to the Friant Kern Canal.
6. Dry Creek Trail	Multiple purpose trail along Dry Creek between the Enterprise Canal and Minnewawa Avenue.
7. Piedra Trail	Multiple purpose trail and bikeway on Piedra Road between Minkler and Pine Flat Dam, possibly also using the old railroad grade and Elwood Road.
8. Belmont Trail	Multiple purpose trail and bikeway along the abandoned Southern Pacific Railroad right-of-way (McKenzie Avenue alignment) between Fine and Clovis Avenues and along Belmont Avenue between Clovis Avenue and the Friant-Kern Canal.
9. Reed Bikeway	Bikeway along Reed Avenue between Reedley and Minkler.
10. Rainbow Bikeway	Bikeway between Reedley and Centerville along Highway 180, Rainbow Road, Newmark Avenue, the Southern Pacific Railroad right-of-way, and River Road.
11. Orange Cove Trail	Equestrian-hiking trail between Orange Cove and Navelencia along the abandoned Atchison, Topeka and Santa Fe Railroad right-of-way.
12. Golden State Bikeway	Bikeway between Fresno and Kingsburg along Golden State Boulevard.
13. Roeding-Kearney Bikeway	Bikeway from Roeding Park to the Kearney Trail at the intersection of Kearney Boulevard and Hughes, via Hughes, Neilsen, and Pacific.
14. Kearney Trail	Multiple purpose trail along Kearney Boulevard between Hughes Avenue and Madera Avenue
15. Skaggs Bridge Trail	Multiple purpose trail along Madera Avenue between Whites Bridge Road and the San Joaquin River.
16. California Aqueduct Trail	Multiple purpose trail along the California Aqueduct in Fresno County.
17. Nees Bikeway	Bikeway along Nees Avenue between Firebaugh and the California Aqueduct.
18. Delta-Mendota Trail	Multiple purpose trail along the Delta-Mendota Canal and the San Luis Drain from Firebaugh to Belmont Avenue.
19. Los Gatos Creek Trail	Multiple purpose trail along Los Gatos and Wartham Creeks from Los Gatos Creek County Park to Wartham Creek and Highway 198.
20. Van Ness Trail	Multiple purpose trail along Van Ness Boulevard between Shaw Avenue and the San Joaquin River bluff area.
21. San Joaquin Bluff Trail	Multiple purpose trail along the San Joaquin River bluffs from Highway 99 to Woodward Park.
22. San Joaquin River Trail	Equestrian-hiking trail from Millerton Lake to Italian Bar Road at Redinger Lake, generally along the San Joaquin River.
23. Clovis/Pinedale Railroad Corridor Trail	Multiple purpose trail along the Clovis/Pinedale Railroad right-of-way.

- Policy OS-I.12 The County shall encourage communication and cooperation with the cities of the County, the Fresno County Council of Governments, and other agencies in the County by referring proposed trail projects for review and comment.
- Policy OS-I.13 The County shall actively seek all possible financial assistance for planning, acquisition, construction, and maintenance of trails when such funding does not divert funds available for preservation and improvement of the road system.
- Policy OS-I.14 The Fresno County General Services Department shall maintain trails located within County parks, along but separated from the road way, along irrigation canals, flood control channels, abandoned railroad rights-of-way or easements, utility easements, and along flood plains.
- Policy OS-I.15 The Fresno County Public Works Department shall maintain recreational trails located within the road right-of-way as integral parts of the roadway.
- Policy OS-I.16 The County shall encourage public/private partnerships to implement and maintain trails.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The proposed acreage of recreation area to be provided under the Draft General Plan was compared to the standards listed in the *Fresno County Recreation and Park Plan* and incorporated into the Parks and Recreation Element of the General Plan. The Plan suggests four recreation zones and, using the California Outdoor Recreation Plan as a guide, each zone identifies different types of recreation activities to be included in each zone. The zones and uses are as follows:⁵

Zone 1. The recreation facilities in Zone 1 are those close to the user and includes playgrounds, city parks, zoos and pools. They receive intensive “day-use” during weekends and after work hours and are generally man-made areas. In Fresno County, these areas are normally the responsibility of cities, service, or recreation districts.

Zone 2. The recreation areas in Zone 2 are outside the community or urban areas but within an hour’s (40 miles) drive and accessible for one day (usually weekend) outings. The areas should have natural attraction for picnicking, camping, and a “natural” environment. Its service is regional or area-wide rather than being aimed at a community or single urban area.

Zone 3. Zone 3 includes exceptional recreation resources, such as those within the national forest parks, serving overnight visitors from 125+ miles distance for weekend or longer vacation stays.

Zone 4. An area extending beyond Zone 3, for variation trips of 10 nights or longer.

The majority of the park and recreational facilities under County jurisdiction provide services for Zone 2 users. Park standards for Zone 2 Recreation Facilities are shown in Table 4.6-2. The 1990 Park and Open Space Standards and Guidelines provides suggested facility design standards as guidelines that can be adapted to local needs. According to the Background Report, actual facility size and standards should be based on current survey data and parks and recreation needs assessment.

TABLE 4.6-2			
PARK DEVELOPMENT STANDARDS FOR ZONE 2 FRESNO COUNTY, 1997			
Activity	Type	Development (1)(2)	Parking Spaces
Camping	Family, tent, or trailer	Net 4 units per acre; Gross 3 units per acre	1 per unit
Swimming	Shoreline	25 feet per 150 people per day	
Boating	Trailer and non-trailer	50 boats per each 160 surface acres of water 1 launching facility per 50 boats	1 per boat
Picnicking	Family outside community	Net 8 units per acre Gross 4 units per acre	1 per unit
	Group	25 units per acre	50 per 25 units
	Wayside	16 units per acre (minimum 4 per location)	1 per unit, plus overflow for non-picnickers
Golf	18-hole	120 acres including auxiliary facilities	200
	9-hole	60 acres including auxiliary facilities	100
(1) Net units per acre: number of units per actual used area. One family, 3.5 persons, per unit. (2) Gross units per acre: allows for parking open space, buffer strips, sanitation facilities and the like. Source: Fresno County General Plan Draft Background Report, May.			

Standards of Significance

For the purposes of this EIR, impacts would be significant if implementation of the Proposed Project would:

- fail to meet the required supply of neighborhood recreation and open space facilities;
- adversely affect existing or planned future recreational opportunities; or
- exceed the capacity of regional/community recreation and open space facilities.

Impacts and Mitigation Measures

4.6-6 Development under the Draft General Plan would increase the demand for parks and recreational facilities in unincorporated areas of the County.

By 2020, the population in the unincorporated areas of the County is projected to increase by approximately 25,500. Based on the present number of 1,165 acres of parkland serving a population of 174,200, the ratio of parkland facilities to population is approximately 6.7 acres of total parkland per 1,000 population. The amount of developed parkland is approximately 800 acres.⁶ The ratio of developed parkland to population is, therefore, approximately 4.6 acres per 1,000 population.

Based on the population projections presented in Chapter 2, Project Description and Demographic Information, the unincorporated population in 2020 would be approximately 143,000. Based on the present amount of parkland, this would result in a ratio of approximately 8.2 acres of total parkland per 1,000 population and 5.6 acres of developed parkland per 1,000 population. This is consistent with General Plan Policy OS-H.2, which states that the County should strive to maintain a standard of 5 to 8 acres of improved parkland per 1,000 residents.

Maintenance of current parkland and development of future parkland are addressed in the General Plan policies, listed above under Plan Elements. Under the General Plan Goal OS-H, the designation of land for and the promotion of development of public and private recreational facilities would be encouraged. General Plan Policy OS-H.2 encourages a standard of five to eight acres of improved parkland per 1,000 residents. General Plan Policies OS-H.3 and OS-H.4 address the dedication of land and creation of funds to provide for all of the public parkland and park development needs as development occurs in the County.

Because the ratio of developed parkland to population would meet the standards for improved parkland listed in the Draft General Plan, and because the Draft General Plan includes goals and policies to promote, develop and maintain a variety of park and recreational facilities, this would be a ***less-than-significant impact***.

Mitigation Measures

4.6-6 *None required beyond Draft General Plan Policies OS-H.2 through OS-H.4.*

4.6-7 Development under the Draft General Plan would increase the demand for park and recreational facilities in incorporated jurisdictions of the County.

Buildout under the Draft General Plan would result in an increase in population of incorporated portions of the County of approximately 318,600 people which would result in a need for additional park and recreation facilities in incorporated jurisdictions. The need for additional park and recreation facilities would be provided by the incorporated cities. The ratio of parkland to resident would vary as would policies and approaches to ensure adequate park and recreation facilities are provided. New development would contribute revenues from property taxes to each jurisdictions general fund. This revenue could be used to fund additional facilities, if deemed necessary, in each jurisdiction. However, the County cannot control the funding or implementation timing of adequate park and recreation facilities in incorporated cities of the County; therefore, the impact would be ***significant*** within those jurisdictions.

Mitigation Measures

4.6-7 *None available to the County to reduce the impact of development within the cities' jurisdiction.*

SCHOOLS

ENVIRONMENTAL SETTING

Background information regarding public schools can be found in Chapter 5, Facilities and Services, of the *Fresno County General Plan Background Report (Background Report)*. Chapter 5.7, which describes school facilities in Fresno County, is hereby incorporated by reference and summarized below.

According to the *Background Report*, public school services are provided throughout the County by 35 school districts. Of the 35 school districts, 16 are unified districts providing educational services for grades kindergarten through 12. The remaining 19 districts consist of 16 elementary school districts and three high school districts. Many districts have only one or two schools.

The number of students enrolled in public schools in Fresno County, as of July 1999, was 177,213 students, with 78,942 in the Fresno Unified School District and 31,487 students in the Clovis Unified School District.⁷ This included approximately 99,160 elementary school students, 26,660 middle school students, 50,020 high school students, and 1,380 ungraded students.⁸ The total public school enrollment for the 1997-98 year was 174,924. The total number of full-time teachers in Fresno County for the 1997-98 year was approximately 8,450, with approximately 3,713 teachers in the Fresno Unified School District and 1,432 teachers in the Clovis Unified School District.⁹

REGULATORY SETTING

State Department of Education

The State Department of Education School Facilities Planning Division includes specific code sections in the California Government Code relating to siting schools. Code sections 17212, 17212.5, 17213, and 17217 refer to specific safety requirements in selecting a school site. This includes conducting thorough geologic and engineering studies on prospective school sites, ensuring that no hazardous or solid wastes have been stored on the site and the site has not been identified with any potential hazardous materials or emissions, and that if a site is selected within two miles of an airport runway or a potential runway identified in an airport master plan the Department of Transportation will be contacted.

The following is a review of those sections pertinent to the siting of new schools.

Section 17251

The State Department of Education shall:

- (a) Upon the request of the governing board of any school district, advise the governing board on the acquisition of new school sites and, after a review of available plots, give the governing board in writing a list of the recommended locations in the order of their merit, considering especially the matters of educational merit, safety, reduction of traffic hazards, and conformity to the land use element in the general plan of the city, County, or city or County having jurisdiction. The governing board may purchase a site deemed unsuitable for school purposes, by the State Department of Education only after reviewing the department's report on proposed sites at a public hearing. The department shall charge the school district a reasonable fee for each school site reviewed not to exceed the actual administrative costs incurred for that purpose.
- (b) Develop standards for use by a school district in the selection of school sites, in accordance with the objectives set forth in subdivision (a). The department shall investigate complaints of noncompliance with site selection standards and shall notify the governing board of the results of the investigation. If that notification is received prior to the acquisition of the site, the governing board shall discuss the findings of the investigation in a public hearing.
- (c) Establish standards for use by school district to ensure that the design and construction of school facilities are educationally appropriate and promote school safety.
- (d) Upon the request of the governing board of any school district, review plans and specifications for school buildings in the district.
- (e) Upon the request of the governing board of any school district, make a survey of the building needs, suggest plans for financing a building program to meet the needs. The department shall charge the district, for the costs of the survey, a reasonable fee not to exceed the actual administrative costs incurred for that purpose.
- (f) Provide information relating to the impact or potential impact upon any school site of hazardous substances, solid waste, safety, hazardous air emissions, and other information as the department may deem appropriate. Amended by Stats. 1991, c. 846 (AB 1603), 17.

The Department of Education also maintains a policy relating to the siting of schools in proximity to high voltage power lines. Required buffers include:

- 100 feet from edge of easement for 50-133 kv line;
- 150 feet from edge of easement for 222-230 kv line; and
- 350 feet from edge of easement for 500-550 kv line.

In addition, the Department recommends that a determination of railroad hazard status be made for sites in proximity to railroad tracks. The Department has a recommended guide for making such a determination, that looks at issues, such as ownership, usage, cargo, condition of track, and accident record.

Proposition 1A/Senate Bill 50

Proposition 1A/Senate Bill (SB) 50 (Chapter 407, Statutes of 1998) is a school construction measure that was approved by the voters on the November 3, 1998 ballot. It authorized the expenditure of State general obligation bonds totaling \$9.2 billion through 2002, primarily for the modernization and rehabilitation of older school facilities and the construction of new school facilities related to new growth. Of the \$9.2 billion, \$2.5 billion is targeted for higher education facilities and the remaining \$6.7 billion is targeted for K-12 facilities throughout the state.

Of the \$6.7 billion for K-12 schools, \$2.9 billion is for new construction, \$2.1 billion is for modernization of older schools, \$1.0 billion is for districts in hardship situations, and \$700 million is for class size reduction. The new construction money is available through a 50/50 State/local match program. The modernization money is available through an 80/20 State/local match program. There are a number of other program reforms that are not summarized here.

Proposition 1A/SB 50 also implements significant fee reform by amending the laws governing developer fees and school mitigation in a number of ways:

- It establishes the base (statutory) amount (indexed for inflation) of allowable developer fees at \$1.93 per square foot for residential construction and \$0.31 per square foot for commercial construction.
- It prohibits school districts, cities, and counties from imposing school impact mitigation fees or other requirements in excess of or in addition to those provided in the statute.
- It also suspends for a period of at least 8 years, a series of court decisions allowing cities and counties to deny or condition development approvals on grounds of inadequate school facilities when acting on certain types of entitlements.

A local agency cannot require participation in a Mello-Roos for school facilities. The statutory fee is reduced by the amount of any voluntary participation in a Mello-Roos however. Proposition 1A/SB 50 has resulted in full State preemption of school mitigation. Satisfaction of the statutory requirements by a developer is deemed to be “full and complete mitigation.”

The new law does identify certain circumstances under which the statutory fee can be exceeded. These include preparation and adoption of a “needs analysis”, eligibility for State funding, and satisfaction of one of four requirements (prior to January 1, 2000) identified in the law including year-round enrollment, general obligation bond measure on the ballot over the last four years that received 50 percent plus one of the votes cast, 20 percent of the classes in portable classrooms, or specified outstanding debt.

Assuming a district can exceed the statutory fee, the law establishes ultimate fee caps of 50 percent of costs where the State makes a 50 percent match, or 100 percent of costs where the State match is

unavailable. All fees are levied at the time the building permit is issued. District certification of payment of the applicable fee is required before the City can issue the building permit.

PLAN ELEMENTS

The Proposed Project would increase the population in Fresno County to approximately 1.11 million in 2020, broken out per city as listed in Table 2-5, in Chapter 2, Project Description and Demographic Information. The following goals and policies from the Draft General Plan apply to schools:

School Facilities

- | | |
|---------------|---|
| Policy PF-I.1 | The County shall encourage school districts to provide quality educational facilities to accommodate projected student growth in locations consistent with land use policies of the General Plan. |
| Policy PF-I.2 | The County shall encourage school facility siting that establishes schools as focal points within the neighborhood and community in areas with safe pedestrian and bicycle access. |
| Policy PF-I.3 | The County shall consider school district plans when designating existing and future school sites in community plans and specific plans to accommodate school district needs. |
| Policy PF-I.4 | The County shall work cooperatively with school districts in monitoring housing, population, and school enrollment trends and in planning for future school facility needs and shall assist school districts in locating appropriate sites for new schools. |
| Policy PF-I.5 | The County shall involve school districts in the early stages of residential land use planning, such as during the adoption of or updating of specific, community, and regional plans, to provide a coordinated effort for the planning of school facilities. |
| Policy PF-I.6 | The County strongly discourages the siting of schools in agricultural areas due to the growth-inducing potential of schools and conflicts with farming practices such as pesticide applications. |
| Policy PF-I.7 | The County shall include schools among those public facilities and services that are considered an essential part of the development service facilities that should be in place as development occurs and shall work with residential developers and school districts to ensure that needed school facilities are available to serve new residential development. |
| Policy PF-I.8 | The County and school districts should work closely to secure adequate funding for new school facilities. The County shall support the school districts efforts to obtain appropriate funding methods such as school impact fees. |

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The Fresno County Department of Education does not have an average student generation rate that is applied to future development. However, the State of California Department of Education has

established guidelines for service levels at local schools on the basis of class size in students and facility sizes, shown in Tables 4.6-3 through 5 below.

The California Department of Finance develops County-wide population and enrollment projections. The State's Demographic Research Unit within the Department of Finance was created to serve as the single official source of demographic data for State planning and budgeting. The Unit projects the State and County population by age, race/ethnicity and sex, K-12 enrollment and high school graduates, and post-secondary education enrollment. The historical and projected enrollment for Fresno County was used to obtain an estimate of future school enrollment. Table 4.6-6 displays the projected student population, with a breakdown of students per grade level. It is not possible to determine the precise effect on individual schools, or assign anticipated enrollment increases to specific districts on the basis of these projections. Instead, these projections are intended to reflect the magnitude and general age breakdown of future school demand.

TABLE 4.6-3 ELEMENTARY SCHOOL		
School Enrollment	Without Class Size Reduction	With Class Size Reduction - K3
	Acres per 1999 Guidelines	Acres per 1999 Guidelines
450	9.2	9.6
750	13.1	13.8
1200	16.4	17.6
Source: California Department of Education, School Facilities Planning Division, <i>School Site Analysis and Development, Draft</i> , April 28, 1999.		

TABLE 4.6-4 MIDDLE SCHOOL (WITH TRACK)	
School Enrollment	Acres per 1999 Guidelines
600	17.4
900	20.9
1200	23.1
Source: California Department of Education, School Facilities Planning Division, <i>School Site Analysis and Development, Draft</i> , April 28, 1999.	

TABLE 4.6-5
HIGH SCHOOL

School Enrollment	Acres per 1999 Guidelines
1200	33.5
1800	44.5
2400	52.7

Source: California Department of Education, School Facilities Planning Division, *School Site Analysis and Development, Draft*, April 28, 1999.

TABLE 4.6-6
PROJECTED ENROLLMENT, FRESNO COUNTY

Year	K-6 (approximate)	7-8 (approximate)	9-12 (approximate)	Total (approximate)
2001	101,000	27,180	50,690	178,870
2002	100,520	27,850	51,190	179,560
2003	100,360	28,560	51,720	180,640
2004	100,660	28,820	52,780	182,260
2005	101,170	29,250	53,940	184,360
2006	102,450	29,400	54,880	186,730
2007	104,460	29,120	56,020	189,600

Source: <http://www.cde.ca.gov/dmsbranch/sfpdiv/fieldservices/mstrplng/proj10.htm>, 1998 Series K-12 Enrollment Projection, Demographics Unit, California Department of Finance, November 1998.

Pursuant to Proposition 1A/Senate Bill 50 (Chapter 407, Statutes of 1998), payment of statutory fees or alternate fees as discussed above are deemed to be full and complete mitigation of school impacts.

Standards of Significance

Implementation of the Proposed Project would result in a significant impact to public schools if the Proposed Project:

- would result in a substantial need for new, altered or expanded school facilities beyond those available or planned.

Impacts and Mitigation Measures

4.6-8 Development under the Draft General Plan would result in an increase in the student enrollment resulting in the need for additional staff and facilities.

Based on the Department of Finance enrollment projections, future growth in Fresno County would generate 104,460 elementary students, 29,120 middle school students, and 56,020 high school-age students by 2007. The Proposed Project does not include a specific number of schools to be built.

Assuming these future enrollment numbers, the present number of public schools would not be adequate to serve new development, and additional schools would be required. Because most of the growth is expected to occur in Fresno and Clovis, it is expected that the Fresno Unified School District and Clovis Unified School District would contain most of the future student enrollment growth. It should be noted that the increase in population for both the unincorporated and incorporated portions of the County would be identical with or without the project (approximately 25,500 and 318,600, respectively).

School funding would be needed for the construction and operation of new public schools. New development would contribute its “fair share” of taxes (e.g., property tax), a portion of which would support schools. In addition, the school districts could receive State funds for school construction.

General Plan Policies PF-I.1, I.3, I.7 and I.8 would ensure that adequate school facilities and funding are provided to serve projected student growth associated with new development. General Plan Policies PF-I.3, I.4, and I.5 would ensure that schools are sited and designed in new developments in cooperation from the school districts. Because the Proposed Project includes policies to plan for and build additional schools in conjunction with new development. Existing funding mechanisms would also ensure that school facilities are adequate in the incorporated areas. Therefore, this is considered a ***less-than-significant impact***.

Mitigation Measure

4.6-8 *None required.*

SOLID WASTE

ENVIRONMENTAL SETTING

Background information regarding public services can be found in Chapter 5, Facilities and Services, of the *Fresno County General Plan Background Report (Background Report)*. Chapter 5.8 of the *Background Report*, which describes solid waste facilities in Fresno County, is hereby incorporated by reference and summarized below.

Fresno County operates two active solid waste disposal facilities, or landfills: the American Avenue Landfill and the Coalinga Landfill. These landfills serve 6,000 square miles, with a population of 760,900 people.¹⁰

The County and the cities have established the American Avenue Landfill as the regional landfill in Fresno County. The American Avenue Landfill purchased additional acreage approximately 10 years ago to serve as the regional landfill. The American Avenue Landfill currently has approximately 30 years of additional capacity, based on approved permits. Portions of the unincorporated areas of the County use the Clovis Landfill and the Orange Avenue Landfill. Only a small portion of the unincorporated County's solid waste is taken to these facilities, as the Clovis Landfill serves mainly the city of Clovis, and the Orange Avenue Landfill serves mainly the city of Fresno. The Coalinga Landfill also has approximately 30 years of additional capacity; however, this landfill mostly serves the cities of Coalinga and Huron. The Orange Avenue Landfill is expected to close before buildout of the General Plan.

The four landfills in Fresno County serve an unincorporated population of approximately 178,708 and receive approximately 138,675 total tons of solid waste from the unincorporated area. This results in an average per capita generation rate of 4.25 pounds/day (.776 tons/year).¹¹

REGULATORY SETTING

Solid waste disposal is governed by California State Assembly Bill 939 (AB939). AB939 is designed to increase landfill life and conserve other resources through increasing recycling. AB939 requires counties to prepare Integrated Waste Management Plans to implement the bill's goals, particularly to divert approximately 50 percent of the solid waste generated by year 2000. AB939 requires cities and counties to prepare Source Reduction and Recycling Elements (SRRE). This Element is designed to develop programs to achieve the landfill diversion goals, to stimulate local recycling and the purchase of products containing recycled materials.

State-mandated waste reduction goals require local agencies to implement source reduction, recycling and composting activities to reduce solid waste generation by 25-percent by the year 1995 and 50-percent by the year 2000. State law requires that each city and County prepare a Source Reduction and Recycling Element and a Household Hazardous Waste Element.

PLAN ELEMENTS

The Draft General Plan includes the following policies addressing solid waste that includes a goal to ensure the safe and efficient disposal or recycling of solid waste generated in the County to protect the public health and safety.

Landfills, Transfer Stations, And Solid Waste Processing Facilities

Policy PF-F.1	The County shall continue to promote maximum use of solid waste source reduction, reuse, recycling, composting, and environmentally-safe transformation of wastes.
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- Policy PF-F.2 The County shall locate new solid waste facilities including disposal sites, resource recovery facilities, transfer facilities, processing facilities, composting facilities, and other similar facilities in areas where potential environmental impacts can be mitigated and the facilities are compatible with surrounding land uses. Site selection for solid waste facilities shall be guided by the following criteria:
- a. Solid waste facility sites shall not be located within the conical surface, as defined by Federal Aviation Regulations, Part 77, of a public use airport, except for enclosed facilities;
 - b. Solid waste facilities shall not be sited on productive agricultural land if less productive lands are available;
 - c. Solid waste facilities shall be located in areas of low concentrations of people and dwellings;
 - d. Solid waste facilities shall be located along or close to major road systems. Facility traffic through residential neighborhoods should not be permitted. It is preferable that the roadways used for solid waste transfer conform to approved truck routes; and
 - e. Solid waste facilities shall not be located adjacent to rivers, reservoirs, canals, lakes, or other waterways.
- Policy PF-F.3 The County shall protect existing or planned solid waste facilities from encroachment of incompatible land uses that may be allowed through discretionary land use permits or changes in land use or zoning designations.
- Policy PF-F.4 The County shall ensure that all new development complies with applicable provisions of the County Integrated Waste Management Plan.
- Policy PF-F.5 The County shall not allow the siting of new landfills. The County shall not permit existing privately-owned landfills to expand beyond the current capacities, which are defined in their solid waste facility permits.
- Policy PF-F.6 The County shall impose site development and operational conditions on new solid waste facilities in order to mitigate potential environmental impacts on existing and planned land uses in the area.
- Policy PF-F.7. The County has designated the American Avenue landfill site as the regional landfill to serve the incorporated and unincorporated areas of the County. The publicly-operated Coalinga and Clovis landfills may continue to operate provided the sites are operated economically and in compliance with all environmental laws and regulations. Existing publicly operated landfills may expand their existing sites.
- Policy PF-F.8 The County shall require the following siting criteria for transfer/processing stations:
- a. Sites shall be of adequate size to accommodate proposed transfer/processing station operations and vehicle storage and should be of adequate size to provide for expansion to accommodate future shifts in resource recovery technology;
 - b. Transfer stations shall be located within designated commercial or industrial areas except where commercial and industrial lands are only limitedly available within the Sierra-North and Sierra-South Regional Plans. Landfills closed under appropriate closure regulations may be considered for transfer station sites; and
 - c. Transfer station sites with direct access to or in transportation corridors are preferable.

- Policy PF-F.9 The County shall require the following siting criteria for resource recovery facilities:
- a. Sites shall be of adequate size to accommodate the proposed plant and facilities anticipated for future shifts in resource recovery and pollution control technology;
 - b. Sites should provide opportunities for steam use or development of steam users or otherwise maximize energy utilization;
 - c. Sites with existing or planned urban residential land uses downwind should be avoided; and
 - d. Resource Recovery sites with direct access to or in transportation corridors are preferable.
- Policy PF-F.11 The County shall require the following siting criteria for inert waste disposal sites:
- a. Sites shall be of adequate size to accommodate proposed waste disposal operations;
 - b. Operation of disposal sites should not increase the site elevation to above elevations of adjacent properties and should not preclude reasonable future use of the property; and
 - c. Permanent site improvements associated with inert waste disposal should be discouraged, as the inert disposal operation is a temporary operation.

Household Hazardous Waste

- Policy HS-F.8 The County shall encourage and promote household hazardous waste information and collection programs.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The expected solid waste generated by the Proposed Project is compared to existing and planned capacity of the landfills to determine impacts assuming a per capita generation rate of 4.25 pounds/day (.776 tons/year). The ultimate goal of AB 939 is to achieve a 50 percent diversion of solid waste by the year 2000. Because the current solid waste diversion rate in unincorporated Fresno County is approximately 39 percent,¹² this number is applied to the solid waste generation estimates in this analysis.

Standards of Significance

For the purpose of this EIR, impacts are considered significant if implementation of the Proposed Project would:

- generate solid waste exceeding landfill capacity or substantially shortening the life of the landfill; or
- be inconsistent with other applicable plans, policies, and regulations.

Impacts and Mitigation Measures

4.6-9 Development under the Draft General Plan would increase the volume of solid waste accepted at the County landfills.

Future development is estimated to add approximately 25,500 persons in the unincorporated areas and 318,600 persons in the incorporated areas of the County by 2020. Based on a per capita generation rate of 4.25 pounds/day (.776 tons/year), development under the Draft General Plan would result in an additional 731 tons/day (267,000 tons/year) of solid waste. With a diversion rate of 39 percent, this would result in 446 tons/day (162,870 tons/year) of solid waste to be disposed of at the County's landfills. Of this total, approximately 12,070 tons/year would be attributed to development in unincorporated portions of the County and 150,800 tons/year would be generated by development in incorporated portions of the County. It should be noted that the increase in population, and increased generation of solid waste, would occur with or without the project.

Draft General Plan Policies PF-F.1 and F.4 would ensure that new development in unincorporated portions of the County complies with the County Integrated Waste Management Plan and that waste reduction is maximized. Draft General Plan Policy HS-F.8 would provide information regarding household hazardous waste reduction and recycling efforts. General Plan Policies PF-F.2, F.3, F.6, and F.8 through F.11 would guide the siting of new solid waste facilities to minimize incompatibilities with adjacent land uses and the surrounding natural environment.

Adherence to the General Plan policies would ensure that adequate services and collection sites are provided to serve new development in unincorporated Fresno County and that household hazardous waste is adequately disposed of. The American Avenue Landfill has adequate capacity to serve the future unincorporated and incorporated population projected under the Draft General Plan. Because the additional solid waste generated by new development in both incorporated and unincorporated areas is not anticipated to adversely affect the future solid waste capacity of the County landfill facilities, this is considered a ***less-than-significant impact***.

Mitigation Measures

4.6-9 *None required.*

LIBRARY FACILITIES

ENVIRONMENTAL SETTING

Background information regarding public services can be found in Chapter 5, Facilities and Services, of the *Fresno County General Plan Background Report (Background Report)*. Chapter 5.10, pages 5-79 and 5-80, includes a description of library services in Fresno County. This information is hereby incorporated by reference and summarized below.

The Fresno County Public Library System is comprised of interdependent branches providing services to all residents. There are two regional libraries, five branch libraries, 19 neighborhood libraries, six station libraries (satellite libraries with less books, and operating hours than the branch libraries), one corrections library, the Central Library (which is the main County library and the largest), and one Bookmobile in Fresno County. Together, these libraries house a total of 858,278 books.

Library hours range from seven hours per week at the Laton Library to 55 hours per week at the Central Library. Seating capacities range from zero at the Miramonte Station Library to 261 at the Central Library. Total square footage at the various libraries range from 39 square feet at the Miramonte Station Library to 82,716 square feet at the Central Library.

According to library staff, the Fresno County libraries' levels of service are not adequate for the County's population. The libraries are open approximately one-half the hours that are considered adequate, and the budget is approximately one-third the amount desired by Library Administration.

REGULATORY SETTING

There are no specific federal or State regulations pertaining to library services that would reduce environmental impacts associated with the Proposed Project.

PLAN ELEMENTS

The Draft General Plan would include an Economic Development Plan to increase employment and population within the County. This would result in a buildout population of 1,113,785 in the County by 2020. The Draft General Plan includes the following policies addressing library facilities:

Policy PF-I.9 The County shall promote provision of library services throughout the county and create new facilities as appropriate or expand existing facilities to meet additional demand from new growth.

The goals, policies and programs in the Draft General Plan under the heading General Public Facilities and Services address general public services, including library services. These include Goals PF-A and PF-B, Policies PF-A.1 and PF-B.1 through PF-B.7, and Implementing Programs PF-A.1 and PF-B.A and B.B.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Although it is not possible to predict the exact distribution of new population growth, the general area of population growth may be determined based on the Proposed Project population projections. The assessment of library service is a qualitative review of the existing facilities available to the project area and a determination of whether they are adequate to serve the needs of the Proposed Project.

Standards of Significance

Implementation of the Proposed Project would result in a significant impact to library facilities if the Proposed Project would:

- result in a new need for substantial library service in an area not currently served by a library facilities of adequate size and capacity.

Impacts and Mitigation Measures

4.6-10 Development under the Draft General Plan would increase demand for Fresno County Library facilities.

By 2020, the increase in population in the unincorporated portion of the County would be approximately 25,500 persons, and population for incorporated areas would increase by approximately 318,600. It should be noted that the project increase in population would occur with or without the project. New residents would use the existing Fresno County Public Library System. As development occurs, revenue from property taxes would be added to the County General Fund, which could finance the expansion of future library services.

Draft General Plan Policies PF-A.1 and PF-I.9 would ensure that adequate public facilities, including libraries, are available to serve new development before development is approved. With adherence to the General Plan policies, and continued maintenance of existing library facilities, this would be a ***less-than-significant impact***.

Mitigation Measures

4.6-10 *None required beyond Draft General Plan Policies PF-A.1 and PF-I.9.*

4.6-11 Development under the Draft General Plan would increase demand for Coalinga Library District services.

New development would result in an increase in population of incorporated portions of the cities of Coalinga and Huron (by a total of approximately 6,400) who are served by the Coalinga Library District which would result in a need for additional library facilities. The need for additional library facilities would be provided by the incorporated cities. Policies and approaches to ensure adequate library facilities are provided would be under the jurisdiction of the cities of Coalinga and Huron. New development would contribute revenues from property taxes to each jurisdictions general fund. This revenue could be used to fund additional facilities, if deemed necessary, in each jurisdiction. However, the County cannot control the funding or implementation timing of adequate library facilities in the cities of Coalinga and Huron; therefore, the impact would be ***significant*** within the Coalinga Library District.

Mitigation Measures

4.6-11 *No mitigation is available to the County to reduce the impact of development within the Coalinga Library District.*

Cumulative Impacts

The cumulative context for public services is county-wide development through the year 2020.

4.6-12 Development under the Draft General Plan, in combination with other development in the County, would increase the demand for public services.

The project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the project. The impacts identified in this section for development in the cities and county, taken together, are the cumulative condition that would be anticipated by the Year 2020. The Proposed Project would contribute considerably to the following cumulative impacts:

- increased demand for law enforcement services and facilities (see Impact 4.6-2);
- increased demand for fire protection and emergency services (see Impact 4.6-4 and 4.6-5);
- increased demand for parks and recreation facilities (see Impact 4.6-7); and
- increased demand for libraries (see Impact 4.6-11).

As discussed throughout this chapter, the project would contribute considerably to these impacts because it would result in additional development in areas that are outside of the County's jurisdiction. Therefore, these cumulative impacts are considered significant. However, it should be noted that these cumulative impacts would occur within the cities, and there are mechanisms available to the cities, similar to the Draft General Plan policies under consideration by the County, that may reduce these impacts to a less-than-significant level.

Mitigation Measures

4.6-12 *None available.*

ENDNOTES

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 2. Fresno County, *Fresno County General Plan Background Report*, Draft, May 1997.
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 5. Fresno County, *Fresno County General Plan Background Report*, Draft, May 1997, pp. 6-5.
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 7. http://www.fcoe.k12.ca.us/infoplease/stats_glance_9899.htm.
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http://www.fcoe.k12.ca.us/infoplease/eroll_cbeds_9899.htm.
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 10. Fresno County, *Fresno County General Plan Background Report*, Draft, May 1997.
 11. Marion Miller, Fresno County Public Works Resource Management Planning, Waste Origin Summary, written communication, September 8, 1999.
 12. Harris Hays, Fresno County Public Works and Development, Personal communication, September 1999.

4.7 CULTURAL RESOURCES

INTRODUCTION

This section of the EIR addresses potential impacts of future development under the Draft General Plan on historical and prehistoric resources in the County. Cultural resources consist of remains and sites associated with past human activities. These include prehistoric and proto historic Native American archaeological sites, historic archaeological sites, and historic sites, buildings, structures, or objects. They also include traditional cultural properties or areas such as Native American sacred sites that have been, and often continue to be, of special economic and/or religious significance.

Historic resources are generally those associated with periods of recorded history, often in connection with European settlement of North America. Some historical resource sites may also be of cultural significance to contemporary Native Americans or other ethnic groups because they contain objects or elements important to their cultural heritage. Significant historical resources and traditional cultural properties are afforded a measure of protection under existing federal, State and local laws.

ENVIRONMENTAL SETTING

A description of cultural resources in Fresno County is provided in Chapters 6.3 and 6.4, Recreation, Archaeological, and Historical Resources, Archaeological Resources and Historic and Cultural Resources, of the *General Plan Background Report*, which are hereby incorporated by reference. This information is summarized below.

Cultural resources in Fresno County reflect the area's history of settlement by Native Americans, Europeans, Mexicans and others, as well as periods of economic and social change such as those associated with the Gold Rush and development of agriculture and rail transportation. This region of the San Joaquin Valley, which extends from the forested Sierra Nevada to the Coastal Range, has supported an abundance of wildlife, riparian habitats and marshes. Records indicate that at least five Native American tribes resided in the area. The presence of archaeological and historic resources would generally be most likely along rivers and streams and in other areas with ground cover or other features which could have invited and sustained habitation.

Fresno County's rich history has produced a large stock of historically significant homes, public buildings, and landmarks including important ethnic historical sites. The physical environment of Fresno County has been greatly altered by human modification over the past 150 years, including archaeological resources which may have been buried or displaced. An index of historic properties in Fresno County is provided in Appendix 6A in the *General Plan Background Report (Background Report)*.

The California Department of Parks and Recreation, Office of Historic Preservation, has documented 16 ethnic historical sites, also listed in Appendix 6A. These include four Black American sites, 10 Japanese American sites, and two Mexican American sites. The California Department of Parks and Recreation records indicate that at least five Native American tribes resided in the area. There are three remaining tribal communities on reservations in the County with a total County wide Native American population in 1996 of approximately 7,000.

Most of the 13 museums in Fresno County are located in the City of Fresno, with others located in Clovis, Coalinga, Reedley and Sanger. Cultural and historic resources of the region are also available at the Henry Madden Library, California State University, the Fresno City & County Historical Society, and the Fresno City Community College Library.

REGULATORY SETTING

Federal, State and local governments have developed laws and regulations designed to protect significant cultural resources that may be affected by actions that they undertake or regulate. The National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA) are the basic federal and state laws governing preservation of historic and archaeological resources of national, regional, State and local significance.

Federal

Federal regulations for cultural resources are governed primarily by Section 106 of the National Historic Preservation Act (NHPA) of 1966. Section 106 of NHPA requires Federal agencies to take into account the effects of their undertakings on historic properties and affords the Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings. The Council's implementing regulations, "Protection of Historic Properties" are found in 36 Code of Federal Regulations (CFR) Part 800. The goal of the Section 106 review process is to offer a measure of protection to sites which are determined eligible for listing on the National Register of Historic Places. The criteria for determining National Register eligibility are found in 36 CFR Part 60. Amendments to the NHPA (1986 and 1992) and subsequent revisions to the implementing regulations have, among other things, strengthened the provisions for Native American consultation and participation in the Section 106 review process. While federal agencies must follow federal regulations, most projects by private developers and landowners do not require this level of compliance. Federal regulations only come into play in the private sector if a project requires a federal permit or if it uses federal money.

State

State historic preservation regulations affecting this project include the statutes and guidelines contained in the California Environmental Quality Act (CEQA; Public Resources Code Sections 21083.2 and 21084.1 and Section 15064.5 of the CEQA guidelines). CEQA requires lead agencies to carefully consider the potential effects of a project on historical resources.

An "historical resource" includes, but is not limited to, any object, building, structure, site, area, place, record or manuscript which is historically or archaeologically significant (Public Resources Code Section 5020.1). Section 15064.5 of the CEQA Guidelines specifies criteria for evaluating the importance of cultural resources, replacing "Appendix K" of the CEQA Guidelines. Evaluation criteria include the following:

- (1) The resource is associated with events that have made a contribution to the broad patterns of California history;
- (2) The resource is associated with the lives of important persons from our past;
- (3) The resource embodies the distinctive characteristics of a type, period, region or method construction, or represents the work of an important individual or possesses high artistic values; or
- (4) The resource has yielded, or may be likely to yield, important information in prehistory or history.

Advice on procedures to identify such resources, evaluate their importance and estimate potential effects is given in several agency publications such as the series produced by the Governor's Office of Planning and Research (OPR). The technical advice series produced by OPR strongly recommends that Native American concerns and the concerns of other interested persons and corporate entities, including but not limited to, museums, historical commissions, associations and societies be solicited as part of the process of cultural resources inventory. In addition, California law protects Native American burials, skeletal remains and associated grave goods regardless of their antiquity and provides for the sensitive treatment and disposition of those remains (California Health and Safety Code Section 7050.5, California Public Resources Code Sections 5097.94 *et seq.*).

California Historic Register

The State Historic Preservation Office (SHPO) also maintains the California State Register of Historic Resources (CRHR). Properties that are listed on the National Register of Historic Properties (NRHP) are automatically listed on the CRHR, along with State Landmarks and Points of Interest. The CRHR can also include properties designated under local ordinances or identified through local historical resource surveys.

PLAN ELEMENTS

The Proposed Project would result in additional development in rural and urban areas.

The Draft General Plan contains the following policies aimed at preserving and protecting cultural resources.

Policy OS-J.1	The County shall require that discretionary development projects, as part of any required CEQA review, identify and protect important historical, archaeological, paleontological, and cultural sites and their contributing environment from damage, destruction, and abuse to the maximum extent feasible. Project-level mitigation shall include accurate site surveys, consideration of project alternatives to preserve archaeological and historic resources, and provision for resource recovery and preservation when displacement is unavoidable.
Policy OS-J.2	The County shall, within the limits of its authority and responsibility, maintain confidentiality regarding the locations of archaeological sites in order to preserve and protect these resources from vandalism and the unauthorized removal of artifacts.
Policy OS-J.3	The County shall solicit the views of the local Native American community in cases where development may result in disturbance to sites containing evidence of Native American activity and/or sites of cultural importance.
Policy OS-J.4	The County shall maintain an inventory of all sites and structures in the County determined to be of historical significance (Index of Historic Properties in Fresno County).
Policy OS-J.5	The County shall support the registration of property owners and others of cultural resources in appropriate landmark designations (i.e., National Register of Historic Places, California Historical Landmarks, Points of Historical Interest, or Local Landmark).
Policy OS-J.6	The County shall provide for the placement of historical markers or signs on adjacent County roadways and major thoroughfares to attract and inform visitors of important historic resource sites. If such sites are open to the public, the County shall ensure that access is controlled to prevent damage or vandalism.
Policy OS-J.7	The County shall use the State Historic Building Code and existing legislation and ordinances to encourage preservation of cultural resources and their contributing environment.
Policy OS-J.8	The County shall support efforts of other organizations and agencies to preserve and enhance historic resources for educational and cultural purposes through maintenance and development of interpretive services and facilities at County recreational areas and other sites.
Policy OS-J.9	In approving new development, the County shall ensure, to the maximum extent practicable, that the location, siting, and design of any project should be subordinate to significant geologic resources.
Policy OS-J.10	The County shall encourage property owners to enter into open space easements for the protection of unique geologic resources.
Policy OS-J.11	The County shall consider purchasing park sites for the purpose of preserving unique geologic resources for public enjoyment.
Policy OS-J.12	The County should encourage the inclusion of unique geologic resources on the National Registry of Natural Landmarks.
Policy OS-J.13	The County shall encourage State and Federal agencies to purchase significant geologic resources for permanent protection.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Setting information concerning prehistorical and historical background in Fresno County was prepared for the *Background Report*. The potential for damaging or destroying cultural resources is assessed by comparing areas that are anticipated to be developed with or without the Proposed Project to those areas that could contain prehistoric or historic resources. Impacts on particular properties or areas are not identified because specific information concerning the location and design of future development is unknown at this time. The impact analysis for this project is general in nature, consistent with the methodology for updating the General Plan. The preferred approach for reducing adverse effects on cultural resources is to anticipate and avoid them if possible. Alternatives in declining order of preference are to minimize such effects while preserving the resource in place, to relocate the resource, and to officially record the existence of the resource if it has not been preserved or protected through destruction, damage or loss.

Standards of Significance

The significance of impacts on prehistoric and historic resources was determined by applying criteria found in the Public Resources Code (Sections 5020.1, 21083.2 and 21084.1), and Section 15064.5 of the CEQA guidelines. Properties listed or eligible for listing on the National or California historic registers are considered significant historic resources. For the purposes of this EIR, a significant environmental impact would occur if the Proposed Project would:

- create or contribute to a substantial adverse change in the significance of a listed historic resource due to a change in the context or fabric of the resource;
- damage or destroy historic, archaeological or unique paleontological resources; or
- allow development that would be inconsistent with the County's General Plan policies or ordinances concerning preservation of historic or prehistoric resources.

Impacts and Mitigation Measures

4.7-1 The Proposed Project could result in disturbance, alteration, or destruction of subsurface archaeological prehistoric resources.

Under the Draft General Plan, almost 78,000 acres in the County would be developed for residential and non-residential uses from 1996 to 2020. Urbanized areas that have been developed are not likely to contain subsurface, prehistoric resources. However, land that has been used for certain types of agricultural production, grazing or other activities that do not require extensive excavation and/or grading, or that is vacant, could contain such resources, particularly near drainages and in woodlands. Development in these areas could damage or destroy prehistoric resources, if present, during

excavation and/or grading. Even if such resources are adequately recorded, removal and/or destruction from their place of origin reduces their value as resources. The potential loss or degradation of archaeological or prehistoric resources is considered a **significant impact**.

It should be noted that most of the development occurring by 2020, approximately 89 percent by total acreage, would occur whether or not the project was adopted. Furthermore, more than 93 percent of projected development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence.

The Draft General Plan includes policies designed to preserve and protect significant subsurface archaeological or prehistoric resources. Policy OS-J.1 requires that important archaeological and paleontological resources be identified and protected through the review and conditional approval of discretionary development projects. Policy OS-J.2 requires that the County maintain confidentiality concerning the locations of archaeological sites to preserve and protect these resources from vandalism and the unauthorized removal of artifacts. Policy OS-J.3 requires that the County solicit the views of the local Native American community when development may affect sites containing evidence of Native American activity. State law also specifies steps that need to be taken when Native American sites or artifacts, or human remains are discovered. Policy OS-J.7 requires that the County use applicable legislation and ordinances to encourage preservation and protection of cultural resources.

Effective implementation of the policies cited above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. Similar measures are available to, and required by some of the cities in the County. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.7-1 *No mitigation is required beyond Draft General Plan Policies OS-J.1 through OS-J.3 and OS-J.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would reduce significant impacts related to subsurface prehistoric archaeological resources within the unincorporated areas of the County, implementation of additional mitigation, as recommended by Draft General Plan policies, within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.7-2 The Proposed Project could result in devaluation, disturbance, alteration or destruction of historic areas, sites and structures.

The County contains various areas, sites, and structures that are or may be of historic importance. Land development anticipated under the Draft General Plan may include areas which have been

inhabited and where historic resources are located. As land development continues in the County, historic buildings or sites could be damaged or removed, or the surrounding environment may be altered in a way that devalues the resource and its historical context. Specific impacts on historic resources cannot be addressed until particular development projects are identified and reviewed. Adequately recording such resources will not necessarily mitigate these impacts. The potential loss or degradation of historic resources is considered a **significant impact**.

The Draft General Plan includes policies designed to preserve and protect significant historic areas, sites and structures. Policies OS-J.1 and OS-J.4 require that important historic resources be identified and protected through the review and conditional approval of discretionary development projects. Policy OS-J.5 requires the County to support registration of cultural resources. Policy OS-J.6 provides for placement of historical markers or signs to attract and inform visitors of important historic resource sites and security measures to prevent damage or vandalism of such resources. Policy OS-J.7 provides for use of legislation and ordinances to encourage preservation of historic resources and their contributing environment. Policy OS-J.8 provides for County support of efforts by others to preserve and enhance historic resources for educational and cultural purposes.

Effective implementation of the policies cited above would reduce this impact to a less-than-significant level for development that occurs under the County's jurisdiction. Similar measures are available to, and required by some of the cities in the County. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.7-2 *No mitigation is required beyond Draft General Plan Policies OS-J.1 and OS-J.4 through OS-J.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Development within the cities and County would be required to comply with applicable historic preservation standards and requirements. As such, protection of historic resources within the incorporated areas could also be achieved. However, implementation of additional measures to protect historic resources, which are reflected in the Draft General Plan policies within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

Cumulative Impacts

The cumulative context for cultural resources is development within the Central Valley through the year 2020. Cultural resources occur throughout the San Joaquin Valley, particularly along water courses and in foothill areas.

4.7-3 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the devaluation, disturbance, alteration or destruction of unidentified subsurface prehistoric resources and historic areas, sites and structures.

The Proposed Project by itself (i.e., the growth attributable directly to the Draft General Plan policies plus the increment attributable to the Economic Development Strategy) represents a relatively small portion of the growth projected to occur in the county by 2020, and an even smaller portion of growth anticipated within the Central Valley during the planning horizon. However, some of this growth is expected to occur in areas in which cultural resources are known, or can be reasonably expected, to occur.

This cumulative cultural impact will occur incrementally as individual development projects are entitled and built, most in conformance with and not requiring amendment to the County General Plan or other jurisdiction long-range land use plans. In aggregate, these projects could result in the loss of and damage to unidentified cultural resources. Identified cultural resources will be mitigated by existing State and local policies protecting cultural resources, including those found during site preparation and development activities.

As discussed above, the project would contribute considerably to these impacts within Fresno County.

Furthermore, development in Fresno County, including the project increment, would contribute to the significant loss of cultural resources elsewhere in the Central Valley, Coast Range and Sierra Nevada foothills, and the Sierra Nevada to a lesser degree.

The policies aimed at preserving and protecting cultural resources will minimize the cumulative impact from the Project within Fresno County's jurisdiction. Similar policies in adjacent counties and mandated by the State could minimize the impacts within the San Joaquin Valley. However, these impacts are beyond the control of the County. Therefore, the cumulative impacts to cultural resources are considered **significant**.

Mitigation Measures

4.7-3 *None available beyond Draft General Plan Policies OS-J.1 through OS-J.8.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.8 WATER RESOURCES

INTRODUCTION

This section describes the impacts on County water resources associated with development anticipated to occur under the General Plan. This section focuses on how development at the intensities assumed in the General Plan could affect water supply and water quality. Other water-related issues, such as wastewater, storm drainage, and flooding are discussed in Section 4.5, Wastewater, Storm Drainage, and Flooding.

ENVIRONMENTAL SETTING

Water Resources

Water resources in Fresno County include a number of rivers and streams, artificial waterways, and groundwater. Detailed information about surface water and groundwater resources is contained in Chapter 5.3, Public Facilities and Services, Storm Drainage and Flood Control, Chapter 5.4, Water Supply and Distribution Facilities, Chapter 5.5, Wastewater Collection, Treatment, and Disposal, Chapter 7.2, Natural Resources, Water Resources, and Chapter 7.3, Water Quality Condition in the *General Plan Background Report (Background Report)*. That information is hereby incorporated by reference and is summarized below.

Surface Water Resources

The San Joaquin River originates in the Sierra Nevada and flows westerly forming the border between Fresno and Madeira Counties downstream from Mammoth Pool Reservoir. The North and Middle Forks originate in Madeira County near Devils Postpile National Monument. The South Fork begins at Martha Lake in northern Kings Canyon National Park within Fresno County. Average annual precipitation in the upper reaches of the river falls mainly in the form of snow and is as high as 70 inches. By comparison, the arid San Joaquin Valley to the west, average annual rainfall is as low as six inches near Mendota. Friant Dam is the most significant of the several dams on the San Joaquin River.

It was completed in 1942 by the U.S. Bureau of Reclamation (USBR) for the purposes of agricultural irrigation and is part of the Central Valley Project (CVP). There are several dams upstream of Friant owned and operated by Southern California Edison (SCE) and Pacific Gas & Electric Company (PG&E) for power generation. The combined storage capacity of the dams upstream of Friant is 609,530 acre-feet and the storage capacity of Millerton Lake (formed by Friant Dam) is 520,500 acre-feet.

The Kings River originates high in the Sierra Nevada Mountains near the Inyo County line. It has a large drainage basin including most of Kings Canyon National Park and most of the area between

Shaver and Florence Lakes in the north to the Fresno/Tulare County border in the south. The average annual precipitation for the mountain region has not been consistently recorded but, it is probably greater than the 43 inches that falls in Grant Grove on the southern reaches of the Kings River watershed. Downstream average precipitation is approximately 7 to 10 inches per year. The major portions of the upper reaches feed into Pine Flat Lake, a 1,000,000 acre-feet reservoir constructed by the U. S. Army Corps of Engineers (Corps) in 1944 for flood control purposes. There are additional reservoirs upstream of Pine Flat that are owned and operated by PG&E for the purpose of hydroelectric power generation. These facilities have a combined storage capacity of about 252,000 acre-feet.

There are many creeks and lakes in the high Sierra Nevada within Fresno County, all of which eventually feed into either the Kings River or the San Joaquin River. In addition, several creeks drain the foothill areas and flow into developed areas in central Fresno County. Most of these streams (i.e., Redbank, Fancher, Dry and Dog Creeks) have been controlled by efforts of the Corps and the Fresno Metropolitan Flood Control District (FMFCD).

Stream systems in western Fresno County are prone to high flows and flooding because they drain very large watersheds. The soils in the Coast Range are subject to erosion. As a result, stormwater runoff typically carries large volumes of sediment and naturally occurring minerals, such as selenium, arsenic, boron and asbestos, which may be undesirable to downstream users. Some creeks are seasonal and may be plowed into local fields. The California Department of Water Resources (DWR) is currently working with landowners to improve watershed management practices and reduce erosion. Western Fresno County contains five major stream systems: Little Panoche Creek, Panoche Creek, Tumey Gulch and Arroyo Ciervo, Cantua Creek, and Arroyo Pasajero.

Groundwater Resources

Groundwater conditions vary considerably from eastern to western Fresno County. Aquifers east of the valley trough are generally semi-confined to unconfined, while aquifers west of the valley trough are generally semi-confined to confined. Most pumping occurs below a naturally occurring subterranean clay, although considerable pumping also occurs above the layer, depending upon location and water quality issues. This layer is several hundred feet below the ground surface, and pumping costs are high.

As a consequence of the heavy reliance on groundwater to meet urban and agricultural demand, groundwater overdraft is widespread. Groundwater overdraft occurs when the amount of water withdrawn due to pumping exceeds the amount of water that replenishes the groundwater basin. Groundwater overdraft is a problem in western Fresno County, especially in the Westlands Water District and in the Pleasant Valley Water District near Coalinga, because of limited groundwater recharge, periodic droughts, and inadequate surface water supplies. Long-term recharge is inadequate to maintain water table elevations. The California Department of Water Resources (DWR) has estimated groundwater overdraft at 650,000 acre-feet for 1990 in the Tulare Lake Region, which generally includes Fresno County. Groundwater overdraft conditions vary annually based on demand, surface water availability, and climate. Long-term projections indicate a continuing annual overdraft

of the basin underlying most of Fresno County. Overdraft can result in a number of undesirable effects such as land subsidence, which has been a problem in the valley trough and parts of western Fresno County. Overdraft can also result in an increased risk of cross-contamination of aquifers as a result of well-deepening or drilling of new wells, and the spreading of groundwater contamination associated with new or expanded cones of depression. Nearly every water agency in Fresno County is currently reporting overdraft conditions, and the DWR has designated the Kings Groundwater Basin, located in the central area of the County, as “critically overdrafted.”

The county-wide groundwater overdraft condition is being exacerbated by increasing water demand by the agriculture industry. This increased demand is the result of a trend in cropping patterns from less water-consumptive crops such as grains and hay to higher value crops like fruits, tree nuts, and vegetables, which require substantially more water. This trend is particularly evident in the western side of the valley. In some instances this has increased per acre water demand from one acre-foot to over three acre-feet per year.

Subsidence

In some areas along the valley trough and in parts of western Fresno County, groundwater pumping has caused subsidence of the land surface. This usually occurs in areas where the groundwater basin has historically been subject to overdraft and long-term recharge is inadequate to maintain the water table elevation. Subsidence can impact conjunctive use programs by reducing storage capacity and changing transmissivity. In general, subsidence in Fresno County has stabilized, except during droughts. Areas in Fresno County where subsidence has been a problem generally include the Westlands Water District and the Pleasant Valley Water District.

Groundwater Recharge

Surface and groundwater resources are closely managed in Fresno County in an effort to maintain groundwater balance. Artificial recharge programs have been in place since at least the 1930s. The largest recharge program in the County, which has been in place since the 1970s, is implemented through the combined efforts of the Fresno Irrigation District (FID), the Fresno Metropolitan Flood Control District (FMFCD), and the cities of Fresno and Clovis. The major element of this program is the joint recharge effort by the City of Fresno and FID, whereby the City’s surface water allocations of San Joaquin River water are conveyed by FID to recharge basins in the Fresno area. This serves to replenish groundwater pumped by the City’s municipal wells. In addition, the FMFCD operates 135 ponding basins, which serve the dual purposes of retaining stormwater drainage for flood protection and capturing surface water flows for groundwater recharge. These efforts have addressed the overdraft problem to the point where groundwater in the Fresno-Clovis area is almost in a state of balance (the average annual overdraft in the Fresno-Clovis area is currently 10,000 to 20,000 acre-feet per year, representing approximately 10 percent of annual pumping). In addition, treated effluent produced by the Fresno-Clovis Regional Wastewater Treatment and Reclamation Facility is conveyed to large evaporation/percolation ponds. Percolation ponds achieve some level of nutrient reduction

and disinfection by filtering effluent through soil and extracting the treated, soil-filtered effluent by means of reclamation wells at the perimeter of the reclamation area. This reclaimed water is used for agricultural irrigation only since it does not meet drinking water requirements for municipal use. The recharging effect of this effluent percolation has resulted in the formation of a groundwater mound under the percolation ponds southwest of Fresno.

Most other cities in the County also utilize ponding basins for flood control and incidental groundwater recharge. The cities and special districts also dispose of treated wastewater effluent through evaporation/percolation ponds that provide groundwater recharge. While this effluent is not suitable for irrigation of food crops, some of the effluent is used directly in the irrigation of cotton. The Regional Water Quality Control Board would prefer to have as much effluent as possible used for agricultural irrigation (and recharge), but such use would require advanced treatment which is prohibitively expensive for small communities. Large agricultural operations and food processing industries located in the rural areas also utilize evaporation/percolation ponds to dispose of treated effluent, which provides additional recharge. Agricultural irrigation also provides a significant amount of groundwater recharge as a portion of the applied water moves below the root zone.

Water Supply

Water supply in Fresno County is provided through complex systems of local groundwater and surface water management and delivery. Water supply management is accomplished through a combination of public and private water agencies, including the U.S. Bureau of Reclamation (USBR), cities, water and flood control districts, local irrigation districts, and utility companies, which are all governed by state and federal regulations. The 15 incorporated cities all have municipal water systems, and there are approximately 370 entities providing domestic water in the unincorporated County, of which about 20 serve more than 200 connections. In the Fresno-Clovis metropolitan area, annual demand for domestic water in 1995 was 146,542 acre-feet, representing 71 percent of the County-wide total for municipal and irrigation (M&I) uses. The other 13 incorporated cities in Fresno County had a combined annual water demand of 30,868 acre-feet in 1995, representing 15 percent of the County-wide total for M&I use. County-wide annual demand for domestic water supply in Fresno County was 205,614 acre-feet in 1995.

The San Joaquin River and the Kings River are the major sources of surface water for agricultural and urban purposes in Fresno County. Water from both river systems is controlled upstream by numerous dams and reservoirs, which are used for water storage, flood control, and power generation. The largest dam in terms of storage is the Pine Flat Dam on the Kings River, a facility operated by the U.S. Army Corps of Engineers (Corps), which impounds Pine Flat Lake. The second major dam is the Friant Dam, a facility of the federal Central Valley Project (CVP) or operated by USBR on the San Joaquin River, which impounds Millerton Lake. Both rivers are subject to extreme variations in annual runoff resulting from annual changes in mountain precipitation. At present, reservoir storage capacity on the Kings and San Joaquin rivers is inadequate to make full use of available runoff, and an average of almost 700,000 acre-feet per year is released as a result. This is partially due to the constraints placed

on reservoir operations involving their other functions for flood control and power generation. Rights to San Joaquin River and Kings River water have been fully appropriated, except for excess winter flows which are unavailable due to inadequate storage capacity.

Another important source of water supply for Fresno County is CVP surface water imported from the Sacramento-San Joaquin River Delta (Delta). This water is delivered to agricultural and M&I (municipal and industrial) water users located in the western portion of the County adjacent to and west of Fresno Slough. The delivery of Delta water is controlled under water service contracts and water rights exchange agreements between the water users, the state, and the U. S. Bureau of Reclamation (USBR). Surface waters are delivered through the USBR's San Luis Canal as far as the San Luis Reservoir, and via the California Aqueduct (a joint state and federal facility) south of San Luis Reservoir. Delta water is already fully appropriated. In recent years, CVP contractors in Fresno County have received substantially less water deliveries than their contract entitlements due to mandated seasonal restrictions on Delta pumping plants to protect fisheries and to control water quality in the Delta. This situation has become referred to as a "regulatory drought," and has had a significant impact on growers in the west County area.

In Fresno County, nearly all M&I water demands are met by the exclusive use of groundwater. Currently, more than 95 percent of the County's total population is directly dependent upon groundwater for domestic and industrial purposes. Groundwater also plays a significant role in sustaining the County's agricultural production. In the major urban areas, the reliance on groundwater for municipal supply is necessary because untreated surface water supplies do not meet drinking water standards. Instead of treating the surface water supply, it has been more cost-effective to use surface waters for groundwater recharge and then pump the groundwater after it has filtered through the soil. Most appropriately-designed water wells provide drinking water quality without treatment other than mandated chlorination to control bacteria in the distribution systems. Some domestic wells require wellhead treatment facilities to remove specific contaminants to drinking water standard levels. However, surface water treatment does occur in some smaller cities such as Coalinga, Huron, and Orange Cove, where very poor groundwater quality makes it unsuitable for domestic use. The City of Fresno will have a small 20 million gallon per day (mgd) surface water treatment plant online in 2002, which will provide approximately 10 percent of the city's water supply in summer and 40 to 50 percent of its water supply in winter months. This treatment plant is intended to address existing problems in northeast Fresno where the groundwater production is inadequate due to the relatively shallow depth to bedrock, and due to the general lack of surface water entitlements for agricultural uses (which would provide incidental groundwater recharge through irrigation). The treatment plant will be expandable to a treatment capacity of 60 mgd.

Agricultural water demands in Fresno County are met primarily by surface water supplemented by groundwater. The exception is the area along the trough of the valley, between Fresno and Fresno Slough, which does not have access to a reliable surface water supply. Since all sources of surface water in the County are fully appropriated, increased agricultural demand may result in additional groundwater pumping.

In the area of the County northeast of the Fresno-Clovis metropolitan area, water supply is very limited due to relatively shallow depth to bedrock and lack of surface water entitlements for agricultural irrigation and recharge. This area has been subject to historic rural residential development and there are several large development projects that are approved or pending in this area. In other areas, such as Fresno and Clovis, water supplies for urbanizing areas are provided from surface water entitlements.

However, due to the lack of surface water entitlements in the northeast County area, the conversion from agriculture to rural residential development in this area results in a net increase in groundwater consumption, resulting in water quantity problems. In addition, the increased groundwater pumpage in this area tends to reduce groundwater flowing down-gradient to the southeast, and has decreased groundwater available for municipal pumping in the northeast areas of Fresno and Clovis. In response to poor well production in northeast Fresno, the City is constructing a surface water treatment plant to supplement water supplies in this part of the city, as discussed above. The City of Clovis is also considering construction of a surface water treatment plant.

In the foothill and mountain areas of eastern Fresno County, the availability of groundwater is limited to water contained in rock fractures and voids. Finding water can be difficult and yields are generally low. This groundwater limitation has restricted development in these areas as alternative water supplies are not available at this time.

External Factors Affecting Water Supply

An important factor affecting future water supplies is the possibility of individual growers selling groundwater and/or surface water entitlements for export to areas outside the County. This is particularly true since passage of the Central Valley Project Improvement Act (CVPIA) in 1992, as well as new state laws, which provide individuals with the right to transfer their water entitlements or rights to others. Since urban buyers are willing to pay far more than agricultural users can afford for water, this provides a substantial incentive for transfers of water out of agricultural areas. Loss of this water could also result in increased groundwater pumping and worsening of long-term overdraft conditions.

These effects may be ameliorated by converting to less water-intensive crops, seasonal fallowing, or land retirement. Conversely, the liberalized transfer rules would enable urban centers of the County to purchase water entitlements outside the County to augment local supplies. Under the CVPIA, existing surface water contractors have the right of first refusal for purchase of CVP water proposed for transfer.

The CVPIA could also reduce contract water allocations to the County under its mandate that a certain portion of CVP water be allocated to habitat restoration and other environmental purposes. It is anticipated that the U.S. Fish and Wildlife Service will request increases in instream flows in the San Joaquin River under CVPIA provisions for fish and wildlife habitat restoration and enhancement. These increases could be implemented by terminating some junior water rights, such as the FID's Class 2 water from the San Joaquin River. (FID has the County's only contract allocation for Class 2 water, in the amount of 75,000 acre-feet, which is typically available only in wet years.) These requirements could also reduce imported CVP surface water deliveries from the Delta. No formula or mechanism

for allocating water for environmental purposes has been established to date. Current proposals include a tiered pricing structure whereby higher rates would be charged for higher rates of water use.

Also of significance to the cities are the CVPIA water conservation provisions that require water metering. Since the City of Fresno's charter contains a provision forbidding water metering, this conflict places Fresno's CVP contract water allocation of 60,000 acre-feet per year in severe jeopardy. Fresno's CVP contract is due for renewal in 2006, and local officials are working to reach a solution to this problem, including the possibility of placing the metering issue on the ballot.

Water Quality

Water quality is generally defined in terms of salinity and concentrations of harmful trace elements. In Fresno County, most water sources have excellent quality and are available for most uses after conventional treatment. Many communities are able to pump and use groundwater, although groundwater in certain areas contain contaminants from both natural and introduced sources and is unsuitable for irrigation and municipal and industrial (M & I) uses. Bacterial counts (coliform bacteria) and parasite cyst loads of surface water sources is an emerging concern, and regulations for managing and monitoring these contaminants have been promulgated. The following summarizes surface water and groundwater quality characteristics and issues in the County.

Surface Water Quality

The quality of local surface water from the Kings and the San Joaquin Rivers is excellent for both irrigation and municipal and industrial (M&I) uses. The concentration of total dissolved solids (TDS) and other mineral constituents is typically low and harmful levels of trace elements are not present. Because of the excellent quality of water from these sources, conventional water treatment processes can be used.

The TDS of water at Mendota Pool tends to be higher than the other surface water sources because the USBR allows water from groundwater pumping to be discharged into the Delta-Mendota Canal and Mendota Pool. The Exchange Contract contains provisions that set forth requirements that the USBR must meet regarding the quality (salinity) of water delivered through the Delta-Mendota Canal and Mendota Pool. These contractual water quality standards include daily, monthly, annual, and 5-year TDS concentration limits. The Delta Mendota Canal and Mendota Pool are not used to provide water for M&I uses in Fresno County.

Streams draining the western portion of the County carry large volumes of sediment and naturally occurring minerals, such as selenium, arsenic, boron and asbestos, which may be undesirable to downstream users. In particular, Panoche Creek is known to carry high levels of selenium and arsenic.

Arroyo Pasajero contains high levels of sulfates, boron, and TDS. Arroyo Pasajero also carries asbestos. Several studies have been conducted on asbestos levels in soil and water samples from

Arroyo Pasajero and other streams and retention basins. These studies indicate that although some samples contain elevated asbestos levels, in general, the asbestos levels in the Arroyo Pasajero detention basin are not any higher than those in the rest of the watershed area.

Groundwater Quality

Groundwater quality is generally affected by withdrawals, recharge, and agricultural and industrial practices. Groundwater quality in Fresno County is generally very good, although past herbicide use in the eastern portions of the County has resulted in groundwater contamination. This has resulted in the closure of some municipal wells in the cities of Fresno and Clovis which are down-gradient from the contamination. Concentrations of dibromochloropropane (DBCP), a pesticide banned from use since 1977, have exceeded the maximum contaminant level (MCL) in groundwater in many locations in eastern Fresno County. Concentrations of DBCP are generally decreasing, and the compound has been diluted and extracted from the aquifer since then. Communities like Fresno and Clovis have begun to construct well head treatment facilities to reduce DBCP levels to acceptable concentrations.

As long as DBCP concentrations decline and do not exceed the MCL, the cities of Fresno and Clovis will be able to manage the problem. Contaminants such as petroleum products and industrial solvents also occur in groundwater in localized areas in Fresno County. In other areas of the County, other naturally-occurring elements such as uranium, radon, iron, and manganese are sometimes found.

Nitrate levels in rural groundwater wells have been increasing from fertilizers used in agriculture. Many of these wells have nitrate concentrations that exceed the MCL for nitrate in drinking water. Nitrate levels may also be elevated in areas served by domestic septic systems, on-site industrial wastewater disposal facilities (when processes involve nitrogen-containing materials), and in areas where dairy operations do not have state-of-the-art treatment for cattle waste. There also appear to be areas in the County where native soil or rock strata have imparted nitrogenous compounds to the aquifer.

Most poor quality groundwater is located along the western side of Fresno County. Concentrations of TDS, sodium, sulfate, boron, chloride and carbonate/bicarbonate, and trace elements (such as selenium) limit the beneficial use of groundwater in this area. Agricultural lands in western Fresno County are becoming increasingly degraded by rising saline in shallow groundwater. This is a result of irrigation with imported surface water primarily from the Central Valley Project (CVP) and caused by a combination of geologic and soil conditions, soil salinity, and inefficient irrigation water management.

The San Luis Drain project, which began in 1968, was halted in 1975 due to funding problems and environmental concerns over drainage water discharge impacts to the Delta. Following disclosure of bird mortalities in the Kesterson Reservoir caused by selenium from the introduced drainage waters and concern for public health, the U.S. Department of the Interior (USDI) in a March 1985 agreement with Westlands Water District called for the cessation of drainage flows to Kesterson Reservoir. A long-term solution to the subsurface drainage problem is needed to sustain agricultural crop production in western Fresno County.

There are currently a wide variety of programs and activities in the County devoted to protecting groundwater quality and/or remediating identified groundwater contamination.

REGULATORY SETTING

Federal, state, and local governments have developed numerous programs and regulations designed to ensure adequate and safe water supply for urban and agricultural use. The programs and regulations that are most important to water resources in Fresno County are briefly described below. Additional information regarding water conveyance projects is described in detail in Chapter 5, Public Facilities and Services, in the *Background Report*.

Federal

Water Supply

The primary federal legislation currently affecting water supply in Fresno County is the *Central Valley Project Improvement Act (CVPIA)* of 1992, which is jointly administered by the USBR and the U.S. Fish and Wildlife Service (USFWS). The Act includes provisions intended to: place limitations on CVP contracts, improve and facilitate water transfers, implement water conservation actions, provide for fish and wildlife restoration actions, and establish an environmental restoration fund. The CVPIA requires that 800,000 acre-feet of CVP water be dedicated to general fish and wildlife purposes annually, and sets a goal of doubling the anadromous fish population of Central Valley rivers and streams. The Act also sets a goal for restoring the fishery and riparian habitat of the San Joaquin River, which may require additional water in certain reaches of the river. The CVPIA also provides for enhancement of water supplies to wildlife refuges in the Central Valley. No formula or mechanism for allocating water for environmental purposes as been established to date. Current proposals include a tiered pricing structure whereby rates would increase with higher usage. It is expected that the end result will likely be a reduction of surface water deliveries to existing CVP contractors, and some surface water allocation currently used for agricultural and M&I uses in the County could be terminated.

Also of significance to the cities is the CVPIA water conservation provisions that require water metering. Since the City of Fresno's charter contains a provision forbidding water metering, this conflict places Fresno's CVP contract water allocation of 60,000 acre-feet per year in severe jeopardy. Fresno's CVP contract is due for renewal in 2006, and local officials are working to reach a solution to this problem.

Agricultural lands served by CVP water or non-project waters delivered through CVP facilities are subject to the provisions of the *Reclamation Reform Act (RRA)* of 1982. The RRA restricts the acreage under one ownership that can be irrigated with federally-subsidized water or facilities. Generally, the amount of land that can be owned and irrigated with subsidized water is 960 acres, although additional lands under one ownership may be irrigated with project water if the full cost of such additional water is paid.

Water Quality

Under the *Safe Drinking Water Act*, the U.S. Environmental Protection Agency (EPA) has the authority to set standards for contaminants in drinking water supplies. The Act is administered and enforced by the California Department of Health Service (DHS). The *National Primary Drinking Water Standards* establish maximum contaminant levels (MCLs) which set the maximum permissible levels of contaminants that are allowed in public water distribution systems. The *National Secondary Drinking Water Standards*, or secondary MCLs, apply at the point of delivery to the customer and generally involve protecting aesthetic aspects of drinking water such as taste, odor, and appearance. Additional water quality standards are included in the *Trihalomethane Regulations* and the *Lead and Copper Rule*.

The EPA has proposed a new drinking water requirement called the *Radon Rule*. This rule would require that radon levels in drinking water not exceed 300 picocuries, which is well below the existing radon levels in groundwater being pumped by municipal users such as the cities of Fresno and Clovis. Available mitigation includes installation of costly aerators at each well. The alternative is to close wells exceeding the radon MCL and convert to treated surface water supply, which would also be very expensive. The new MCL is expected to be promulgated in 2000, and the cities will have a three-year phase-in period for compliance. The City of Fresno is actively evaluating alternatives for bringing their system into compliance with the proposed MCL.

The federal *Surface Water Treatment Rule (STWR)* was promulgated by the EPA to protect against disease-causing organisms *Giardia lamblia*, *Legionella*, and viruses in surface drinking water sources and in groundwater sources influenced by surface water. The STWR requires all utilities with surface water supply, or groundwater supply influenced by surface water, to provide adequate disinfection and, under most conditions, filtration. The *Enhanced Surface Water Treatment Rule (ESTWR)* provides additional protection against organisms including *Cryptosporidium parvum*. Other amendments to the drinking water standards have included the *Disinfectants/Disinfection By-Products Rule* and the *Total Coliform Rule*.

State

Water Supply

The State Water Resources Control Board (SWRCB) has authority over all water rights in California under the common law public trust doctrine to protect public trust uses. The SWRCB is authorized under *Water Code* Section 1394 to include a reservation for jurisdiction in a water rights permit when issues related to the protection of vested rights and the public interest cannot be resolved when the application is approved.

The *California Water Code* Section 1735 provides authority for long-term water transfers, subject to the requirements of the Environmental Quality Act (CEQA). Under the terms of the Water Code, long-term transfers cannot injure vested water rights or cause any unreasonable impact to fish and wildlife.

Two California water use efficiency laws require local suppliers to plan for water conservation activities. The first is the *Urban Water Management Planning Act*, which requires every public or private water supplier who meets certain operational criteria to prepare, adopt, and submit to the state Department

of Water Resources (DWR) an urban water management plan, and to update the plan at least every five years. The second law is the *Agricultural Water Conservation and Management Act*, which provides that agricultural water suppliers may institute water conservation and management programs. DWR assists agricultural water suppliers in implementing efficient water management practices to improve agricultural water use efficiency.

Assembly Bill 225 and AB 3030 authorized local agencies which provide water service to adopt and implement groundwater management plans. Consequently, the County of Fresno and other local agencies have adopted groundwater management plans. AB 3030 provides local agencies with broad police powers to implement groundwater management programs including the enactment and enforcement of ordinances. (This is significant for agencies that do not otherwise have police powers, such as FID.) The use of groundwater management authority under AB 3030 is precluded in basins whose wells produce an average yield of 100 gallons per minute, which would apply to the foothill and mountain areas of the County. The Fresno County Groundwater Management Plan is described below under 'Local.'

Water Quality

The State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) are responsible for ensuring implementation and compliance with the provisions of the federal Clean Water Act (CWA) and California's Porter-Cologne Water Quality Control Act. Fresno County is situated within the jurisdiction of the Central Valley Region of the RWQCB (Region 5). The Central Valley RWQCB (CVRWQCB) has the authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction.

Water quality objectives for the San Joaquin River and its tributaries are specified in the Water Quality Control Plan for the Sacramento River Basin and San Joaquin River Basin (Basin Plan) prepared by the CVRWQCB in compliance with the federal CWA and the State Porter-Cologne Water Quality Control Act. The Kings River lies within a different basin (Tulare Hydrologic Basin) and is subject to Basin Plan requirements adopted for that area. Each Basin Plan establishes water quality objectives, and implementation programs to meet stated objectives and to protect the beneficial uses of water in the Sacramento-San Joaquin River Basin and Tulare Basin. All discharges to surface water or groundwater within Fresno County are subject to the Basin Plan requirements.

National Pollutant Discharge Elimination System (NPDES)

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the CWA to regulate municipal and industrial discharges to surface waters of the U.S. Each NPDES permit contains limits on allowable concentrations and mass emissions of pollutants contained in the discharge. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that EPA must consider in setting effluent limits for priority pollutants.

Nonpoint sources are diffuse and originate over a wide area rather than from a definable point. Nonpoint pollution often enters receiving water in the form of surface runoff but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such nonpoint sources are generally exempt from federal NPDES permit program requirements. However, two types of nonpoint source discharges are controlled by the NPDES program - nonpoint source discharges caused by general construction activities and the general quality of stormwater in municipal stormwater systems (either as part of a combined system or as a separate system in which runoff is carried through a developed conveyance system to specific discharge locations).

Construction Site Runoff Management

In accordance with NPDES regulations, to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting five acres or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a Stormwater Pollution Prevention Plan (SWPPP) and implement Best Management Practices (BMPs) to reduce construction effects on receiving water quality by implementing erosion control measures.

In 1997, EPA proposed revisions to the 1992 general permit to clarify that all construction activity, including small construction sites that are part of a larger common plan (e.g., sites under five acres), would be eligible for coverage under the revised permit. The State Water Resources Control Board (SWRCB) adopted a revised and updated general permit in August 1999. Because construction of the Proposed Project through buildout would collectively disturb more than five acres, the project would be subject to permit requirements both now and if the revised permit is adopted. Implementation of such measures would be included in contract specifications. As noted above, Phase 2 regulations cover construction sites ranging in size from one to five acres.

Examples of typical construction BMPs include: using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering stormdrains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

Construction Dewatering

Clean or relatively pollutant-free wastewater that poses little or no threat to water quality may be discharged directly to surface water under certain conditions. In addition to the State General Construction Activity Permit, the CVRWQCB has also adopted a general NPDES permit for short-term discharges of small volumes of wastewater from certain construction-related activities. Permit conditions for the discharge of these types of wastewaters to surface water are specified in Waste Discharge Requirements (WDR) "General Order for Dewatering and Other Low-Threat Discharges to Surface Waters." Discharges may be covered by the permit provided they are (1) either four months

or less in duration, or (2) the average dry weather discharge does not exceed 0.25 million gallons per day. Construction dewatering, well development water, pump/well testing, and miscellaneous dewatering/low-threat discharges are among the types of discharges that may be covered by the permit.

The general permit also specifies standards for testing, monitoring, and reporting, receiving water limitations, and discharge prohibitions.

Urban Runoff Management

The 1987 amendments to the CWA directed the federal EPA to implement an urban runoff stormwater management program in two phases. Phase 1 addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase 2 addresses all other discharges defined by EPA that are not included in Phase 1, including small municipalities and construction site runoff for projects ranging from one to five acres in size.

The goal of urban runoff management regulations is to improve the quality of stormwater discharged to receiving waters to the "maximum extent practicable" through the use of BMPs. Post-construction BMPs would require projects to implement structural and non-structural BMPs that would mimic pre-development quantity and quality runoff conditions from new development and redevelopment areas. Structural BMPs include engineered features that provide some treatment, such as vegetative drainage ways, detention infiltration ponds, constructed wetlands, or filtration basins and sand filters. A BMP may be drainage area-wide or site-specific. Non-structural BMPs are typically non-engineered management measures such as administrative and education programs focused on pollution prevention and source control. Development projects would be required to incorporate structural BMPs appropriate to the type of development and land uses in the project site, taking into account local and regional drainage and water quality considerations.

Urban runoff within the Fresno-Clovis metropolitan area is managed according to an NPDES Municipal Stormwater Permit issued under the federal Phase 1 program. However, other cities and communities in unincorporated areas do not currently operate under a NPDES Municipal Stormwater Permit because the jurisdictions do not meet the federal EPA criteria for Phase 1 compliance. Discharges from municipal separate storm sewer systems ("MS4s") in smaller urbanized areas are also a concern because of the high concentration of pollutants found in those discharges. Additional federal legislation, referred to as the Storm Water Phase 2 program, has been promulgated under the NPDES program to include small municipalities with populations of 1,000 to 100,000. Although similar regulations at the State level have not been prepared to implement the federal standards, discharges of urban runoff from some smaller municipalities in Fresno County are now regulated under the federal Phase 2 program.

The federal regulations implementing the Phase II program were published in the *Federal Register* on December 8, 1999. The regulations become effective February 7, 2000. The NPDES permitting authority (in this case, the State Water Resources Control Board) would issue general permits for Phase 2-designated small MS4s and construction activity within 3 years from the date of publication of the final regulations. Owners and operators of Phase 2-designated small MS4s and construction activity would obtain general permit coverage within 3 years and 90 days of publication of the final federal rule.

(early 2003). The regulated small MS4s would be required to fully implement their stormwater management programs by the end of the first permit term, typically a 5-year period. Assuming this schedule, jurisdictions subject to Phase 2 requirements would need to have a fully implemented program in place by the end of 2008. The Phase 2 regulations require that MS4s develop, implement, and enforce a stormwater management program that would, at a minimum, implement the following six management measures:

- Public Education and Outreach Management
- Public Involvement/Participation Management
- Illicit Discharge Detection and Elimination Management
- Construction Site Storm Water Runoff Management
- Post-Construction Storm Water Management in New Development and Redevelopment Management
- Pollution Prevention/Good Housekeeping for Municipal Operations Management

The post-construction management measure requires structural and/or non-structural BMPs that would mimic pre-development quantity and quality runoff conditions from new development and redevelopment areas. There is no regulatory requirement for either site-specific or city/drainage-wide BMPs. The Phase 2 program also requires that a plan is developed to ensure adequate long-term operation and maintenance of the BMPs, that controls are in place that would prevent or minimize water quality impacts, and to determine the appropriate BMPs and measurable goals for minimum control measures.

Municipal Supply Water Quality

The *California Surface Water Treatment Regulations* were derived from amendments to the federal SWTR and require multi-barrier treatment for microbiological contaminants. Unlike the federal requirements, the regulations require all public water systems in California to filter their surface water and groundwater influenced by surface water. Due to high start-up costs, this aspect of the regulations was amended to allow qualifying systems to avoid filtration, similar to the federal requirements. California has also adopted total coliform regulations, analogous to the federal regulations.

Assembly Bill 21 was adopted to reduce MCLs for various groundwater contaminants to the point where there are no known adverse health effects. Of greatest local concern is the proposed MCL for dibromochloropropane (DBCP), a pesticide that was used extensively in the eastern area of the County until 1977, when it was banned. DBCP exceeded the previous MCL of 0.2 parts per billion (ppb) of groundwater in many locations. This has resulted in the closure and subsequent installation of wellhead treatment facilities at some municipal wells in Fresno and Clovis that are down-gradient from the contamination. Mitigation would consist of adding granulated-active charcoal (GAC) filters to affected wells to provide treatment. Although not enforceable, the adopted maximum contaminant goal for DBCP is 0.02 ppb, which is one order of magnitude lower than the old MCL. DHS is currently proposing to lower the MCL to 0.1 ppb. Although the newer, lower MCL has not yet been implemented by DHS, once implemented it will likely affect many of Fresno's and Clovis' production wells by virtually doubling the amount of GAC required for treatment.

Local

The *San Joaquin River Management Plan (SJTMP)* was mandated by Assembly Bill 3603 to address the needs of the San Joaquin River system. The provisions of the plan include: the creation of a forum where information can be developed and exchanged to provide for the orderly development and management of the resources of the San Joaquin River system; identification of actions which can be taken to benefit legitimate uses of the San Joaquin River system; and the development of solutions compatible with water supply, water quality, flood protection, fisheries, wildlife habitat, and recreational needs.

The *Fresno/Clovis Metropolitan Area Water Resources Management Plan* is a joint document adopted by the cities of Fresno and Clovis in 1993. The primary goal of the plan is to provide a safe, dependable, reliable and economical water supply that will accommodate existing and future development in the two cities until the year 2050. To achieve this goal, the plan includes policies encouraging using groundwater as the primary water source, providing wellhead treatment to ensure that domestic supply meets safe drinking water standards, supplementing the groundwater supply with surface water, constructing plants to treat surface water and large-diameter transmission water mains, continuing with an active recharge program, and continuing with appropriate water conservation measures.

The *Fresno County Groundwater Management Plan* was adopted in 1997 and presents a comprehensive strategy to enhance and maintain the quantity and quality of local groundwater resources. The plan document states that the County's groundwater-related issues can be addressed through currently available means without intrusive regulation and/or restrictions on groundwater pumping. If implemented, efforts related to conservation, water recycling, groundwater banking, management of groundwater contamination, and development of additional surface water storage can provide means to meet future increases in demand while reducing or eliminating overdraft within the County. These and other initiatives contained in the County's Groundwater Management Plan are summarized below.

- Groundwater banking would involve the use of unused storage capacity in local aquifers, which could be used for the intentional recharge of excess flood flows which are currently released and leave the County. The County currently manages one banking program in County Service Area Number 34 and will seek to implement one or more additional groundwater banking programs.
- As a CVP contractor, the County intends to explore the feasibility of developing a program to exercise its right of first refusal for purchase of CVP water proposed for transfer. The County will also seek to acquire other water should additional supplies become available.
- An increase in overall reservoir storage capacity would allow greater capture of spring flood flows for increased water supply. Limited storage also reduces the amount of surface water imported under USBR contracts, and limits the ability to provide carryover storage for use in drought years. The County intends to participate, whenever feasible and possible, in the development of new water storage projects.

- The County may implement an ordinance prohibiting groundwater for export outside the County, and prohibiting uncontrolled groundwater pumping to replace surface water leaving the County as a result of a transfer. However, such an ordinance would not interfere with existing water rights.
- The County intends to develop a program to monitor groundwater quantity and quality to provide an early warning of potential future groundwater-related problems. The County intends to implement programs and policies directed toward the maintenance and enhancement of water quality, preventing groundwater contamination, and preventing the spread of groundwater contamination.
- The County intends to implement a groundwater recharge ordinance to acquire unused surface waters formerly used on converted agricultural lands and use those waters for recharge. The County intends to construct its own recharge facilities to implement this provision. The County also intends to explore the feasibility of acquiring surface water entitlements to urbanized lands.
- The County may explore the feasibility of establishing groundwater protection areas, whereby areas of good recharge capability, shallow groundwater, or existing groundwater contamination would be designated for protection. The County also intends to explore the feasibility of implementing an ordinance to require all new wastewater treatment plants to provide advanced treatment so that the treated effluent can be used for irrigation, recharge, and non-potable domestic uses.

PLAN ELEMENTS

Development under the Draft General Plan would result in additional development in the urban and rural areas of the County. It is estimated that a total of approximately 24,100 acres of additional residential development and 13,700 acres of additional non-residential development would be accommodated under the Draft General Plan. Of these totals, approximately 1,500 acres of residential and 540 acres of non-residential development would occur in the unincorporated areas of the County. Some proportion of this new development will consist of rural residential development and agricultural industries served by private wells. The remainder of this new development will increase demands on centralized water supply and distribution facilities in the urbanized areas of the County, and would result in the need for localized installation of additional facilities such as municipal wells, treatment facilities, pump stations, storage facilities, and water mains.

The Draft General Plan contains the following policies from the Public Facilities and Services Element that are applicable to water resources:

General Public Facilities and Services

- Policy PF-A.2 The County shall require new industrial development to be served by community sewer, stormwater, and water systems where such systems are available or can feasibly be provided.
- Policy PF-A.3 The County shall require new urban commercial and urban-density residential development to be served by community sewer, stormwater, and water systems.

Water Supply and Distribution - General

- Policy PF-C.1 The County shall actively engage in efforts and support the efforts of others to retain existing water supplies within Fresno County.
- Policy PF-C.2 The County shall actively engage in efforts and support the efforts of others to import flood, surplus, and other available waters for use in Fresno County.
- Policy PF-C.3 To reduce demand on the County's groundwater resources, the County shall encourage the use of surface water to the maximum extent feasible.
- Policy PF-C.4 The County shall support efforts to expand groundwater and/or surface water storage that benefits Fresno County.
- Policy PF-C.5 The County shall develop a County water budget to determine long-term needs and to determine whether existing and planned water resource enhancements will meet the County's needs over the twenty (20) year General Plan horizon.
- Policy PF-C.6 The County shall support water banking when the program has local sponsorship and involvement and provides new benefits to the County.
- Policy PF-C.7 The County shall recommend to all cities and urban areas within the County that they adopt the most cost-effective urban best management practices (BIPs) [sic] published and updated by the California Urban Water Agencies, California Department of Water Resources, or other appropriate agencies as a means of meeting some of the future water supply needs.
- Policy PF-C.8 The County shall require preparation of water master plans for areas undergoing urban growth.
- Policy PF-C.9 The County shall work with local irrigation districts to preserve local water rights and supply.
- Policy PF-C.10 The County shall require any community water system in new residential subdivisions to be owned and operated by a public entity.
- Policy PF-C.11 The County shall assure an on-going water supply to help sustain agriculture and accommodate future growth by allocation of resources necessary to carry out the water resource management programs.

Domestic Water Supply

- Policy PF-C.12 The County shall approve new development only if an adequate sustainable water supply to serve such development is demonstrated.

- Policy PF-C.13 The County shall limit development in areas identified as having severe groundwater level declines or limited groundwater availability to uses that do not have high water usage or can be served by a surface water supply.
- Policy PF-C.14 The County shall require that water supplies serving new development meet US Environmental Protection Agency and California Department of Health Services and other water quality and quantity standards.
- Policy PF-C.15 The County shall require that surface water used to serve new development be treated in accordance with the requirements of the California Surface Water Treatment Rule.
- Policy PF-C.16 If the cumulative effects of more intensive land use proposals are detrimental to the water supplies of surrounding areas, the County shall require approval of the project to be dependent upon adequate mitigation. The County shall require that costs of mitigating such adverse impacts to water supplies be borne proportionately by all parties to the proposal.
- Policy PF-C.17 The County shall, prior to consideration of any discretionary project related to land use, undertake a water supply evaluation. The evaluation shall include the following:
- a. A determination that the water supply is adequate to meet the highest demand that could be permitted on the lands in question. If surface water is proposed, it must come from a reliable source and the supply must be made “firm” by water banking or other suitable arrangement. If groundwater is proposed, a hydrogeologic investigation may be required to confirm the availability of water in amounts necessary to meet project demand. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required.
 - b. A determination of the impact that use of the proposed water supply will have on other water users in Fresno County. If use of surface water is proposed, its use must not have a significant negative impact on agriculture or other water users within Fresno County. If use of groundwater is proposed, a hydrogeologic investigation may be required. If the lands in question lie in an area of limited groundwater, a hydrogeologic investigation shall be required. Should the investigation determine that significant pumping-related physical impacts will extend beyond the boundary of the property in question, those impacts shall be mitigated.
 - c. A determination that the proposed water supply is sustainable or that there is an acceptable plan to achieve sustainability. The plan must be structured such that it is economically, environmentally, and technically feasible. In addition, its implementation must occur prior to long-term and/or irreversible physical impacts, or significant economic hardship, to surrounding water users.
- Policy PF-C.18 In the case of lands entitled to surface water, the County shall only approve land use-related projects that provide for or participate in effective utilization of the surface water entitlement such as:
- a. Constructing facilities for the treatment and delivery of surface water to lands in question;
 - b. Developing facilities for groundwater recharge of the surface water entitlement;
 - c. Participating in the activities of a public agency charged with the responsibility for recharge of available water supplies for the beneficial use of the subject lands.
- Policy PF-C.19 The County shall discourage the proliferation of small community water systems.
- Policy PF-C.20 The County shall not permit new private water wells within areas served by a public water system.

Agricultural Water Supply

Policy PF-C.21 The County shall promote the use of surface water for agricultural use to reduce groundwater table reductions.

Water Transfer Policies

Policy PF-C.22 The County supports short-term water transfers as a means for local water agencies to maintain flexibility in meeting water supply requirements. The County shall support long-term transfer, assignment, or sale of water and/or water entitlements to users outside of the County only under the following circumstances:

- a. The impacts of the transfer on Fresno County are mitigated;
- b. The transfer is part of a long-term solution to the region's water supply shortfall; and
- c. The transfer will not result in a net decrease in the availability of surface and/or groundwater to water users within Fresno County.

Policy PF-C.23 The County shall regulate the transfer of groundwater for use outside of Fresno County. The regulation shall extend to the substitution of groundwater for transferred surface water.

Policy PF-C.24 The County shall encourage the transfer of unused or surplus agricultural water to urban uses within Fresno County.

Water Conservation

Policy PF-C.25 The County shall require that all new development within the County use water conservation technologies, methods, and practices as established by the County.

Policy PF-C.26 The County shall encourage the use of reclaimed water where economically, environmentally, and technically feasible.

Policy PF-C.27 The County shall adopt, and recommend to all cities that they also adopt, the most cost-effective urban best water conservation management practices circulated and updated by the California Urban Water Agencies, California Department of Water Resources, or other appropriate agencies.

Policy PF-C.28 The County shall encourage agricultural water conservation where economically, environmentally, and technically feasible.

Policy PF-C.29 The County shall, in order to reduce excessive water usage, require tiered water pricing within County Service Areas and County Waterworks Districts.

Policy PF-C.30 The County shall generally not approve land use-related projects that incorporate a man-made lake or pond that will be sustained by the use of groundwater.

Wastewater Collection, Treatment, and Disposal

Policy PF-D.1 The County shall encourage the installation of public wastewater treatment facilities in existing communities that are experiencing repeated septic system failures and lack sufficient area for septic system repair or replacement and/or are posing a potential threat to groundwater.

- Policy PF-D.2 The County shall require that any new community sewer and wastewater treatment facilities serving residential subdivisions be owned and maintained by a County Service Area or other public entity approved by the County.
- Policy PF-D.3 The County shall require that any new community wastewater treatment facility meet the policy standard of Policy OS-A.26.
- Policy PF-D.4 The County shall limit the expansion of unincorporated, urban density communities to areas where community wastewater treatment facilities cannot [sic] be provided.
- Policy PF-D.5 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.
- Policy PF-D.6 The County shall permit individual on-site sewage disposal systems on parcels that have the area, soils, and other characteristics that permit installation of such disposal facilities without threatening surface or groundwater quality or posing any other health hazards and where community sewer service is not available and cannot be provided.
- Policy PF-D.7 The County shall require preparation of sewer master plans for wastewater treatment facilities for areas experiencing urban growth.

Storm Drainage and Flood Control

- Policy PF-E.11 The County shall encourage project designs that minimize drainage concentrations and maintain, to the extent feasible, natural site drainage patterns.
- Policy PF-E.12 The County shall coordinate with the local agencies responsible for flood control or storm drainage to ensure that future drainage system discharges comply with applicable State and Federal pollutant discharge requirements.
- Policy PF-E.13 The County shall encourage the use of natural storm water drainage systems to preserve and enhance natural drainage features.
- Policy PF-E.14 The County shall encourage the use of retention-recharge basins for the conservation of water and the recharging of the groundwater supply.
- Policy PF-E.16 The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season, unless adequately mitigated, to avoid sedimentation of creeks and damage to riparian habitat.
- Policy PF-E.17 The County shall encourage the local agencies responsible for flood control or storm drainage retention-recharge basins located in soil strata strongly conducive to groundwater recharge, where practical, be developed and operated in such a way as to facilitate year-round groundwater recharge.
- Policy PF-E.18 The County shall encourage the local agencies responsible for flood control or storm drainage to plan retention-recharge basins on the principle that the minimum number will be the most economical to acquire, develop, operate, and maintain.

- Policy PF-E.19 The County shall encourage the local agencies responsible for flood control or storm drainage discharge of runoff from local drainage areas directly into major canals and other natural water courses within the limits of the capacity of the channels to carry such runoff in cases where areas are so highly urbanized as to not permit the acquisition and use of retention-recharge basins or where drainage areas are otherwise not suited to the use of retention-recharge basins.
- Policy PF-E.20 The County shall require new development of facilities near rivers, creeks, reservoirs, or substantial aquifer recharge areas to mitigate any potential impacts of release of pollutants in flood waters, flowing rivers, streams, creeks, or reservoir waters.
- Policy PF-E.21 The County shall require the use of feasible and practical best management practices (BMPs) to protect streams from the adverse effects of construction activities, and shall encourage the urban storm drainage systems and agricultural activities to use BMPs.

In addition to policies included in the Public Facilities and Services Element, the Open Space and Conservation Element of the Draft General Plan contains the following water supply and water quality policies:

Water Resources

- Policy OS-A.1 The County shall develop, implement, and maintain a plan for achieving water resource sustainability, including a strategy to address overdraft and the needs of anticipated growth.
- Policy OS-A.2 The County shall provide active leadership in the regional coordination of water resource management efforts affecting Fresno County and shall continue to monitor and participate in, as appropriate, regional activities affecting water resources, groundwater, and water quality.
- Policy OS-A.3 The County shall provide active leadership in efforts to protect, enhance, monitor, and manage groundwater resources within its boundaries.
- Policy OS-A.4 The County shall update, implement, and maintain its Groundwater Management Plan.
- Policy OS-A.5 The County shall support efforts to create additional water storage that benefits Fresno County, and is economically, environmentally, and technically feasible.
- Policy OS-A.6 The County shall develop a repository for the collection of County water resource information and shall establish and maintain a centralized water resource database. The database shall incorporate surface and groundwater data and provide for the public dissemination of water resource information.
- Policy OS-A.7 The County shall develop and maintain a water budget (i.e., an accounting of all inflows and outflows of water into a specified area) for the County to aid in the determination of existing and future water resource needs. The water budget shall be incorporated into the County Geographic Information System (GIS) and included in the water resource database.
- Policy OS-A.8 The County shall develop, implement, and maintain a program for monitoring groundwater quantity and quality within its boundaries. The results of the program shall be reported annually and shall be included in the water resource database.

- Policy OS-A.9 The County shall develop and maintain an inventory of sites within the County that are suitable for groundwater recharge. The sites shall be incorporated into the County GIS and included in the water resource database.
- Policy OS-A.10 The County shall develop and implement public education programs designed to increase public participation in water conservation and water quality awareness.

Groundwater Recharge

- Policy OS-A.11 The County shall encourage, where economically, environmentally, and technically feasible, efforts aimed at directly or indirectly recharging the County's groundwater.
- Policy OS-A.12 The County shall support and/or engage in water banking (i.e., recharge and subsequent extraction for direct and/or indirect use on lands away from the recharge area) based on the following criteria:
- a. The amount of extracted water will never exceed the amount recharged;
 - b. The water banking program will result in no net loss of water resources within Fresno County;
 - c. The water banking program will not have a negative impact on other water users within Fresno County;
 - d. The water banking program will not create, increase, or spread groundwater contamination; and
 - e. The water banking program includes sponsorship, monitoring, and reporting by a local public agency;
 - f. The groundwater banking program will not cause or increase land subsidence;
 - g. The water banking program will not have a negative impact on agriculture within Fresno County; and
 - h. The water banking program will provide a net benefit to Fresno County.
- Policy OS-A.13 The County shall, to the maximum extent possible, maintain local groundwater management authority and pursue the elimination of unwarranted institutional, regulatory, permitting, and policy barriers to groundwater recharge within Fresno County.
- Policy OS-A.14 The County shall permit and encourage, where economically, environmentally, and technically feasible, over-irrigation of surface water as a means to maximize groundwater recharge.
- Policy OS-A.15 The County shall directly and/or indirectly participate in the development, implementation, and maintenance of a program to recharge the aquifers underlying the County. The program shall make use of flood and other waters to offset existing and future groundwater pumping.

Land Use

- Policy OS-A.16 The County shall require that natural watercourses are integrated into new development in such a way that they are accessible to the public and provide a positive visual element and a buffer area between waterways and urban development in an effort to protect water quality and riparian areas.
- Policy OS-A.17 The County shall require the protection of floodplain lands and, where appropriate, acquire public easements for purposes of flood protection, public safety, wildlife preservation, groundwater recharge, access, and recreation.
- Policy OS-A.18 The County shall support the policies of the San Joaquin River Parkway Plan to protect the San Joaquin River as an aquatic habitat, recreational amenity, aesthetic resource, and water source. (See Policy OS-H.12)

- Policy OS-A.19 The County shall, where economically, environmentally, and technically feasible, encourage the multiple use of public lands, including County lands, to include groundwater recharge.
- Policy OS-A.20 The County shall not approve the creation of new parcels that rely on the use of septic systems of a design not found in the California Plumbing Code.

Water Quality

- Policy OS-A.21 The County shall protect groundwater resources from contamination and overdraft by pursuing the following efforts:
- a. Identifying and controlling sources of potential contamination;
 - b. Protecting important groundwater recharge areas;
 - c. Encouraging water conservation efforts and supporting the use of surface water for urban and agricultural uses wherever feasible;
 - d. Encouraging the use of treated wastewater for groundwater recharge and other purposes (e.g., irrigation, landscaping, commercial, and non-domestic uses);
 - e. Supporting consumptive use 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;
 - f. Considering areas where recharge potential is determined to be high for designation as open space; and
 - g. Developing conjunctive use of surface and groundwater.
- Policy OS-A.22 The County shall require new development near rivers, creeks, reservoirs, or substantial aquifer recharge areas to mitigate any potential impacts of release of pollutants in storm waters, flowing river, stream, creek, or reservoir waters.
- Policy OS-A.23 The County shall minimize sedimentation and erosion through control of grading, cutting of trees, removal of vegetation, placement of roads and bridges, and use of off-road vehicles. The County shall discourage grading activities during the rainy season unless adequately mitigated to avoid sedimentation of creeks and damage to riparian habitat.
- Policy OS-A.24 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.
- Policy OS-A.25 The County shall monitor water quality regularly and take necessary measures to prevent contamination, including the prevention of hazardous materials from entering the wastewater system.
- Policy OS-A.26 The County shall only approve new wastewater treatment facilities that will not result in degradation of surface water or groundwater. The County shall generally require treatment to tertiary or higher levels.
- Policy OS-A.27 In areas with increased potential for groundwater degradation (e.g., areas with prime percolation capabilities, coarse soils, and/or shallow groundwater), the County shall only approve land uses with low risk of degrading groundwater.
- Policy OS-A.28 The County shall support efforts to require the U.S. Bureau of Reclamation to provide San Joaquin Valley agricultural drainage facilities as intended in the authorization of the Central Valley Project.

Water quality protections is also addressed in the following Health and Safety Element policies in the Draft General Plan:

- Policy HS-F.4 For redevelopment or infill projects or where past site uses suggest environmental impairment, the County shall require that an investigation be performed to identify the potential for soil or groundwater contamination. In the event soil or groundwater contamination is identified or could be encountered during site development, the County shall require a plan that identifies potential risks and actions to mitigate those risks prior to, during, and after construction.
- Policy HS-F.6 The County shall work cooperatively with the State Department of Toxic Substances Control and Regional Water Quality Control Board to promote the timely and efficient cleanup of contaminated sites under the regulatory oversight of these agencies.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The issue of water resources is regional in nature, and depends on many interconnected variables that largely operate irrespective of jurisdictional boundaries. Therefore, this analysis is mainly County-wide in scope, with a view that regional water supply constraints and programs will affect the water resources available to serve growth in both the unincorporated and incorporated areas of the County. However, the potential effects of planned growth in the unincorporated areas upon water resources is also addressed.

This analysis is programmatic and largely qualitative in nature, although the numeric increments of growth planned under the Proposed Project are the primary basis for the impact analysis. Additionally, the comparison of potential Draft General Plan impacts with development impacts through the year 2020 without the Draft General Plan is based on the overall quantitative allocation of land use development between urban and rural areas under each respective scenario.

The effects of Draft General Plan development are evaluated in the context of existing programs and regulations that address protection and enhancement of water supply resources. An important consideration is the potential effectiveness of Draft General Plan policies in supporting and enhancing such programs and regulations through its land use directives and policies.

The water demand estimates were obtained from the infrastructure cost estimates prepared as part of the Draft General Plan program. These estimates were based on the following sources: the 1995 water use figures (surface and groundwater) for the incorporated areas were taken from Table 5-7 in the *Background Report* (the original source is State Department of Health Services, *Annual Reports to the Drinking Water Program*). The 1995 groundwater figures for the unincorporated areas were calculated by multiplying the population by a per capita consumption figure of 0.23 acre-feet per year for all unincorporated areas. This per capita consumption figure was derived from the average per capita groundwater usage in the incorporated areas. The 2020 water use estimates were derived from existing

(1995) use rates for each area or city (i.e., the 1995 per capita use rates were used as a multiplier that was applied to 2020 population estimates for each area or city to calculate 2020 water use rates). It was assumed that 1995 per capita consumption rates would also apply in 2020.

Standards of Significance

For purposes of this EIR, an impact is considered significant if development under the Draft General Plan would:

- exceed available water supplies from existing entitlements and resources;
- result in potential worsening of groundwater overdraft conditions, subsidence, or otherwise adversely affect the availability of water supplies;
- require or result in the construction of new water supply, treatment, storage, conveyance, or distribution facilities, the construction of which would cause significant environmental effects; or
- substantially degrade surface water or groundwater quality.

Water Supply Impacts and Mitigation Measures

4.8-1 Development under the Draft General Plan could result in the demand for water exceeding available supply, resulting in overdraft conditions and potential adverse effects on groundwater recharge potential.

Overview of Potential Effects

By 2020, the overall annual demand for domestic water supply in Fresno County will increase from 205,614 acre-feet in 1995, to 285,887 acre-feet in 2020, an increase of about 39 percent (see Table 4.8-1). Approximately 7.5 percent of this increase will be attributable to growth in the unincorporated areas of the County. Agricultural demand for water is also expected to increase due to shifts in cropping to more water-intensive crops such as fruits, tree nuts and vegetables. There would also be significant increases in water demands from agricultural industries such as food processing, partially resulting from the County's encouragement of such industries for economic development. As discussed under "Environmental Setting," above, groundwater resources are in an overall state of overdraft in the County, and surface water supplies have been fully allocated. Unless water supply sources are managed to meet overall growth demand, the increased groundwater pumping and installation of new wells would exacerbate current overdraft conditions. Long-term groundwater pumping would be unsustainable and would ultimately result in an inability to meet water demands. Water supply and demand effects for specific areas and uses are presented in more detail below.

Unincorporated Areas

In the unincorporated areas of the valley floor, the overall annual water demand by unincorporated urban centers and rural development was 23,085 acre-feet in 1995, representing 13.3 percent of the County-wide total. By 2020, this demand is projected to increase to 28,386 acre-feet per year, an increase of 23 percent. This will represent only 6.6 percent of the overall increase in County-wide demand through 2020. This growth in demand will partially occur in unincorporated urban centers with centralized services, partially on individual lots in the rural areas, and partially as a result of new agricultural industries. This will result in the drilling of new municipal wells, as well as new wells for high volume agricultural users, in addition to possibly thousands of new individual wells. Most of this development will occur on the valley floor where overdraft conditions prevail. While some recharge would occur from flood control and effluent basins in the unincorporated urban centers, and from industrial and agricultural effluent ponds, there would likely be a net withdrawal of groundwater in these areas. In the rural areas, development on individual lots would withdraw groundwater without replenishing it. In many instances, development in the unincorporated area would remove an area currently being recharged through agricultural irrigation. Given that the groundwater basin in a large part of the County is designated as “critically overdrafted,” the increased overdraft resulting from incremental development in the unincorporated areas under the Draft General Plan would have an adverse effect on groundwater supplies.

The unincorporated area located northeast of Fresno and Clovis merits specific discussion since it is the subject of intense development pressure with limited groundwater or surface water supply. In the absence of effective groundwater management or a secure source of surface supply (which must be treated), such growth is unsustainable and would result in significant impacts to groundwater resources.

However, the effective implementation of the Draft General Plan policies requiring avoidance of impacts to water supplies in adjacent areas and the demonstration of sustainable water supply prior to approval of increased development intensity could avoid this impact.

In the unincorporated foothill and mountain areas of the County, the overall annual water demand by unincorporated urban centers and rural development was 4,238 acre-feet in 1995, representing about 2.1 percent of the County-wide total. By 2020, this demand is projected to increase to 4,892 acre-feet per year under the Proposed Project, an increase of 15.4 percent. This would represent 0.8 percent of the overall increase in County-wide demand under the Draft General Plan through 2020. In the foothill and mountain areas, most domestic demands are currently met by groundwater. The effects of existing groundwater pumping is not currently being monitored and is, therefore, unknown. In these areas, it may be necessary to drill to significant depths to obtain a well yield that is adequate for domestic purposes. The higher costs involved may pose a significant burden on area landowners.

Incorporated Areas

In the Fresno-Clovis metropolitan area, annual demand for domestic water in 1995 was 146,542 acre-feet, representing 71 percent of the County-wide total for M&I uses. By 2020, this demand is projected to increase to 210,300 acre-feet per year under the Draft General Plan, an increase of 43.5 percent. In the Fresno-Clovis area, the use of former agricultural water to serve lands converted to urban uses, combined with the joint efforts of local agencies to maintain groundwater levels through continuing development of recharge facilities to meet the demands of urban growth, has resulted in the maintenance of an approximate balance of groundwater conditions. The cities of Fresno and Clovis both acquire rights to FID water as former agricultural lands are converted to urban uses, and Fresno has surplus Kings River water allocation which it currently does not fully utilize. With continuing acquisition of surface water allocation, combined with continuing efforts to expand their recharge and/or surface water treatment capabilities to meet the needs of urban growth, it is anticipated that adequate water supply will be available in the Fresno-Clovis urban area to accommodate growth through 2020 anticipated under the Draft General Plan. However, there is a possibility that the City of Fresno could lose its CVP surface water entitlement due the potential inability to meet CVPIA water conservation requirements. This presents an element of uncertainty to the future ability of the City of Fresno to meet rising demands for water over the next 20 years.

Exclusive of Fresno and Clovis, the other 13 incorporated cities in Fresno County had a combined annual water demand of 30,868 acre-feet in 1995, representing 15 percent of the County-wide total for M&I use. By 2020, this demand is projected to increase to 42,308 acre-feet per year, an increase of 37.1 percent. Growth in the smaller urban centers will be subject to varying water supply conditions depending on location and source of supply. The cities of Coalinga, Orange Cove, and Huron rely exclusively on CVP contract water for M&I needs, and their contract allocations will be more than sufficient to meet growth demands under the Draft General Plan through 2020. The remaining 10 cities do not have surface water allocations and will have to rely on increased groundwater pumping to support future growth. Considering that most of these cities have no intentional recharge programs beyond percolation of stormwater and treated wastewater, the net effect would be increased overdraft. When combined with the increased pumping in the adjacent agricultural areas, discussed below, these increased overdraft conditions would further exacerbate groundwater supply problems. To the extent that this growth is accelerated by Draft General Plan policies encouraging growth in the urban centers, this impact could be attributed to development under the Draft General Plan.

Agricultural Uses

Agricultural water use comprises over 80 percent of overall water use in the County, and agricultural consumption is subject to limited institutional control and regulation. Under current conditions, groundwater supplies are being further depleted by increased agricultural extraction to support conversion to high-value water-intensive crops, a trend which is expected to continue. Agricultural pumping could be further exacerbated by curtailed surface water deliveries due to institutional factors,

as well as water transfers out of the County by individual farmers. Significant further improvements in efficiency of agricultural water use are not expected. While some growers will likely respond to these exigencies by land retirement, seasonal fallowing, or conversion to less water-intensive crops, the net effect is expected to be increased pumping and further overdraft along with the related physical impacts described above. Unless agricultural practices are modified in response to water supply limitations, the result could further deplete groundwater resources. However, this impact would largely occur independent of the Proposed Project because it is not growth related. The Draft General Plan policies aimed at the preservation of agricultural lands would help protect the recharge function provided by agricultural irrigation. However, taken as a whole, the Draft General Plan policies would not prevent increasing overdraft in the rural areas of the valley floor anticipated to occur through 2020.

Discussion

The impacts of growth upon water supply resources will vary depending on location. In the Fresno-Clovis metropolitan area, it appears that growth can be accommodated without significant impacts to groundwater resources. In the other urban centers and rural areas of the valley floor, it is likely that continued heavy reliance on groundwater for M&I and agricultural use, in the absence of effective measures to significantly replenish groundwater, would result in increased overdraft. In the foothill and mountain areas of the County, the effects of groundwater pumping have not been monitored and are largely unknown. Therefore, the groundwater impacts resulting from development under the Draft General Plan are difficult to evaluate. However, given that groundwater impacts have been reported in those areas in the past, it is reasonable to conclude that at least some localities would be subject to groundwater impacts due to additional pumping associated with growth under the Draft General Plan.

The provision of water supply outside the Fresno-Clovis area is highly decentralized and the adequacy of water supplies to accommodate growth will depend on localized conditions as well as many decisions by numerous agencies, entities and individuals. The County's Groundwater Management Plan includes a number of initiatives for increasing water supply while protecting groundwater resources. Although there has been a great deal of discussion and study of the problem, it appears that there are no clear alternatives being actively pursued to increase overall water supplies to meet Draft General Plan growth demands. As described in "Regulatory Setting," above, to date, no groundwater management programs have been implemented by the County, and no funding commitments have made for future program implementation. Additionally, there is significant institutional uncertainty surrounding water resources issues, particularly given the threats to existing water supplies from potential transfers out of the County, and potential curtailment of existing entitlements due to impending environmental water allocations.

The County of Fresno has limited authority to influence water supply. However, with the adoption of the Groundwater Management Policy, the County has initiated a serious effort to solve the problem, although implementation has not yet commenced and cannot be assumed. Draft General Plan Policies PF-C.1 through P-C.9, PF-C.11 through PF-C.13, PF-C.16 through PF-C.18, PF-C.21 through PF-C.24,

PF-C.30, PF-E.14, PF-E.17, OS-A.1 through OS-A.9, OS-A.11 through OS-A.15, OS-A.17 through OS-A.19, OS-A.21, and OS-A.28 provide a comprehensive approach to support, to protect, and to enhance overall water supplies through water conservation and efficient water use efforts, identification of recharge areas, review of proposed water transfers, support of water banking efforts, and the preparation of water master plans for areas undergoing rapid growth. Significant among these are Draft General Policies PF-C.12, PF-C.16, and PF-C.17, which require that sustainable water supply be demonstrated for any proposed change in the intensity of land use. Other policies require that the detrimental effects of any project upon the water supplies of surrounding areas be mitigated, which is particularly important for protecting groundwater resources in areas of the County experiencing development pressure, such as the northeast area of the County. In addition to these policies are several draft policies in the Land Use Element that would also protect water resources through effective land use planning. Focused urban growth is more likely to be subject to comprehensive groundwater management programs, particularly in the Fresno-Clovis area, and would be less likely to contribute to overdraft conditions. Various policies preclude the designation of new rural residential areas, which tend to be relatively heavy water users, and which remove agricultural irrigation/recharge from an area and increase groundwater pumping. Other policies encourage the redesignation of undeveloped rural residential areas to higher density residential or agricultural use.

Without the Proposed Project, development through 2020 would result in relatively less urban growth and commensurately more rural residential development. This would result in a somewhat less efficient land use pattern than would occur under the Draft General Plan, resulting in less protection of agricultural recharge areas and greater water consumption associated with high water using rural residential development. Less urban development would take place without the Draft General Plan, resulting in relatively fewer users that would be served by centralized water systems with effective groundwater management programs. This low increase in urban growth relative to the Draft General Plan would also result in the need for less water system infrastructure. Without the Draft General Plan, there would be fewer agricultural industries located in rural areas with their high water pumping rates and consequent impacts on groundwater levels. In this respect, the Proposed Project would result in relatively greater impacts than growth through 2020 without the Proposed Project. However, growth without the Draft General Plan would not be subject to the many policies aimed at protecting water resources and enhancing adequate water supply. Overall, development under the Draft General Plan would result in a lower level of impacts to water resources than would occur under growth without the Draft General Plan.

In view of current conditions, it does not appear that overall water supplies would be available to meet Draft General Plan growth demands through 2020, and that development of the Proposed Project would therefore have an overall significant impact on groundwater resources in the County. Draft General Plan policies cannot in and of themselves ensure the provision of adequate water supplies to support Draft General Plan growth in the incorporated or unincorporated areas of Fresno County, and

it cannot be demonstrated at this time that such efforts would reduce effects on water supplies to less-than-significant levels. This is considered a **significant impact** that would occur with or without the Proposed Project.

Mitigation Measures

4.8-1 *No mitigation is available beyond Draft General Plan Policies PF-C.1 through P-C.9, PF-C.11 through PF-C.13, PF-C.16 through PF-C.18, PF-C.21 through PF-C.24, PF-C.30, PF-E.14, PF-E.17, OS-A.1 through OS-A.9, OS-A.11 through OS-A.15, OS-A.17 through OS-A.19, OS-A.21, and OS-A.28 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of the policies cited above would reduce potential adverse water supply impacts for development that occurs within the County's jurisdiction, but not to a less-than-significant level. Similar measures are available to, and required by some of the cities in the County. However, the County cannot ensure similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable.

4.8-2 Development of future water supplies would require additional water treatment and delivery systems.

In general, urban development under the Draft General Plan would increase the number of wells needed because the converted agricultural lands cannot directly use surface water formerly used for irrigation due to lack of treatment facilities to meet drinking water standards. Therefore, surface water supplies from converted agricultural lands must be applied to groundwater recharge before being pumped for domestic and industrial uses. Increasing overall water supplies would require installation of water system improvements such as new wells, treatment facilities, pipelines, and recharge facilities. Although some surface water treatment facilities would be constructed within the General Plan horizon, water treated at these facilities would likely comprise a small proportion of overall domestic supply by 2020. The need for additional facilities to treat and deliver water to accommodate future growth would occur with or without the Proposed Project.

Draft General Plan Policies PF-A.2, PF-A.3, PF-C.10, PF-C.14, PF-C.15, PF-C.19, and PF-C.20 would provide a coordinated approach to deliver water that meets applicable standards in an efficient manner. However, the precise nature and location of water treatment and delivery system improvements has not been determined, so the impacts resulting from installation of such improvements cannot be identified at this time. Further, although similar measures are available to, and in many cases required by city governments (which also must comply with applicable standards to ensure a safe water supply), the County cannot ensure that such measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

- 4.8-2 *No mitigation is available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.10, PF-C.14, PF-C.15, PF-C.19, and PF-C.20 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of the policies cited above would reduce water treatment and delivery impacts for development that occurs within the County's jurisdiction, but not to a less-than-significant level. The impacts resulting from installation of treatment and delivery system improvements cannot be identified at this time, and the County cannot ensure similar measures would be implemented within the cities' jurisdictions. For these reasons, the impact would remain significant and unavoidable.

4.8-3 Development under the Draft General Plan could exacerbate groundwater overdraft conditions, resulting in secondary effects such as subsidence, lowering of water tables, or altering the rate or direction of contaminated groundwater.

As discussed in Impact 4.8-1, groundwater resources are in an overall state of overdraft in the County, and surface water supplies have been fully allocated. Unless water supply sources are managed to meet overall growth demand, the increased groundwater pumping and installation of new wells would exacerbate current overdraft conditions. Long-term projections indicate a continuing annual overdraft of the basin underlying most of Fresno County. In addition, increases in impervious surfaces as undeveloped lands are converted to urban uses would reduce the area available for recharge. These activities could result in changes in aquifer characteristics, as summarized below.

Subsidence has been found in areas where the groundwater basin has historically been subject to overdraft and long-term recharge is inadequate to maintain the water table elevation. Areas in Fresno County where subsidence has been a problem generally include the Westlands Water District and the Pleasant Valley Water District. Subsidence can impact conjunctive use programs by reducing storage capacity and changing transmissivity of the aquifer. In general, subsidence in Fresno County has stabilized, except during droughts. In the future subsidence will resume only if renewed pumping is sufficiently heavy to cause groundwater levels to drop below previous lows.¹ Other potential impacts to groundwater users include: the need to deepen existing wells or drill new wells; damage to existing pumps; the need for larger, more expensive pumps; increased costs due to increased energy demand from deeper pumping; the spreading of groundwater contamination associated with new or expanded cones of depression, and the resulting necessity to treat contaminated groundwater.

The comprehensive approach to managing water supplies that would occur with implementation of the Draft General Plan policies listed in Impact 4.8-1, above, with Draft General Plan Policies PF-C.18, PF-E.14, PF-E.17 through PF-E.20, OS-A.11 through OS-A.15, OS-A.17, OS-A.19, OS-A.21, and OS-

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Gilbert L. Bertoldi and others, "Ground Water in the Central Valley, California – A Summary Report," *U.S. Geological Survey Professional Paper 1401-A*, 1991, p. A34.

A.22 providing a mechanism to identify and control, where necessary, potential effects on aquifer characteristics by managing groundwater recharge. In particular, tasks included in Draft General Plan Policies OS-A.12 (groundwater banking program) direct that a water balance be maintained. Such policy-based efforts would help reduce the potential for land subsidence, inadvertent spread of contamination, and lowering of water tables within the unincorporated areas. As noted in Impact 4.8-1, in the Fresno-Clovis area (where most of the future growth with or without the Proposed Project would occur), the use of former agricultural water to serve lands converted to urban uses, combined with the joint efforts of local agencies to maintain groundwater levels through continuing development of recharge facilities to meet the demands of urban growth, has resulted in the maintenance of an approximate balance of groundwater conditions. However, there is a possibility that changes in future water supply sources could result in increased demand on groundwater resources, which could affect aquifer characteristics. Therefore, impacts would be significant for the County. Although similar measures are available to, and in many cases already implemented or planned by local jurisdictions, the County cannot ensure that such measures would be enforced for future development within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.8-3 *No mitigation is available beyond Draft General Plan Policies PF-C.18, PF-E.14, PF-E.17 through PF-E.20, OS-A.11 through OS-A.15, OS-A.17, OS-A.19, OS-A.21 and OS-A.22 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of the policies cited above would reduce secondary impacts related to groundwater withdrawal, but not to a less-than-significant level. In addition, the County cannot ensure similar measures would be implemented within the cities' jurisdictions. For these reasons, the impact would remain significant and unavoidable.

Water Quality Impacts and Mitigation Measures

4.8.4 Stormwater runoff from areas under construction could affect receiving water quality.

Development under the Draft General Plan would involve the construction of buildings and structures, roadways, parking lots, and infrastructure, which would require grading, excavation, and other construction-related activities that could cause soil erosion at an accelerated rate during storm events.

All of these activities have the potential to affect water quality if stormwater runoff from construction sites enters receiving water. Such effects would occur as part of development with or without the Proposed Project.

Construction activities such as grading, excavation, and trenching for site improvements would result in disturbance of soils at the project site or at offsite locations. Construction site runoff can contain soils and sediments from these activities. Dust from construction sites can also be transported to other nearby locations, where it can enter runoff or water bodies. Spills or leaks from heavy equipment and machinery, staging areas, or building sites can also enter runoff. Typical pollutants could include petroleum products and heavy metals from equipment and products such as paints, solvents, and

cleaning agents that could contain hazardous constituents. Sediment from erosion of graded or excavated surface materials, leaks or spills from equipment, or inadvertent releases of building products could result in water quality degradation if runoff containing the sediment entered receiving waters in sufficient quantities to exceed water quality objectives. Impacts would generally be short-term, limited to the duration of construction.

Future projects would also be required by State law to obtain and comply with the State General Construction Activity Stormwater Permit. If any elements of the projects are developed in increments of less than five acres, a permit would still be required, assuming the construction activity is part of the larger common plan of development (e.g., a specific plan). Compliance with the permit would involve filing a Notice of Intent (NOI) with the SWRCB and preparing a Storm Water Pollution Prevention Plan (SWPPP) prior to construction. These requirements apply equally to locations in the unincorporated and incorporated areas.

To ensure compliance with adopted regulations, construction Best Management Practices (BMPs) would be implemented. BMPs can include a variety of methods to eliminate or reduce non-storm water discharges to receiving waters, including: scheduling or limiting activities to certain times of year, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollution (i.e. straw bales, dikes, silt fences, sediment traps, mulching or vegetation maintenance, or equally effective methods).

Draft General Plan Policies PF-E.20, PF-E.21, and OS-A.22 through OS-A.24, which reinforce compliance with federal and State laws and regulations for water quality protection, direct that potential construction pollutant sources be controlled to minimize effects on receiving water. Compliance with the State General Construction Activity Permit, Draft General Plan policies, and County standards pertaining to grading and erosion control would ensure that future development within the unincorporated areas would not substantially degrade surface water quality as a result of construction by exceeding adopted RWQCB Basin Plan water quality objectives, applicable NPDES permit requirements, or local standards. This would reduce potential impacts to less-than-significant levels within unincorporated areas in the County. Within the incorporated Fresno-Clovis area, where most of the future growth, with or without the Proposed Project would occur, similar measures to ensure compliance with federal and State laws and regulations have been adopted and implemented. For other incorporated areas, construction projects greater than five acres are required to comply with the State General Permit. With the publication of the federal Phase 2 regulations for small municipalities, smaller incorporated and unincorporated communities must also develop and implement programs that address how construction site runoff for projects less than five acres in size will be managed. Assuming compliance with federal and State laws and regulations, this impact is considered ***less than significant***.

Mitigation Measures

4.8-4 *None required.*

4.8-5 Runoff from new impervious surfaces would contain urban contaminants that could affect receiving water quality.

Although much of the planned development would occur in urbanized areas, where stormwater runoff is already generated, conversion of undeveloped land to urban uses would increase the amount of impervious surface. Additional analysis of this issue as it relates to storm drainage and flooding issues is presented in Impact 4.5-1 in Section 4.5, Wastewater, Storm Drainage, and Flooding.

The increase in impervious surfaces that would occur with or without the Proposed Project would alter the types and levels of pollutants that could be present in runoff. Urban runoff studies throughout the U.S. have shown that the concentration of suspended solids usually decreases as exposed soils are covered by impervious surfaces, although some particulates may still be present due to entrained dust on roadways and parking lots and in runoff from any remaining open space areas. Activities that could increase the types or quantities of pollutants in runoff due to development include motor vehicle operations, residential maintenance, littering, careless material storage and handling, domestic animal and wildlife wastes, and pavement wear. Pollutants typically associated with urban uses, such as those that would be present as a result of the Proposed Project, include oil and grease, coliform bacteria, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total organic carbon (TOC), total petroleum hydrocarbons (TPH), nitrogen, phosphorus, heavy metals such as lead, copper, and zinc, and suspended solids. Residues of agricultural chemical products would tend to be replaced by residues from pesticides and other landscape maintenance products typically used in residential developments.

Draft General Plan Policies PF-A.2 and PF-A.3 recognize the need to effectively manage stormwater runoff through developed systems. In addition, Draft General Plan Policies PF-E.20, PF-E.21, OS-A.16, OS-A.22, and OS-A.24 require that future development consider the proximity to receiving water sources and to incorporate feasible and practical best management practices (BMPs) to control pollutants in urban runoff. The selected BMPs would be based on the type of development and land uses in the project site, taking into account local and regional drainage and water quality considerations. Structural BMPs could include engineered features that provide some treatment, such as vegetative drainage ways, detention infiltration ponds, or filtration basins and sand filters. Policy OS-A.16 specifically directs that buffer areas be provided between waterways and urban development to protect the quality of natural watercourses integrated into new development, and Policy OS-A.22 requires new development to mitigate potential runoff effects on surface water. Non-structural BMPs are typically non-engineered management measures such as administrative and education programs focused on pollution prevention and source control, as directed on Policy OS-A.10. The effectiveness of BMPs must be monitored to ensure compliance with water quality regulations.

In summary, the Porter-Cologne Act mandates that water quality objectives ensure the reasonable protection of beneficial uses and the prevention of nuisance, recognizing that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses (California Water Code, Section 13241). Federal antidegradation policy also requires that existing beneficial uses also be maintained as development within a watershed occurs. Accordingly, to the extent

that projects must comply with applicable federal NPDES programs, which would be implemented through BMPs intended to minimize pollutant loading in runoff and to protect the beneficial uses of receiving water, development under the Draft General Plan would not result in any significant adverse effects on receiving water quality. This would reduce potential impacts to less-than-significant levels within unincorporated areas in the County. However, with the exception of the Fresno-Clovis metropolitan area, comprehensive local urban runoff water quality management programs consistent with federal Phase 2 requirements for small municipalities (MS4s), as applicable, may not exist or have not been fully implemented within all incorporated areas or their SOIs. In the absence of Phase 2 programs, and because the County cannot ensure that similar policies or mechanisms implementing the Phase 2 requirements would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur, this impact is considered **significant**.

Mitigation Measures

4.8-5 *No mitigation is required beyond General Plan Policies PF-A.2, PF-A.3, OS-A.10, OS-A.16, OS-A.22, PF-E.20, and PF-E.21 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies, combined with existing regulations, would reduce potentially significant impacts related to urban runoff water quality within unincorporated areas of the County and the Fresno-Clovis metropolitan areas, implementation of such programs within the incorporated areas or their SOIs (exclusive of the Fresno-Clovis metropolitan area) is not within the County's jurisdiction to monitor and enforce. Therefore, the impact would remain significant and unavoidable.

4.8-6 Development under the Draft General Plan would increase the volume of wastewater treated and discharged by publicly owned facilities, which could adversely affect the quality of waters receiving treated effluent.

As discussed in Impact 4.5-1 in Section 4.5, Wastewater, Storm Drainage, and Flooding, the Draft General Plan objective of focusing development in existing urban areas would accelerate growth in those areas and necessitate expansion of existing collection and treatment facilities to accommodate future residential, industrial, and commercial wastewater flows. The Draft General Plan economic development goal of increasing food processing industry in the County would further result in increased wastewater flows because these users generally are high-volume wastewater dischargers. Increased wastewater flows discharged to publicly owned treatment facilities, which would ultimately discharge treated effluent to receiving streams, would occur with or without the Proposed Project. Draft General Plan Policies OS-A.25, OS-A.26, PF-A.2, PF-A.3, and PF-D.1 through PF-D.7 provide strong support for maintaining water quality protection administered at the local level. These policies require advanced treatment of wastewater, encourage the installation of public sewage systems in existing communities which are experiencing repeated septic system failures, and direct the County to prepare sewer master plans for sewer collection and treatment systems for areas undergoing rapid urban

growth. Such policies represent significant new policy initiatives for ameliorating existing water quality problem areas and preventing future problem areas from developing. Further, all discharges from publicly owned facilities would be required to comply with federal and State discharge standards monitored and enforced by the CVRWQCB, regardless of whether the facility is located in the County or within the cities' jurisdiction. Therefore, the water quality impacts resulting from expanded wastewater treatment facilities under the Draft General Plan would be ***less than significant***.

Mitigation Measure

4.8-6 *None required.*

4.8-7 Increased wastewater discharges associated with development under the Draft General Plan could contribute nitrate and other constituents to groundwater through individual septic system use.

The Draft General Plan encourages development in existing urbanized areas served by centralized wastewater treatment facilities subject to effluent quality limits, which minimizes the need for septic systems and reduces receiving water quality effects. However, as discussed in Impact 4.5-2 in Section 4.5, Wastewater, Storm Drainage, and Flooding, development under the Draft General Plan would result in increased development relative to existing conditions, which would increase the number of individual septic systems in communities not served by developed wastewater collection and treatment systems. Such growth and the resulting increase in septic system use would occur with or without the Proposed Project, and both existing and Draft General Plan policies (e.g., Policy PF-D.6) support continued use of individual septic systems in areas not served by a public wastewater treatment system. Because individual septic systems provide only primary treatment of effluent, the discharged water can contain elevated levels of chemical constituents. Increased nitrate levels in groundwater is the most common result of domestic septic system use. The extent to which groundwater quality could be affected by septic system use would depend on underlying soil characteristics (e.g., permeability) and the amount and rate of wastewater discharged to the septic system.

For unincorporated areas, County ordinances would ensure that domestic septic systems would be properly sited, installed, and maintained so that potential impacts to groundwater quality from new development would be minimized. In addition, Draft General Plan Policies PF-D.6, OS-A.20, and OS-A.27 reinforce compliance with applicable water quality protection standards associated with on-site septic system use and to consider site conditions and proposed land uses. Therefore, impacts would be less than significant for areas within the unincorporated County. However, Fresno County ordinances and Draft General Plan policies would not apply to development that would occur in areas outside the County's jurisdiction where development would not be served by a community system. Therefore, increased individual septic system use could potentially affect water quality, and the impact is considered ***significant***.

Mitigation Measure

4.8-7 *No mitigation is required beyond Draft General Plan Policies PF-D.6, OS-A.20, and OS-A.27 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Implementation of the policies listed above would reduce impacts related to septic system use in the unincorporated areas to a less-than-significant level. However, the County cannot ensure similar measures would be implemented within the cities' jurisdictions. For this reason, the impact would remain significant and unavoidable.

4.8-8 Continued agricultural practices could affect groundwater or surface water quality.

Groundwater and surface water quality has been affected by agricultural practices and is a County and regional concern. Agricultural lands in western Fresno County are becoming increasingly degraded by rising salinity levels in shallow groundwater. This is a result of irrigation with imported surface water primarily from the Central Valley Project (CVP) and caused by a combination of geologic and soil conditions, soil salinity, and inefficient irrigation water management. Rural residential development can support concentrations of livestock that are a source of nitrate in groundwater. In addition, agricultural operations can discharge nitrates, minerals, and organic compounds (e.g., pesticides and herbicides) that can affect groundwater or surface water quality. However, increased development of agricultural operations is not proposed as part of the Proposed Project, and such activities would occur regardless of whether the Proposed Project is implemented. Moreover, various Draft General Plan policies encourage the County to participate in regional solutions to surface water and groundwater quality problems. Therefore, development under the Draft General Plan would not exacerbate existing groundwater quality conditions as a result of agricultural practices. Therefore, impacts would be ***less than significant***.

Mitigation Measures

4.8-8 *None required.*

Cumulative Impacts

The cumulative context for water resources is development through the year 2020 in the Central Valley, Coast Range and Sierra Nevada foothills, and Sierra Nevada, which are hydrologically connected to Fresno County, sharing common river and stream courses within and surrounding the Tulare Lake Basin, the Sacramento-San Joaquin River Basin, and the San Joaquin Valley Groundwater Basin. Since passage of the Central Valley Project Improvement Act and other related water transfers and water rights agreements, the potential now exists for water entitlements to be exported outside of the County, and presumably, outside of the Central Valley, and for other actions elsewhere in the State to affect the availability of water supplies to serve Fresno County water needs.

4.8-9 Increased development under the Draft General Plan in combination with other cumulative development would increase demand for water exceeding available supply and require additional facilities for water treatment and delivery systems. Secondary effects of long-term groundwater overdraft conditions would increase. Surface and groundwater quality could be affected by increased areas under concurrent construction and increased impervious areas, and from continued agricultural practices. The increase in wastewater treated from increased development intensity and development in new areas could affect the quality of waters receiving treated effluent.

As discussed in Impacts 4.8-1 through 4.8-5, project and non-project development in Fresno County would contribute to water consumption and potential degradation of water quality conditions. The Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the County by 2020, because the population growth would be unchanged by the project. However, where a significant and unavoidable impact has been identified for County-wide growth, the project contribution to that impact would be considered cumulatively considerable, even if on a project-specific level, it may be considered less than significant. The growing water demand from increased development intensity and development in new areas elsewhere in the Central Valley, Coast Range and Sierra Nevada foothills, and the Sierra Nevada, the ability for water to be exported, and the potential degradation of surface and groundwater sources could adversely affect water supply and quality. In addition, the effect of expansion or construction of water treatment facilities, and the concomitant impact on water quality cannot be determined, these cumulative impacts are considered **significant**.

Mitigation Measure

4.8-9 *None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.1 through PF-C.30, PF-D.1 through PF-D.7, PF-E.1 through PF-E.21, OS-A.1 through OS-A.28, HS-F.4, and HS-F.6.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.9 BIOLOGICAL RESOURCES

INTRODUCTION

This section discusses the biological resources found in Fresno County and impacts associated with development under the Draft General Plan. Anticipated growth within Fresno County could affect common and special-status plant and wildlife species and the various habitats they depend upon for survival. Because Fresno County spans between the high sierras to the east and central coast range to the west, a wide variety of habitats occur within the county borders.

ENVIRONMENTAL SETTING

A detailed description of each habitat type in Fresno County is provided in Chapter 7.6, Natural Resources, Biological Resources, of the *Fresno County General Plan Background Report (Background Report)*, which is hereby incorporated by reference, and summarized below.

Plant and Wildlife Habitat

Fresno County supports a rich variety of habitat types as defined by the Wildlife Habitat Relationship (WHR) which include the following 28 habitats: annual/ruderal grassland, valley oak woodland, pasture, cropland, valley-foothill riparian, fresh emergent wetland, lacustrine, blue oak woodland, blue oak-foothill pine woodland, mixed chaparral, chamise-redshank chaparral, vernal pool, alkali scrub, orchard-vineyard, montaine chaparral, montaine hardwood-conifer, montaine riparian, sierran mixed conifer, ponderosa pine, Jeffery pine, white fir, lodgepole pine, subalpine, conifer, alpine dwarf scrub, wet meadow, bitterbush, and juniper.

Special-Status Species

Over 164 special-status plant and wildlife species are known to occur in Fresno County. Special-status plants and wildlife have been designated as “rare,” “threatened,” “endangered,” or “species of concern,” under federal or state endangered species legislation, by state resource agencies, or by groups such as the California Native Plant Society (CNPS). The special-status species with potential to occur in Fresno County were determined by review of the California Natural Diversity Data Base (CNDDB) and CNPS electronic inventory of vascular plants. In general, special-status species are associated with a specific habitat such as vernal pools, chaparral, oak woodland, or riparian corridors, however some species can utilize common habitat such as cropland. Table 4.9-1, found at the end of this section, lists each species, status, general habitat description requirements, and known presence by geographic area.

REGULATORY SETTING

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, state, and local level. Agencies with responsibility for protection of biological resources in Fresno County are:

- U.S. Army Corps of Engineers (wetlands and other waters of the United States),
- U.S. Fish and Wildlife Service (endangered species and migratory birds),
- California Department of Fish and Game (waters of the State, endangered species, and other protected plants and wildlife),
- U.S. Forest Service,
- U.S. National Park Service, and
- Fresno County (General Plan Conservation Element Goals and Policies).

A number of federal and state statutes provide a regulatory structure that guides the protection of biological resources. Please refer to the *Background Report*, Chapter 7, for a detailed description of the laws that are relevant to biological resources.

PLAN ELEMENTS

By 2020, new development in Fresno County is projected to convert approximately 38,000 acres of land of which approximately 35,000 would be in incorporated areas and City spheres of influence, and 3,000 acres would be in unincorporated areas. The majority of development would occur on the San Joaquin Valley Floor in association with the City of Fresno sphere of influence and the towns and cities located along State Route (SR) 99. Development in these areas would primarily affect farmland habitat. Development of the Coalinga sphere of influence would impact habitats associated with the Central Coast Range. The lands located in unincorporated Fresno County could effect a variety of sensitive habitat types throughout the county.

The Draft General Plan contains the following policies for the protection of biological resources.

Wetland And Riparian Areas

- OS-D.1 The County shall support the “no-net-loss” wetlands policies of 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.
- OS-D.2 The County shall require new development to fully mitigate wetland loss for function and value in regulated wetlands to achieve “no-net-loss” through any combination of avoidance, minimization, or compensation. The County shall support mitigation banking programs that can provide the opportunity to mitigate impacts to rare, threatened, and endangered species and/or the habitat which supports these species in wetland and riparian areas.
- OS-D.3 The County shall require development to be designed in such a manner that pollutants and siltation do not significantly degrade the area, value, or function of wetlands. The County shall require new developments to implement the use of Best Management Practices (BMPs) to aid in this effort.

- OS-D.4 The County shall require riparian protection zones around natural watercourses and shall recognize that these areas provide highly valuable wildlife habitat. Riparian protection zones shall include the bed and bank of both low- and high-flow channels and associated riparian vegetation, the band of riparian vegetation outside the high-flow channel, and buffers of 100 feet in width as measured from the top of the bank of unvegetated channels and 50 feet in width as measured from the outer edge of the dripline of riparian vegetation.
- OS-D.5 The County shall strive to identify and conserve remaining upland habitat areas adjacent to wetland and riparian areas that are critical to the feeding, hibernation, or nesting of wildlife species associated with these wetland and riparian areas.
- OS-D.6 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 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 creating new riparian habitats within or near the project area. Adjacency to the project area shall be defined as being within the same watershed sub-basin as the project site. Compensation shall be at a ratio of three (3) acres of new habitat for every one (1) acre destroyed.
- OS-D.7 The County shall support the management of wetland and riparian plant communities for passive recreation, groundwater recharge, nutrient storage, and wildlife habitats.
- OS-D.8 The County should consider the acquisition of necessary wetland, meadows, and riparian habitat areas for parks limited to passive recreational activities as a method of wildlife conservation.

Fish and Wildlife Habitat

- OS-E.1 The County shall support efforts to avoid the “net” loss of important wildlife habitat where practicable. In cases where habitat loss cannot be avoided, the County shall impose adequate mitigation for the loss of wildlife habitat that is critical to supporting special-status species and/or other valuable or unique wildlife resources. Mitigation shall be at sufficient ratios to replace the function, and value of the habitat that was removed or degraded. Mitigation may be achieved through any combination of creation, restoration, conservation easements, and/or mitigation banking. Conservation easements should include provisions for maintenance and management in perpetuity. The County shall recommend coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game to ensure that appropriate mitigation measures and the concerns of these agencies are adequately addressed. Important habitat and habitat components include nesting, breeding, and foraging areas, important spawning grounds, migratory routes, migratory stopover areas, oak woodlands, vernal pools, wildlife movement corridors, and other unique wildlife habitats (e.g., alkali scrub) critical to protecting and sustaining wildlife populations.
- OS-E.2 The County shall require adequate buffer zones between construction activities and significant wildlife resources, including both onsite habitats that are purposely avoided and significant habitats that are adjacent to the project site, in order to avoid the degradation and disruption of critical life cycle activities such as breeding and feeding. The width of the buffer zone should vary depending on the location, species, etc. A final determination shall be made based on informal consultation with the U.S. Fish and Wildlife Service and/or the California Department of Fish and Game.

- OS-E.3 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 value of the habitat for wildlife is maintained.
- OS-E.4 The County shall encourage private landowners to adopt sound wildlife habitat management practices, as recommended by the California Department of Fish and Game officials and the U.S. Fish and Wildlife Service.
- OS-E.5 The County shall support preservation of habitats of rare, threatened, endangered, and/or other special-status species including fisheries. The County shall consider developing a formal Habitat Conservation Plan in consultation with Federal and State agencies, as well as other resource conservation organizations. Such a plan should provide a mechanism for the acquisition and management of lands that support special-status species.
- OS-E.6 The County shall ensure the conservation of large, continuous expanses of native vegetation to provide suitable habitat for maintaining abundant and diverse wildlife populations, as long as this preservation does not threaten the economic well-being of the county.
- OS-E.7 The County shall continue to closely monitor pesticide use in areas adjacent to habitats of special-status plants and animals.
- OS-E.8 The County shall promote effective methods of pest (e.g., ground squirrel) control on croplands bordering sensitive habitat that do not place special-status species at risk, such as the San Joaquin kit fox.
- OS-E.9 Prior to approval of discretionary development permits, the County shall require, as part of any required environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based upon field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant resources and/or special-status plants or animals. Such evaluation will consider the potential for significant impact on these resources and will either identify feasible mitigation measures or indicate why mitigation is not feasible.
- OS-E.10 The County shall support State and Federal programs to acquire significant fish and wildlife habitat areas for permanent protection and/or passive recreation use.
- OS-E.11 The County shall protect significant aquatic habitats against excessive withdrawals that could endanger special-status fish and wildlife or would interrupt normal migratory patterns.
- OS-E.12 The County shall ensure the protection of fish and wildlife habitats from environmentally-degrading effluents originating from mining and construction activities that are adjacent to aquatic habitats.
- OS-E.13 The County should protect to the maximum extent practicable wetlands, riparian habitat, and meadows since they are recognized as essential habitats for birds and wildlife.
- OS-E.16 The County should preserve, to the maximum extent practicable, significant wildlife migration routes such as the North Kings Deer Herd migration corridors and fawn production areas.
- OS-E.17 Areas that have unusually high value for fish and wildlife propagation should be preserved in a natural state to the maximum possible extent.

- OS-E.18 The County should preserve, to the maximum possible extent, areas defined as habitats for rare or endangered animal and plant species in a natural state consistent with State and Federal endangered species laws.
- OS-E.19 The County should preserve areas identified as habitats for rare or endangered plant and animal species primarily through the use of open space easements and appropriate zoning that restrict development in these sensitive areas.
- OS-B.2 The County shall work closely with agencies involved in the management of forest ecosystems and shall coordinate with State and Federal agencies, private landowners, and private preservation/ conservation groups in habitat preservation and protection of rare, endangered, threatened, and special concern species, to ensure consistency in efforts and to encourage joint planning and development of areas to be preserved. The County shall encourage State and Federal agencies to give notice to and coordinate with the County on any pending, contemplated, or proposed actions affecting local communities and citizens of the County. The County will encourage State and Federal agencies to address adverse impacts on citizens and communities of Fresno County, including environmental, health, safety, private property, and economic impacts.

Vegetation

- OS-F.1 The County shall encourage landowners and developers to preserve the integrity of existing terrain and natural vegetation in visually-sensitive areas such as hillsides and ridges, and along important transportation corridors, consistent with fire hazard and property line clearing requirements.
- OS-F.2 The County shall require developers to use native and compatible non-native plant species, especially drought-resistant species, to the extent possible in fulfilling landscaping requirements imposed as conditions of discretionary permit approval or for project mitigation.
- OS-F.3 The County shall support the preservation of significant areas of natural vegetation, including, but not limited to, oak woodlands, riparian areas, and vernal pools.
- OS-F.4 The County shall ensure that landmark trees are preserved and protected whenever possible.
- OS-F.5 The County shall establish procedures for identifying and preserving rare, threatened, and endangered plant species that may be adversely affected by public or private development projects. The County shall require, as part of the environmental review process, a biological resources evaluation of the project site by a qualified biologist. The evaluation shall be based on field reconnaissance performed at the appropriate time of year to determine the presence or absence of significant plant resources and/or special-status plant species. Such evaluation shall consider the potential for significant impact on these resources and shall either identify feasible mitigation measures or indicate why mitigation is not feasible.
- OS-F.6 The County shall require that development on hillsides be limited to maintain valuable natural vegetation, especially forests and open grasslands, and to control erosion.
- OS-F.7 The County should encourage landowners to maintain natural vegetation or plant suitable vegetation along fence lines, drainage and irrigation ditches and on unused or marginal land for the benefit of wildlife.
- OS-F.8 The County shall support the continued use of prescribed burning to mimic the effects of natural fires to reduce fuel volumes and associated fire hazards to human residents and to enhance the health of biotic communities.

OS-F.9 The County shall require that new developments preserve natural woodlands to the maximum extent possible.

OS-F.10 The County shall promote the preservation and management of oak woodlands by encouraging landowners to follow the Fresno County Oak Management Guidelines shown below and to prepare an Oak Management Plan for their property.

**Fresno County Oak Woodlands Management Guidelines
(Policy OS-F.10)**

1. When Building Within Oak Woodlands:

- Develop an Oak Woodland Management Plan to retain existing oaks, preserve agriculture, retain wildlife corridors, and enhance soil and water conservation practices.
- Avoid tree root compaction during construction by limiting heavy equipment in root zones.
- Carefully plan roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots. Design roads and consolidate utility services to minimize erosion and sedimentation to downstream sources. Also, consider reseeded any disturbed ground.
- Avoid landscaping which requires irrigation within ten (10) feet of the trunk of an existing oak tree to prevent root rot.
- Consider replacing trees whose removal during construction was avoidable.
- Use fire-inhibiting and drought-tolerant and oak-compatible landscaping wherever possible.

2. Take Steps to Increase Fire Safety on Wooded Parcels:

- Recognize fire as a natural feature of the oak woodland landscape and plan accordingly.
- Set up a continuous management program as a part of your Oak Woodland Management Plan to maintain a fire-safe property environment.
- Identify and manage trees to be fire-safe.
- Recognize the impact of steep slopes on fire safety.
- Develop a fire-safe and oak-friendly landscape plan for your home or business.
- Create "Defensible Space" around buildings. Defensible space is that area which lies between a structure and an oncoming wildfire where the vegetation has been modified to reduce the wildfire threat and which provides an opportunity for firefighters to safely defend a structure.

3. When Implementing Range Improvement Practices in Oak Woodlands:

- When using prescribed fire as a range improvement practice, obtain professional assistance to maximize benefits and minimize risk.
- When converting oak woodlands to other agricultural uses, consider incorporating an oak retention component or a conservation easement in your Oak Woodland Management Plan.
- Develop water sources--ponds, troughs, seeps, and springs for livestock and wildlife.

4. When Harvesting Oaks for Fuel or Range Improvement, Plan Your Harvest to:

- Maintain an average canopy cover of 10 to 30 percent depending on site, elevation, and precipitation.
- Retain some oak trees of all sizes and species represented at the site and in clusters where possible.
- When safety permits, leave old hollow trees and those actively being used for nesting, roosting, or feeding.
- Where low fire risk and aesthetics allow, pile limbs and brush to provide wildlife cover.
- Where commercial or extensive harvest is being contemplated, seek professional advice.

Adopted by the Fresno County Board of Supervisors on March 10, 1998 (Resolution # 98-150).

IMPACTS AND MITIGATION MEASURES

Methods of Analysis

This biological resource analysis evaluates the potential loss of habitat types based on the known geographic distribution of those habitats and the projected areas of development within the county.

Because the development projections are regional, rather than project-specific, the impact analysis is necessarily general. The acreage anticipated to be developed in a particular region is identified, along with the types of habitat that could be affected. It is unlikely that all development in a given area would occur within a single habitat type, so this approach is conservative. For development anticipated in the unincorporated area, the extent to which current State and Federal regulations and proposed General Plan policies would protect identified habitats is evaluated. The type of habitat and extent of development within incorporated areas and spheres of influence is also discussed; however, only State and Federal regulations are considered in these areas, as the County cannot compel other jurisdictions to implement policies similar to those proposed in the Draft General Plan.

Evaluation of impacts has been based on habitat types that have the potential to support the species identified within the *Background Report*. Specific habitat types that could support the identified species has been encompassed under one impact for wildlife and one impact for plants. Identification of the special-status animal or plant species relies upon the use of the CNDDB data base.

Standards of Significance

For the purposes of this EIR, an impact is considered significant if the Proposed Project could:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
- 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; or
- 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 wildlife nursery sites.

Impacts and Mitigation Measures

4.9-1 Development under the Draft General Plan could result in the loss of wetland habitat (e.g., seasonal wetland, vernal pool, riverine, riparian, and wet sierra meadows).

Development within Fresno County as anticipated by the Draft General Plan could result in the loss of jurisdictional wetland which could include vernal pools, seasonal wetland, waters of the U.S.(riverine habitats), or other undescribed wetlands. As grasslands and other undeveloped areas are converted to urban uses, wetlands could be filled and/or disturbed.

It should be noted that the conversion of acres to developed uses would occur with or without the Proposed Project (38,000 acres compared to 34,000 acres without the project). Development in the Eastside Valley would occur with or without the project (34,000 acres compared to 30,000 without the project). Therefore, the loss of wetland habitat would occur whether or not the project was adopted.

The exact acreage of wetlands that could be affected by land conversion in the San Joaquin Valley Floor region is not known at this time, because specific development proposals are not part of the Draft General Plan. The greatest amount of wetland fill would likely occur in the Eastside Valley due to the high acreage of projected growth along the SR 99 corridor. Wetlands associated with farmland, pastures, vernal pool, and stream or river channel could be affected by development in the Eastside Valley, while alkali sink could be affected in the Westside Valley, and meadows and streams could be affected in the Sierra Nevada Foothills and High Sierra Nevada. The development in the Central Coast Range, Sierra Nevada Foothills, and High Sierra Nevada could affect wetlands, but substantially fewer acres would be developed in comparison to the Eastside Valley area, so the effects on wetlands would not be as great.

The U.S. Army Corps of Engineers (Corps) regulates the fill of wetlands by the authority of Section 404 of the Clean Water Act. As development occurs in the County, a wetland delineation in accordance with Corps methodology would be required at each approved project location to determine the extent of wetlands. Acquisition of permits from the Corps for the fill of wetlands and Corps approval of a wetland mitigation plan would ensure no net loss of wetlands in Fresno County. The existing Corps regulations requires that a wetland delineation be conducted to determine the presence and extent of the potential wetlands on a site, and that the appropriate wetland mitigation/creation be implemented in a ratio according to the size of the filled wetlands.

Draft General Plan Policy OS-D.1 adopts the “no-net-loss” policies of the Corps, USFWS, and CDFG, and Policy OS-D.2 requires the full mitigation of wetland areas, to the extent possible. In addition, Policy OS-D.3 requires that development is designed such that pollutants and siltation do not significantly degrade the area, value, or function of wetlands. Policies OS-D.4 through OS-D.8 address the presentation of existing wetlands, as well as adjacent areas. Lands would be evaluated on a project-

by-project basis to assure that all wetland acreage is accounted for and mitigated in accordance with the most current regulations. Compliance with existing County, State and Federal laws and implementation of Draft General Plan policies would ensure that the loss of wetlands due to development is offset through avoidance, preservation and recreation.

While the loss of wetlands may be fully mitigated for individual projects, as more land is urbanized, there could be fewer opportunities to fully compensate for the area, value and function of lost wetlands. Consequently, there could be development over the next twenty years that will not be able to feasibly provide for “no net loss” of the wetland habitat to be filled by the development. Because no net loss of wetlands cannot be assured for every project in the county, this impact is considered **significant**.

Mitigation Measures

4.9-1 *None available beyond Draft General Plan Policies OS-D.1 through OS-D.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities’ jurisdiction.*

Effective implementation of the policies cited above would substantially reduce this impact for development that occurs within the County’s jurisdiction, although not to a less-than-significant level.

Similar measures are available to, and required by, some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable for development within both the County and cities.

4.9-2 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, or other various habitats that support special-status animals.

Development within Fresno County as anticipated by the Draft General Plan could result in the loss of specific habitat types that supports special-status animals. Habitat types within Fresno County such as chaparral, alkali sink, and vernal pools all contain micro-habitats that special-status animal species depend upon to complete their life cycles. The *Background Report* identified 107 wildlife species as present or potentially occurring in the county. The conversion of special-status species habitats due to increased urbanization could result in the decline of listed wildlife species.

Special-status species that could be affected by development in Fresno County would include, but would not be limited to the following:

- valley elderberry longhorn beetle;
- San Joaquin kit fox;
- kangaroo rat (various species);
- California tiger salamander;

- vernal pool fairy shrimp;
- vernal pool tadpole shrimp;
- western spadefoot;
- burrowing owl;
- prairie falcon; and,
- northern harrier.

Table 4.9-1 presents for a complete list of special-status wildlife species that are known to occur or that could occur in Fresno County.

The majority of lands that would be developed would be within incorporated areas and cities' spheres of influence, which occur primarily within the San Joaquin valley floor. This area is composed primarily of farmland, which does not generally provide habitat for many of the special-status wildlife species identified in the Background Report. However, special-status species could be found on the valley floor where land has not been farmed. Unfarmable areas that contain habitat such as alkali sink or vernal pools have a high likelihood of supporting special-status wildlife. Also, special-status species are known to occur east and west of the valley floor in the coast ranges, foothills and Sierra Nevada. It should be noted that the conversion of acres to developed uses would occur with or without the project (38,000 acres compared to 34,000 acres without the project). Therefore, the loss of habitats supporting special-status animals would occur whether or not the project was adopted.

In general, unincorporated lands of Fresno County within the Eastside Valley Floor are similar in biological value to those within the incorporated regions. The Eastside Valley Floor is primarily farmed and little undisturbed wildlife habitat is present. However, the unincorporated lands within the central Coast Range, Westside Valley, Sierra Nevada foothills and Sierra Nevada contain habitats with greater potential for high biological values and contain a greater number of special-status species because these areas have not been farmed or otherwise significantly altered. Development of the unincorporated areas could result in greater losses of special-status wildlife habitat due to the higher quality of habitat in these regions. It is anticipated that approximately 600 acres of unincorporated Coast Range, Westside Valley, Sierra Nevada foothills, and Sierra Nevada would be developed.

The Draft General Plan provides policies to ensure that effects on special-status wildlife species would be avoided and/or minimized. The goal for the Draft General Plan Policy on Fish and Wildlife Habitat, OS-E, is to protect, restore, and enhance habitats in Fresno County that support fish and wildlife species so that populations are maintained at viable levels. The Draft General Plan policies call for the protection of special-status wildlife habitat where possible. Where habitat protection is infeasible, mitigation for losses are required. General Plan Policies OS-E.1 through OS-E.13 and OS-E.16 through OS-E.18 specify measures to avoid, minimize, or compensate for special-status wildlife species, including compliance with CDFG code and USFWS regulations. By compliance with laws already in effect, such as the Migratory Bird Treaty Act, which prohibits the "take" of migratory bird species, protection of such species should be achieved. General Plan Policy OS-E.9 calls for an evaluation by a qualified biologist prior to project approval.

Table 4.9-1 could be used to provide a baseline list of potentially occurring wildlife species for projects that occur in areas with habitat that could potentially support special-status wildlife. If a project occurs in a biotic region from which special-status species occurrences are uncommon, a less intensive review process may be acceptable, so long as no potential habitat occurs on the project site. This would apply to areas such as the Eastside Valley Floor, where land has been intensively farmed for successive years.

For areas that may support special-status wildlife, such as alkali sink, annual grassland, vernal pool, chenopod scrubland, or riverine habitat, a project specific review for potential special-status wildlife habitat should be conducted based on the refined list of species generated by the CNDDB from searching USGS 7.5 minute quadrangle maps representing the project area as well as immediately adjacent lands. By searching a larger area for potentially occurring special-status wildlife species, no animals would be overlooked during the biological review process and impacts to special status species would be reduced.

It is likely that on a project-by-project basis, site-specific wildlife issues would be identified and addressed prior to a project approval or development, as required by federal and State laws, the County General Plan policies, and similar policies within the Cities. Depending upon the size and location of a specific project, impacts on special-status wildlife could be reduced by avoiding or preserving habitat through compliance with existing Fresno County General Plan Policies, USFWS regulations, and CDFG code. However, in some cases, overall habitat could not be re-created to such an extent that it replaces the original natural habitat value required by a particular special-status animal. Therefore, impacts on special-status wildlife species are considered **significant**.

Mitigation Measures

4.9-2 *No mitigation is available beyond Draft General Plan Policies OS-E.1 through OS-E.13, OS-E.16 and OS-E.18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the Draft General Plan policies cited above would reduce this impact for development that occurs within the County's jurisdiction, but not to a less-than-significant level. Similar measures are available to, and required by, some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable for development in both the county and other jurisdictions.

4.9-3 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, and other habitats that could support special-status plants.

Special-status plants are known to occur in Fresno County on land that supports vernal pools, alkaline sink, coniferous forest and other sensitive habitat types identified in the *Fresno County General Plan Background Report*. The CNDDDB and CNPS electronic inventories have identified 57 plant species within Fresno County that have been listed as threatened, endangered or otherwise rare by the USFWS, CDFG or CNPS. (Please refer to Table 4.9-1 for a list of the special-status plant species and their distribution by geographic region.) Most of the special-status plant species identified grow on a specific habitat that provides a micro-environment in which the plant is dependant for survival. The alteration or removal of such habitat type could result in the elimination of a particular species or a severe reduction in the plant's numbers within Fresno County. Some special-status plants identified only occur in Fresno County and the removal of their requisite habitat could result in their extinction.

Special-status plant species that could be affected by development in Fresno County could include but are not limited to the following:

- San Joaquin valley orcutt grass;
- hairy Orcutt grass;
- Hartweg's pseudobahia;
- Mariposa pussypaws;
- California jewel flower;
- San Joaquin wooly threads;
- tree anenome; and,
- San Benito evening primrose.

The majority of special-status plant species occur outside of the San Joaquin Valley floor with the exception of plants dependant on alkali sink, vernal pool or other wetland habitats. The central Coast Range and Sierra Nevada foothills have the highest potential to support special-status plants within the annual grassland, chaparral, serpentine, and cismontane habitats found there. Habitats in the Eastside Valley floor along the SR 99 corridor are not generally supportive to rare plant occurrence due to the extensive farming activities that preclude rare plant growth requirements. The majority of lands projected to be developed in Fresno County lie within farmed habitats and would not likely affect rare plants.

It should be noted that the conversion of acres to developed uses would occur with or without the project (38,000 acres compared to 34,000 acres without the project). Therefore, the loss of habitats supporting special-status plants would occur whether or not the project was adopted. Furthermore, more than 93 percent of project development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence. Development in unincorporated Fresno County would be more likely to result in the development of undisturbed habitats especially in the central Coast Range, Westside Valley floor and Sierra Nevada foothills. It is possible that development of approximately 600 unincorporated acres of Fresno County could result in more significant impacts on special-status plants than the development of lands in the incorporated Eastern Valley Floor areas.

The policies that pertain to vegetation preservation are OS-F.1 through OS-F.10. Fresno County General Plan Policy OS-F.3 supports the preservation of significant areas of natural vegetation, including oak woodlands, riparian areas, and vernal pools. General Plan Policy OS-E.9 requires a biological resource evaluation prior to the approval of discretionary development permits, and General Plan Policy OS-F.5 calls for the establishment of procedures for identifying and preserving valuable vegetation resources of Fresno County. These policies require plant protection and preservation, and special-status plant surveys prior to development to ensure no loss of listed plant species. State and Federal laws also call for the protection of the special-status plants that could be found in the development areas. Project-by-project evaluation for rare-plants and the implementation of existing County, USFWS and CDFG regulations would allow for the protection of plant resources in Fresno County. Existing regulations require a survey, a determination of presence or absence, and salvage in consultation with the appropriate agencies to ensure no loss of rare plant species. While many plants can be successfully translocated to other preserved or recreated habitats, some plant species are not easily translocated. Furthermore, some plant habitat (e.g., alkali sink) is difficult to recreate with all of the characteristics necessary for the successful proration of the plant species using that habitat. Consequently, while the loss of certain plant habitats may be fully mitigated for individual projects, as more land is urbanized, there could be fewer opportunities to fully compensate for the loss of plant habitat. Therefore impacts on rare plants from development in Fresno County and the potential take of listed special-status plant species are considered **significant**.

Mitigation Measures

4.9-3 *None available beyond Draft General Plan Policies OS-F.1 through OS-F.10 and OS-E.9 for Fresno County. No mitigation measures are available to the County to reduce impacts to the cities' jurisdiction.*

Draft General Plan policies would substantially reduce special-status plant impacts by ensuring that project applicants comply with DFG codes and Federal Endangered Species (FESA) as implemented by the USFWS. Similar measures are available to, and required by, some of the cities in the County. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Furthermore, if appropriate habitat cannot be preserved and/or re-created, or if certain plants cannot be successfully translocated, the habitat for some plant species could be reduced. Therefore, the impact would remain significant and unavoidable for development within the County and cities.

4.9-4 Development under the Draft General Plan could result in the loss of heritage or landmark oak trees.

Valley, live, blue, and black oak trees occur across Fresno County in all types of habitat. Oak trees have aesthetic, historic, and habitat values that make them a desirable feature of the landscape for both humans and wildlife. Through the course of development under the Draft General Plan heritage or landmark oak trees could be removed in the incorporated and unincorporated areas of Fresno County.

Specifically, blue oak woodland communities throughout the central valley have been subject to development that threatens the long term stability of this habitat type. Undisturbed blue oak woodlands are declining due to their attractiveness as housing sites. Also, valley oaks have been removed from the valley floor over the last 100 years to facilitate large-scale farming practices, making large oak tree specimens uncommon. Oak tree removals in any habitat type degrades the overall quality of such habitat. Wildlife uses are decreased and water quality is degraded by oak tree removal.

The eastern valley floor region does not support significant valley oak woodland due to the removal of such habitat over the past 100 years; any oak trees that remain in the region are significant tree resources due to their overall scarcity. In the central coast range and Sierra Nevada foothills regions large tracts of oak woodland are present that would not be affected dramatically by the development anticipated within incorporated Fresno County lands. Of the approximately 3,000 acres of unincorporated Fresno County that is anticipated for development approximately 300 acres of development is projected for the central Coast Range and Sierra Nevada foothills with or without the Proposed Project.

General Plan Policy OS-F.4 indicates the County's intent to preserve landmark trees, and policy OS-F.10 provides for the protection of oak woodlands. However, these General Plan policies would not fully offset the effect of oak tree removal because the definition of a landmark tree is not provided. The basis on which a heritage or landmark tree is defined would provide a qualitative guideline for oak tree evaluation. Additionally, oak trees are not protected by any other regulatory agency such as USFWS or CDFG. Therefore, oak tree removal is considered a **significant** impact.

Mitigation Measures

- 4.9-4 (a) *Fresno County shall define the specifications for landmark trees identification, based on size and health of the trees.*
- (b) *Native oak and other landmark trees shall be replaced on an inch-for-inch basis when tree size exceeds 6 inches in diameter.*
- (c) *A 5-year monitoring plan shall be prepared for all replacement trees, including provisions for maintenance and replacement of trees that do not survive.*

When size specification for landmark tree identification are defined, then mitigation requirements can be assessed on a project-by-project basis as they occur in Fresno County. Oak trees that are removed during project implementation would be replaced in accordance with the tree mitigation ratio and monitored until established so that trees may survive independently of irrigation or other human maintenance. This mitigation would provide a means to replace removed oak trees and ensure no net losses of oaks in the county.

Effective implementation of Draft General Plan policies and the above mitigation measures would reduce this impact to a less-than-significant level for development that occurs within the County's

jurisdiction. Similar measures are available to, and required by some of the cities in the County. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact may be significant and unavoidable within those jurisdictions.

4.9-5 Development under the Draft General Plan could result in riparian and associated aquatic habitat degradation.

Aquatic resources associated with the San Joaquin River, Kings River, and their tributaries could be degraded by development under the Draft General Plan. For example, urban runoff, increased recreational uses, and additional municipal water withdrawal could decrease the habitat values of the San Joaquin River. Fisheries dependant on the San Joaquin River could be negatively affected by future development. Specifically, the development anticipated in east valley floor region could adversely affect the San Joaquin River and its associated riparian habitat if development occurs along the riverbank or requires removal of riparian vegetation. Development in the river bottom could substantially diminish habitat values as it would degrade water quality and aquatic habitat. Breeding, foraging and roosting sites for terrestrial and aquatic wildlife could be degraded or potentially eliminated by future development in the region. Overall development in the eastern valley area could increase non-point source pollution to the various creeks and tributaries to the San Joaquin River.

Draft General Plan Policy OS-D.3 specifies that development be conducted in such a manner as to not significantly degrade the area, value, or function of wetlands, and Policy OS-E.2 calls for the identification and protection of important spawning grounds, migratory routes, or wildlife movement corridors. Policies OS-3.10 through OS-E.13 and OS-E.17 call for the protection and/or preservation of important aquatic habitats. The Draft General Plan policies may not be enforceable to the extent necessary to maintain current habitat quality and sustain existing fisheries. Implementation of the General Plan policies and federal laws such as the Clean Water Act and the Migratory Bird Treaty Act would help reduce the impacts on aquatic and riparian habitats but would not fully protect the river and its aquatic resources from urban development and these impacts would be **significant**.

It should be noted that the conversion of acres to developed uses would occur with or without the project (38,000 acres compared to 34,000 acres without the project). Similarly, development in the east valley would occur with or without the project (34,000 acres compared to 30,000 without the project). The City of Fresno is anticipated to grow north toward the San Joaquin River and further pressure the resources located along the riparian corridor. Therefore, the loss of riparian and associated habitat degradation would occur whether or not the Proposed Project was adopted. Furthermore, more than 93 percent of project development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence where the County cannot ensure implementation of similar measures to minimize identified significant impacts.

Mitigation Measures

- 4.9-5 *None available beyond Draft General Plan Policies OS-D.3, OS-E.1, OS-E.10 through OS-E.13, and OS-E.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities jurisdiction.*

Effective implementation of the policies cited above would reduce this impact for development that occurs within the County's jurisdiction, but not to a less-than-significant level. Similar measures are available to, and required by, some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. Therefore, the impact may be significant and unavoidable within those jurisdictions as well.

4.9-6 Development under the Draft General Plan would result in the loss of grassland habitat.

The majority of habitat loss due to new development would occur as farmland is converted to urban uses. Farmland provides general habitat for resident and migratory species in Fresno County. A large reduction in farmland acreage would reduce habitat for these species. Many species use agricultural lands for food and cover during various times of the year, including species that are wide-ranging winter migrating bird species, such as the ferruginous hawk, prairie falcon, and golden eagle, which may occasionally forage in Fresno County. In addition, habitat would decrease for resident raptors such as red-tailed hawks, northern harriers, and the many small bird and mammal species known to forage in agricultural land in Fresno County.

Throughout the Central Valley urban development is consuming farmland and reducing the resources to resident and migratory bird species. The Central Valley has been the target for development from San Francisco Bay overflow and large tracts of commuter homes and support services have been built on farmland. As the Central Valley was converted from its historic natural state to that of a rich farming region, it is now being converted from farmland to urban subdivision development. Resident and migratory wildlife have been able to adapt somewhat to the changes from original habitat to farmland habitat, but would not be able to make the transition from farmland habitat to urban development. Once lands are developed for housing, and other urban uses, wildlife would not find the appropriate food, cover or breeding areas for which they depend on for survival. Additionally, the introduction of pets and competition from non-native bird species would discourage or decrease native wildlife. Over time at the current rate of development many common native wildlife species would decrease in the path of development.

Development under the Draft General Plan would convert large acreage of agricultural lands in Fresno County. This development would contribute to the loss of general biological resources. Draft General Plan Policies OS-E.1 through OS-E.7, OS-E.9, OS-E.13, OS-E.18, and OS-E.19 specify measures to avoid, minimize, or compensate for impacts to wildlife, including resident and migratory bird species. The cumulative loss due to development under County jurisdiction would be partially offset through

implementation of Draft General Plan policies. However, a substantial portion of development would occur outside the County's jurisdiction, where similar policies are not in affect. It should be noted that a substantial portion of anticipated growth would occur with or without the Proposed Project. Nonetheless, the loss of general wildlife habitat values is considered a **significant impact**.

Mitigation Measures

4.9-6 *None available beyond Draft General Plan Policies OS-E.1 through OS-E.7, OS-E.9, OS-E.13, OS-E.18, and OS-E.19 for development in Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Compliance with the Draft General Plan policies, and CDFG and USFWS regulations would reduce the effects on general wildlife habitat in areas under the County's jurisdiction. As development reaches anticipated levels, permanent habitat losses will cause an overall decrease in all wildlife numbers in the region. This can not be alleviated by mitigation because of the historic reduction in available wildlife habitat.

Cumulative Impacts

The cumulative context for loss of biological resources is development through the year 2020 in the Central Valley, Coast Range and Sierra Nevada foothills, and Sierra Nevada, primarily on undeveloped or unaltered land.

4.9-7 Development under the Draft General Plan, in combination with other cumulative development, could result in the loss of heritage or landmark oak trees, riparian, aquatic, or other wetland habitat, chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, grasslands, or other various habitats that support special-status wildlife and plant species in Fresno and other areas within the Central Valley, Coast Range and Sierra Nevada mountains and foothills.

The Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the project. The difference between the project and not approving the project is the growth that would occur in the employment sector and the mix of employment and the patterns of development that would occur in the unincorporated area.

Impacts 4.9-1 through 4.9-6, above, consider the effects of growth related directly to the project along with the growth that is projected to occur throughout the County with or without project. Consequently, each impact addresses both cumulative (partially) and project-specific impacts. Where a significant and unavoidable impact has been identified for county-wide growth, the project contribution to that impact would be considered cumulatively considerable, even if on a project-specific level, it may be considered less than significant. Such impacts would also contribute to the loss of biological resources throughout the region. As regional growth continues, the opportunities to fully compensate for the area, value and function of the habitat lost would be reduced.

As discussed above, the project would contribute considerably to these impacts. Furthermore, the project and non-project development in Fresno County would contribute to the loss of biological resources elsewhere in the Central Valley, Coast Range and Sierra Nevada foothills, and the Sierra Nevada. Therefore, these cumulative impacts are considered **significant**.

Mitigation Measures

4.9-7 *None available beyond Draft General Plan Policies OS-D.1 through OS-D.8, OS-E.1 through OS-E.13, OS-E.16 through OS-E.19, OS-B.2, and OS-F.1 through OS-F.10.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

TABLE 4.9-1							
SPECIAL-STATUS SPECIES OF FRESNO COUNTY BY GEOGRAPHIC REGION							
Scientific Name/ Common Name	Habitat Distribution in Fresno County						
	Inner Coast Range Blue-Oak Woodland and Chaparral	Inner Coast Range Grassland Habitat	San Joaquin Valley Floor Alkali Sink Habitat	Agricultural and Urban Habitat Mosaic	San Joaquin Valley Floor and Annual Grassland Habitat	Central/ Southern Sierra Nevada Foothill Biotic Region	Central/ Southern High Sierra
PLANTS							
<i>Acanthomintha obovata</i> ssp. <i>obovata</i> Obovate-leaved thornmint					X	X	
<i>Amsinckia vernicosa</i> var. <i>furcata</i> Forked fiddleneck					X	X	
<i>Arabis bodiensis</i> Bodie hills rock cress						X	X
<i>Atriplex cordulata</i> Heartscale			X				
<i>Astragalus monoensis</i> var. <i>ravenii</i> Ravin's milk vetch						X	X
<i>Atriplex depressa</i> Brittlescale			X				
<i>Atriplex minuscula</i> Lesser saltscale			X				
<i>Atriplex vallicola</i> Lost hills crownscale		X	X				
<i>Calyptidium pulchellum</i> Mariposa pussypaws						X	X
<i>Calystegia collina</i> ssp. <i>venusta</i> South Inner Coast Range morning glory	X	X				X	X
<i>Camissonia benitensis</i> San Benito evening primrose			X		Xknown only from the New Irdia area	X	
<i>Camissonia sierrae</i> ssp. <i>alticola</i> Mono hot springs evening primrose						X	X
<i>Carex tompkinsii</i> Tompkin's sedge						X	X
<i>Carpenteria californica</i> Tree anemone						X	X
<i>Castilleja campestris</i> ssp. <i>succulenta</i> Succulent owl's clover					X		
<i>Caulanthus californicus</i> California jewelflower		X	X		X	X	
<i>Chorizanthe biloba</i> var. <i>immemora</i> San Benito spineflower						X	
<i>Cordylanthus palmatus</i> Palmate-bracted bird's-beak			X				
<i>Cordylanthus tenuis</i> ssp. <i>barbatus</i> Fresno County bird's beak						X	
<i>Delphinium inopinum</i> Unexpected larkspur						X	X
<i>Delphinium recurvatum</i> Recurved larkspur		X			X	X	
<i>Draba sharsmithii</i> Mt. Whitney draba							X
<i>Epilobium howellii</i> subalpine fireweed							X
<i>Eriastrum hooveri</i> Hoover's eriastrum			X		X	X	
<i>Erigeron aequifolius</i> Hall's daisy						X	
Keil's daisy <i>Erigeron inornatus</i> var. <i>keilii</i>						X	
<i>Eriogonum nudum</i> var. <i>murinum</i> Mouse buckwheat		X			X	X	
<i>Eriogonum nudum</i> var. <i>regirivum</i> Kings River buckwheat						X Kings River Canyon	

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<i>Eryngium spinosepalum</i> Spiney-sepaled coyote-thistle					X		
<i>Gratiola heterosepala</i> Boggs Lake hedge hyssop					X		
<i>Hemizonia halliana</i> Hall's tarplant					X	X	
<i>Hollisteria lanata</i> Hollisteria			X				
<i>Ivesia unguiculata</i> Yosemite ivesia						X	X
<i>Lathyrus jepsonii</i> var. <i>jepsonii</i> Delta tule-pea					X		
<i>Layia discoidea</i> Rayless layia						X	
<i>Layia heterotricha</i> Pale-yellow layia					X	X	
<i>Layia munzii</i> Munz's tidy-tips					X	X	
<i>Lembertia congdonii</i> San Joaquin woollythreads					X	X	
<i>Lepidium jaredii</i> ssp. <i>album</i> Panoche peppergrass			X				
<i>Lewisia congdonii</i> Congdon's lewisia						X	
<i>Lewisia longipetala</i> Long-petaled lewisia						X	X
<i>Linanthus serrulatus</i> Madera linanthus						X	
<i>Lupinus citrinus</i> var. <i>citrinus</i> Orange lupine						X	
<i>Lupinus lepidus</i> var. <i>culbertsonii</i> Hockett meadows lupine						X	X
<i>Madia radiata</i> Showy madia					X	X	
<i>Malacothamnus aboriginum</i> Indian valley bush mallow						X	
<i>Mimulus norrisii</i> Kaweah monkeyflower						X	
<i>Navarretia nigelliformis</i> ssp. <i>radians</i> Shining navarretia					X	X	
<i>Orcuttia inaequalis</i> San Joaquin Valley orcutt grass					X		
<i>Pseudobahia bahiifolia</i> Hartwig's golden sunburst					X	X	
<i>Pseudobahia peirsonii</i> San Joaquin adobe sunburst					X	X	
<i>Raillardiopsis muirii</i> Muir's raillardella						X	
<i>Sagittaria sanfordii</i> Sanford's arrowhead					X		
<i>Sidalcea keckii</i> Kecks checkerbloom					X	X	
<i>Streptanthus fenestratus</i> Tehipite Valley jewel-flower						X	
<i>Trifolium bolanderi</i> Parasol clover					X	X	
<i>Tuctoria greenii</i> Green's tuctoria					X		
INVERTEBRATES							
Bohart's blue butterfly <i>Philotiella speciosa bohartorum</i>					X	X	

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Ciervo aegilian scarab beetle <i>Aeglia concinna</i>					X	X	
Dry Creek cliff strider bug <i>Oravelia pegg</i>					X	X	
Hoppings blister beetle <i>Lytta hoppingi</i>					X		
Kings Canyon cryptochian caddisfly <i>Cryptochia exella</i>						X	
Molestan blister beetle <i>Lytta molesta</i>					X		
Morrison's blister beetle <i>Lytta morrisoni</i>					X		
Redheaded sphecoid wasp <i>Eucerceris ruficeps</i>					X	X	
San Joaquin tiger beetle <i>Cicindela tranquebarica</i> ssp.					X	X	
San Joaquin dune beetle <i>Coelus gracilis</i>					X		
Sierra pygmy grasshopper <i>Tetrix sierrana</i>					X	X	
Tight coin (Yate's snail) <i>Ammonitella yatesi</i>					X	X	
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>				X	X		
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>					X	X	
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>					X	X	
Wolly hydroporus diving beetle <i>Hydroporus</i> sp.					X	X	
FISH							
Central Valley steelhead <i>Oncorhynchus mykiss</i>					X		
Delta smelt <i>Hypomesus transpacificus</i>					X		
Green sturgeon <i>Acipenser medirostris</i>					X		
Kern Brook lamprey <i>Lampetra hubbsi</i>					X		
Lahonton cutthroat trout <i>Oncorhynchus clarki henshawi</i>					X		
Longfin smelt <i>Spirinchus thaleichthys</i>					X		
Pacific lamprey <i>Lamptera tridentata</i>					X		
Paiute cutthroat trout <i>Oncorhynchus (=salmo) clarki seleniris</i>					X	X	
River lamprey <i>Lampetra ayresi</i>					X		
Sacramento splittail <i>Pogonichthys macrolepidotus</i>					X		
AMPHIBIANS							
California red-legged frog <i>Rana aurora draytonii</i>		X				X	
California tiger salamander <i>Ambystoma californiense</i>					X	X	
Foothill yellow-legged frog <i>Rana boylei</i>						X	
Mount Lyell salamander <i>Hydromantes platycephalus</i>							X

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Mountain yellow-legged frog <i>Rana muscosa</i>						X	
Western spadefoot toad <i>Scaphiopus hammondi</i>					X	X	
Yosemite toad <i>Bufo canorus</i>							X
REPTILES							
Blunt-nosed leopard lizard <i>Gambelia (=croataphytus) silus</i>			X		X		
California horned lizard <i>Phrynosoma coronatum frontale</i>			X		X	X	
Giant garter snake <i>Thamnophis gigas</i>					X		
Western pond turtle <i>Clemmys marmorata</i>					X	X	
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>					X	X	
Silvery legless lizard <i>Anniella pulchra pulchra</i>					X	X	
BIRDS							
Common loon <i>Gavia immer</i>					X	X	
Double crested cormorant <i>Phalacrocorax auritus</i>			X	X	X	X	
Aleutian Canada goose <i>Branta canadensis leucopareia</i>					X		
Fulvous whistling duck <i>Dendrocygna Bicolor</i>					X	X	
Harlequin duck <i>Histrionicus histrionicus</i>					X	X	
Barrow's goldeneye <i>Bucephala islandica</i>					X	X	
American white pelican <i>Pelecanus erythrorhynchos</i>					X		
California gull <i>Larus californicus</i>			X	X	X		
Lack tern <i>Chlidonias niger</i>					X		
White faced ibis <i>Plegadis chihi</i>		X	X	X	X		
Greater sandhill crane <i>Grus canadensis tabida</i>		X	X	X	X		
Mountain plover <i>Charadrius montanus</i>					X	X	
Long-billed curlew <i>Numenius americanus</i>			X	X	X	X	
Northern harrier <i>Circus cyaneus</i>	X	X	X	X	X	X	
Cooper's hawk <i>Accipiter cooperi</i>	X					X	
Sharp-shinned hawk <i>Accipiter striatus</i>	X					X	
Northern goshawk <i>Accipiter gentilis</i>						X	X
Swainson's hawk <i>Buteo swainsoni</i>	X	X	X	X	X		
Ferruginous hawk <i>Buteo regalis</i>	X	X		X	X	X	
Golden eagle <i>Aquila chrysaetos</i>	X	X		X	X	X	

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Bald eagle <i>Haliaeetus leucocephalus</i>	X	X			X	X	
Osprey <i>Pandio haliaetus</i>						X	X
American peregrine falcon <i>Falco peregrinus anatum</i>	X	X			X	X	
Prairie falcon <i>Falco mexicanus</i>	X	X			X	X	
Merlin <i>Falco columbarius</i>					X	X	
Great grey owl <i>Strix nebulosa</i>							X
Long-eared owl <i>Asio otus</i>					X	X	
Short-eared owl <i>Asio flammeus</i>			X		X		
Western burrowing owl <i>Athene cunicularia</i>		X	X	X	X	X	
California spotted owl <i>Strix occidentalis occidentalis</i>						X	X
Western yellow billed cuckoo <i>Coccyzus americanus occidentalis</i>					X		
Little willow flycatcher <i>Empidonax traillii brewsteri</i>			X		X		
California horned lark <i>Eremophila alpestris actia</i>					X	X	
Black swift <i>Cypseloides niger</i>					X	X	
Vaux's swift <i>Chaetura vauxi</i>						X	
Bank swallow <i>Riparia riparia</i>			X		X		
Least Bell's vireo <i>Vireo bellii pusillus</i>			X		X		
Yellow warbler <i>Dendroica petechia</i>					X	X	
Tricolored blackbird <i>Agelaius tricolor</i>		X	X	X	X		
Yellow-breasted chat <i>Icteria virens</i>					X		
MAMMALS							
California bighorn sheep <i>Ovis canadensis californica</i>							X
Ringtail <i>Bassariscus astutus</i>					X	X	
American badger <i>Taxidea taxus</i>		X			X	X	
Sierra Nevada Mountain beaver <i>Aplodontia rufa californica</i>					X	X	
San Joaquin kit fox <i>Vulpes macrotis mutica</i>		X	X	X	X		
Pacific fisher <i>Martes pennanti pacifica</i>						X	X
Sierra Nevada red fox <i>Vulpes vulpes necator</i>							X
Small-footed myotis bat <i>Myotis ciliolabrum</i>					X	X	
Long-eared myotis bat <i>Myotis evotis</i>					X	X	
Pallid bat					X	X	

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<i>Antrozous pallidus</i>							
Western mastiff bat <i>Eumops perotis californicus</i>					X	X	
Spotted bat <i>Euderma maculatum</i>					X	X	
Fringed myotis bat <i>Myotis thysanodes</i>					X	X	
Long-legged myotis bat <i>Myotis volans</i>					X	X	
Yuma myotis bat <i>Myotis yumanensis</i>					X	X	
Townsend's big-eared bat <i>Plecotus townsendii pallescens</i>					X	X	
Pacific western big-eared bat <i>Plecotus townsendii townsendii</i>					X	X	
Mt. Lyell Shrew <i>Sorex lyelli</i>							X
San Joaquin Valley woodrat <i>Neotoma fuscipes riparia</i>					X		
Short-nosed kangaroo rat <i>Dipodomys nitraoides brevinasus</i>		X	X		X		
Fresno kangaroo rat <i>Dipodomys nitraoides exilis</i>		X	X		X		
Giant kangaroo rat <i>Dipodomys nitraoides ingens</i>		X	X		X		
Tipton kangaroo rat <i>Dipodomys nitraoides nitraoides</i>		X	X		X		
Nelson's antelope ground squirrel <i>Ammospermophilus nelsoni</i>		X			X		
Southern grasshopper mouse <i>Onychomys torridus ramona</i>		X	X		X		
Heermannis Kangaroo rat <i>Dipodomys heermanni</i>		X	X		X		
San Joaquin pocket mouse <i>Perognathus inornatus inornatus</i>					X	X	
Tulare grasshopper mouse <i>Onychomys torridus tularensis</i>		X	X		X		
Sources: California Department of Fish and Game, <i>California Natural Diversity Database</i> , 1996; California Native Plant Society, <i>Electronic Inventory of Rare and Endangered Vascular Plants of California</i> , March 1994; Federal Register Vol 61, No. 40, February 28, 1996. Peterson Field Guides, <i>Freshwater Fishes</i> . 1991. NOTES: ¹ Scientific names are based on the following sources: ABA 1995, Jennings 1983, Hickman 1993, Zeiner <i>et al.</i> 1990. ² For status, season and habitat requirements, see Table 7-2 in the <i>Background Report</i> .							

4.10 FORESTRY RESOURCES

INTRODUCTION

This section describes the impacts on commercial forest resources associated with development under the Draft General Plan.

ENVIRONMENTAL SETTING

Information regarding the types of forest resources and management methods is presented in Chapter 7.8, Natural Resources, Forestry and Timber Resources, in the *General Plan Background Report (Background Report)*. Chapter 7.8 of the *Background Report* is hereby incorporated by reference and summarized below.

Timber lands are defined as land available for timber production and capable of growing at least 20 cubic feet of industrial quality wood per acre per year. Almost all of the timberlands in Fresno County lie within the southern part of the Sierra National Forest and the northern portion of the Sequoia National Forest. The National Forest system falls within the jurisdiction of the U.S. Forest Service (USFS) under the U.S. Department of Agriculture. The boundaries of the Sierra National Forest include portions of Fresno, Inyo, Madera, Mariposa, and Mono counties. The boundaries of the Sequoia National Forest include portions of Fresno, Kings, Tulare, and Inyo counties. Chapter 1, Land Use and Population, details the acreage of both the public and private land holdings within each forest. Approximately 17,000 acres in the County have been zoned as Timberland Preserve Zone. There is no timber production in the incorporated communities in the East Valley or West Valley.

Annual yields within the Sierra National Forest have averaged approximately 88 million board feet but have scaled down to approximately 40 million board feet in recent years. The reduction in acreage available for logging is partially a result of recent endangered species regulations pertaining to the California spotted owl and the red-legged frog requiring immediate land set asides to preserve suitable habitat for these species. It is expected that yields will remain at the 40 million board foot level for the next several years. Timber from the Sierra, Sequoia, and other adjacent National Forests is the only long-term supply for the local wood products industry. The Sierra National Forest supplies 20 to 25 percent of the lumber manufactured in the San Joaquin Valley.

REGULATORY SETTING

Timber production in the Sierra and Sequoia National Forests is governed by federal regulations administered by the USFS and through resource management plans established for each forest. The role of local government is limited with respect to projects, planning, and management of lands within the jurisdiction of the U.S. Forest Service. If a Proposed Project on National Forest land is determined to be incompatible with the direction of an adopted Forest Plan, the project will be revised or not permitted. Conflicts that recur will result in a review of the relevant management direction of the Forest Plan according to its monitoring and evaluation process, and may lead to an amendment or revision to the Forest Plan. Projects on private lands that could affect USFS land "downstream" of the project would be evaluated by the USFS for cumulative or indirect impacts on federal lands.

Private timberlands in California are governed by the Forest Taxation Reform Act of 1976. The Act created the Timberland Production Zone (TPZ) to preserve forest lands from encroachment by other incompatible land uses. The Act identifies five compatible uses: management for watershed, management for fish and wildlife, or hunting and fishing; uses related to the growing, harvesting, processing of forest products; construction, alteration, or maintenance of utility facilities; and grazing. Residential use is discouraged, but allowed, by approval of a special use permit. Timber harvests on private lands not located within a TPZ are required to submit and obtain approval of a Timber Harvest Plan from the California Department of Forestry and Fire Protection (CDF).

The Fresno County Zoning Ordinance provides for a Timberland Preserve Zone designation, which differs from the federal TPZ. Section 814 of the Zoning Ordinance provides that the TPZ is intended to be an exclusive district for the growing and harvesting of timber and for uses that are an integral part of a timber management operation. Residential, commercial, and non-timber-related industrial uses and services to support those land uses and services to support those land uses are expressly prohibited in the TPZ. Section 814.5 requires a minimum lot area of 40 contiguous acres under a single ownership.

PLAN ELEMENTS

Development under the Draft General Plan would result in residential, commercial, industrial, and public uses being constructed in areas where forestry resources are present. The Draft General Plan contains the following policies that address forestry resources:

Policy OS-B.1	The County shall encourage the sustained productive use of forest land as a means of providing open space and conserving natural resources.
Policy OS-B.2	The County shall work closely with agencies involved in the management of forest ecosystems and shall coordinate with State and Federal agencies, private landowners, and private preservation/conservation groups in habitat preservation and protection of rare, endangered, threatened, and special concern species, to ensure consistency in efforts and to encourage joint planning and development of areas to be preserved. The County shall encourage State and Federal agencies to give notice to and coordinate with the County on any pending, contemplated, or proposed actions affecting local communities and citizens of the County. The County will encourage State and Federal agencies to address adverse impacts on citizens and communities of Fresno County, including environmental, health, safety, private property, and economic impacts.
Policy OS-B.3	The County shall coordinate with agencies involved in the regulation of timber harvest operations to ensure that County conservation goals are achieved.
Policy OS-B.4	The County shall review all proposed timber harvest plans and shall request that the California Department of Forestry and Fire Protection and the U.S. Forest Service amend the plans to address public safety concerns, such as requiring alternate haul routes if use of proposed haul routes would jeopardize public safety or result in damage to public or private roads.
Policy OS-B.5	The County shall encourage and promote the productive use of wood waste generated in the County.
Policy OS-B.6	The County shall encourage and support conservation programs to reforest private timberlands.
Policy OS-B.7	The County shall protect forest resources for the production of timber resources and related activities.

Policy OS-B.8	The County shall discourage the development of land uses that conflict with timberland management.
Policy OS-B.9	The County shall encourage qualified landowners to enroll in the Timberland Production Zone program, pursuant to the Timberland Productivity Act of 1982.
Policy OS-B.10	The County shall maintain Timberland Production designations. Rezoning from the Timberland Production Zone District shall be based on criteria and procedures in accordance with the State Forest Taxation Reform Act and the Fresno County Zoning Ordinance.
Policy OS-B.11	The County shall require parcels removed from the Timberland Production Zone in accordance with the Fresno County Zoning Ordinance to revert to the Resource Conservation Zone District. Removal from the Timberland Production Zone District shall be effective ten (10) years from the date the rezoning is approved or as otherwise specified by the State Forest Taxation Reform Act.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The analysis of forest resources is a qualitative assessment of the effects of existing and potential operations near existing and potential areas of new urban development. The location of new growth in the County is assumed to be primarily in the Fresno-Clovis metropolitan area.

Standards of Significance

Impacts associated with forest resources are deemed significant if development under the Draft General Plan would result in:

- substantial conflicts between existing forestry operations and existing or newly developed land uses; or
- a substantial reduction of the availability in forestry resources in the County.

Impacts and Mitigation Measures

4.10-1 Development under the Draft General Plan could result in the conversion of private forest lands to non-forestry uses or create land use incompatibilities between timber operations and adjacent land uses.

Almost all of the timberlands in Fresno County lie within the southern part of the Sierra National Forest and the northern portion of the Sequoia National Forest. Land within a TPZ cannot be converted to a non-forestry use without a rezoning through the County and approval by the State Board of Forestry.

Almost all of the development under the Draft General Plan would occur in the incorporated areas of Fresno, Clovis, and smaller incorporated communities in the valley where timber crop production does not occur. Future growth with or without the project would increase the amount of land converted to developed uses in the unincorporated areas, including the foothills and mountains. The amount of land converted would be similar. If development were to occur on private forest lands in the

unincorporated areas within the foothills or mountains, Draft General Plan Policies OS-B.2 and OS-B.8 and the County's ordinance for TPZs would ensure that the production and harvesting of forest resources would not be affected within the production area. Policies OS-B.2 and OS-B.4 would help minimize the effects of traffic, noise, air quality, and other environmental effects on nearby residential or other non-forestry land uses. In addition, Draft General Plan Policies OS-B.1, OS-B.3, and OS-B.6 through OS-B.11 also provide direction for land use decisions regarding forestry resources. Therefore, impacts related to the conversion of private forest lands to non-forestry uses or land use incompatibilities would be ***less than significant***.

Mitigation Measures

4.10-1 *None required.*

4.10-2 Development under the Draft General Plan would increase the demand for timber resources.

Annual yields within the Sierra National Forest have averaged approximately 88 million board feet but have scaled down to approximately 40 million board feet in recent years. It is expected that yields will remain at the 40 million board foot level for the next several years. Timber from the Sierra, Sequoia, and other adjacent National Forests is the only long-term supply for the local wood products industry.

Future development in Fresno County with or without the Proposed Project would increase the demand for this renewable resource. The type and amount of forestry products consumed as part of development would not vary substantially, regardless of whether the products are used in unincorporated or incorporated areas. The availability of wood products to meet future demand is not limited to locally produced materials. Further, as described in Impact 4.10-1, above, implementation of the Proposed Project would not preclude access to or use of existing or future yields from National Forest lands in Fresno County. Further, General Plan policies OS-B.1 through OS-B.3, OS-B.5 through OS-B.7, and OS-B.9 through OS-B.11 encourage the sustained productive use of forest land. Therefore, the Proposed Project would not result in a substantial reduction in availability of forestry resources, and this impact is considered ***less than significant***.

Mitigation Measures

4.10-2 *None required.*

Cumulative Impacts

The cumulative context for forestry resources is development within the Sierra Nevada foothills and Sierra Nevada, primarily on forest lands, through the year 2020. Development in these areas could result in the conversion of private forest lands to non-forestry uses or create land use incompatibilities between timber operations and adjacent land uses within the region or contribute to an increase in demand for timber resources within the region.

4.10-3 The Proposed Project, in combination with cumulative development, could convert forest lands to non-forest uses, and/or create land use incompatibilities between timber operations and other land uses.

The Proposed Project by itself (i.e., the growth attributable directly to the Economic development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the project. The difference between the project and not approving the project is the growth that would occur in the employment sector and the mix of employment and the patterns of development that would occur in the unincorporated area. Impacts 4.10-1 and 4.10-2, above, consider the effects of growth related directly to the project along with the growth that is projected to occur with or without project. Consequently, each impact addresses both cumulative (partially) and project-specific impacts.

For forestry, impacts would not be considered cumulatively significant because the pattern of development does not significantly encroach upon the forested areas. The commercial demand for timber products is market-driven, controlled in large part by the federal government, and the Proposed Project would not involve any actions that would directly affect the forestry industry. Because, there would not be a considerable contribution to cumulative impacts on forestry resources, the cumulative impact is considered ***less than significant***.

Mitigation Measures

4.10-3 *None required beyond Draft General Plan Policies OS-B.1 through OS-B.11.*

4.11 MINERAL RESOURCES

INTRODUCTION

This section describes the impacts on County mineral resources associated with the urban development envisioned under the Draft General Plan and impacts associated with extraction of those mineral resources that would be expected to occur under the 20-year timeframe of the Draft General Plan. Specifically, this section focuses on how development at the proposed intensities would affect the availability of mineral resources, result in land use conflicts, or affect supply.

ENVIRONMENTAL SETTING

Mineral resources within Fresno County are described in Chapter 7.9, Natural Resources, Mineral Resources in the *Fresno County General Plan Background Report*, which is hereby incorporated by reference and summarized below.

Fresno County has been a leading producer of minerals because of the abundance and wide variety of mineral resources that are present in the County. Extracted resources include aggregate products (sand and gravel), fossil fuels (oil and coal), metals (chromite, copper, gold, mercury, and tungsten), and other minerals used in construction or industrial applications (asbestos, high-grade clay, diatomite, granite, gypsum, and limestone). Figure 7-7 Mineral Resource Locations, in the *General Plan Background Report (Background Report)* illustrates the general distribution of minerals throughout the County. However, the California Division of Mines and Geology (CDMG) has not performed a comprehensive survey of all potential mineral resource locations or classified other locations within the County into Mineral Resource Zones (MRZ).

For the period 1994 - 95, there were 18 active mines and mineral producers in Fresno County. The principal mineral producing locations and commodities are shown in Figure 7-8 in the *Background Report*. Fluctuating markets have affected the rate of extraction, but the potential for meeting future market demand remains good for several of the minerals.

Aggregate and petroleum are considered the County's most significant extractive mineral resources. The State Department of Conservation, Division of Mines and Geology has classified land as Mineral Resource Zone 2 (MRZ-2) along the San Joaquin River and Kings River, as shown in Figure 7-9 in the *Background Report*. Figures 7-10 and 7-11 in the *Background Report* show the locations of the MRZs in greater detail.

The original 1988 study that classified aggregate resources in the Fresno Production-Consumption (P-C) Region, leading to the designations along the San Joaquin and Kings Rivers, was updated in 1999. As of December 1997, seven mines, operated by six different companies, were producing Portland cement concrete (PCC)-grade aggregate in the Fresno P-C Region. In 1997, annual demand was

approximately 4.7 million tons, based on a population of 748,000. The calculated annual per capita consumption was 6.5 tons. All of the aggregate produced within the Fresno P-C Region is consumed within the region. Based on current estimates, the 93 million tons of presently permitted Portland cement concrete (PCC)-grade aggregate resources (reserves) with the Fresno P-C region will supply regional demand until the year 2011.

The aggregate resources on the San Joaquin River, which have been the primary source of construction materials for almost all of the construction in the Fresno region are almost depleted, as evidenced by their reclassification to MRZ-1. Designated resources on the Kings River deposits are the only other locally available sources for aggregate in the most densely urbanized areas where most of the future growth is anticipated to occur. Figures 7-12 and 7-13 in the *Background Report* illustrate the locations of aggregate resource areas along the San Joaquin and Kings Rivers, respectively. In December 1999, Calaveras Minerals Inc. (CMI) was granted an Unclassified Conditional Use Permit for extraction and processing operations on the Kings River. Projected processing volumes are estimated to be 2 million tons per year by approximately 2006.

Oil production has long been a major industry in western Fresno County, particularly in the Coalinga area. Extensive oil recovery operations are located mostly to the north of the city of Coalinga. Oil companies such as Chevron USA, Union Oil Company, Shell Production, and Santa Fe Energy have substantial land holdings in the area. Natural gas and natural gas liquids occur in oil sands or with oil in an overlying gas cap or as dry gas in separate zones in oilfields and in separate gas fields.

REGULATORY SETTING

Mineral Resource Zones

Sections 2761(a) and (b) and 2790 of the *Surface Mining and Reclamation Act (SMARA)* provide for a mineral lands inventory process termed classification-designation. The California Division of Mines and Geology, and the State Mining and Geology Board are the state agencies responsible for administering this process. The primary objective of the process is to provide local agencies, such as cities and counties, with information on the location, need, and importance of minerals within their respective jurisdictions. It is also the intent of this process, through the adoption of Draft General Plan mineral resource management policies, that this information be considered in future local land-use planning decisions. Areas are classified on the basis of geologic factors, without regard to existing land use and land ownership. The areas are categorized into four MRZs. Of the four categories, lands classified as MRZ-2 are of the greatest importance because they identify significant mineral deposits of a particular commodity. MRZ-3 areas are also of interest because they identify areas that may contain additional resources of economic importance. Areas designated by the Mining and Geology Board as "regionally significant" are incorporated by regulation into Title 14, Division 2 of the California Code of Regulations. Such designations require that a lead agency's land use decisions involving designated areas are made in accordance with its mineral resource management policies, and that they consider the importance of the mineral resource to the region or the state as a whole and not just the lead agency's jurisdiction.

Local Mineral Resource Management Plans

The San Joaquin Regional Parkway Plan is a regional resource management plan for the San Joaquin River. The Parkway Plan contains several mineral resources goals and objectives that support the Parkway purposes. The City of Fresno General Plan (current adopted plan and draft update) and the current Fresno Municipal Code Zoning Ordinance contain policies requiring the protection of aggregate resources and the reclamation of mined areas in the Parkway. A Regional Plan for the Kings River, first adopted in 1976, was amended in 1987 to include the MRZ-2 zones. Land use planning components of the Parkway Plan and Kings River Regional Plan are described in greater detail in Chapter 1, Land Use, in the *Background Report*.

Development Near Oil and Gas Fields

No building intended for human occupancy may be located near any active oil or gas well unless suitable safety and fire protection measures and setbacks are approved by the local fire department.

The State Oil and Gas Supervisor is authorized to order the reabandonment of any previously plugged and abandoned well when construction of any structure over or in the proximity of the well could result in a hazard (Public Resources Code Section 3208.1). In addition, if any plugged and abandoned or unrecorded wells are damaged or uncovered during excavation or grading, the State requires specific notification and remedial plugging operations.

PLAN ELEMENTS

Development under the Draft General Plan would increase the number of people in existing incorporated areas, primarily Fresno and Clovis, and their spheres of influence. Development in western Fresno County and other unincorporated areas would be limited. The Draft General Plan would result in residential, commercial, industrial, and public uses being constructed in areas where mineral resources are present or could exist. The Draft General Plan contains the following policies that address mineral resources:

Policy OS-C.1	The County shall not permit incompatible land uses within the impact area of existing or potential surface mining areas.
Policy OS-C.2	The County shall not permit land uses incompatible with mineral resource recovery within areas designated as Mineral Resource Zone 2 (MRZ-2). (See Figures 7-9, 7-10, and 7-11 in <i>Fresno County General Plan Background Report</i>).
Policy OS-C.3	The County shall require that the operation and reclamation of surface mines be consistent with the State Surface Mining and Reclamation Act (SMARA) and special zoning ordinance provisions.
Policy OS-C.4	The County shall impose conditions as necessary to minimize or eliminate the potential adverse impact of a mining operation on surrounding properties.
Policy OS-C.5	The County shall require reclamation of all surface mines consistent with SMARA and the County's implementing ordinance.

Policy OS-C.6	The County shall accept California Land Conservation (Williamson Act) Contracts on land identified by the State as containing significant mineral deposits subject to the use and acreage limitations established by the County.
Policy OS-C.7	The County shall require that new non-mining land uses adjacent to existing mining operations be designed to provide a buffer between the new development and the mining operations. The buffer distance shall be based on an evaluation of noise, aesthetics, drainage, operating conditions, biological resources, topography, lighting, traffic, operating hours, and air quality.
Policy OS-C.9	The County shall require that any proposed changes in land use within areas designated MRZ-2 along the San Joaquin and Kings Rivers comply with the provisions of SMARA.
Policy OS-C.10	The County shall not permit land uses that threaten the future availability of mineral resource or preclude future extraction of those resources.
Policy OS-C.11	The County shall undertake a comprehensive, watershed-based planning effort to assess future extraction of the aggregate resources and recreation uses along the Kings River as a part of an update of the Kings River Regional Plan. Such a planning effort would help to facilitate use of the resource while protecting other Kings River watershed resources and functions, including floodplain areas. (See Policy OS-H.10, Policy LU-C.4, and Program LU-C.A)
Policy OS-C.12	<p>Fresno County shall be divided into three areas for the regulation of oil and gas development.</p> <ol style="list-style-type: none"> Urban areas including all land within one-fourth mile of the planned urban boundaries shown on adopted community plans. Established oil and gas fields as determined and updated by the California Division of Oil and Gas, excluding urban areas except where specifically included in these policies. Non-urban areas including all land not within either established oil and gas fields or urban areas. A non-urban area's designation shall be changed to an established oil and gas field designation upon: (1) its identification by the Division of Oil and Gas as an oil and gas field, and (2) subsequent approval by the County.
Policy OS-C.13	The County shall require a special permit for certain oil and gas activities and facilities as specifically noted in the Oil and Gas Development Matrix (Table OS-C.1) due to their potential significant adverse effects on surrounding land or land uses.
Policy OS-C.14	The County shall permit by right small-scale oil and gas activities and facilities that can be demonstrated to not have a significant adverse effect on surrounding or adjacent land uses in an established oil and gas field, an established oil and gas field in urban areas, or non-urban areas.
Policy OS-C.15	The County may permit oil refineries to locate within areas designated by the General Plan for industrial uses. Limited oil refining plants may be permitted to locate in non-urban areas provided: the plant is limited to only fractionating and blending operations; the plant is within an established oil and gas field or within one mile of the exterior boundary of each of two (2) or more noncontiguous oil and gas fields; the site has access to both natural gas and crude oil transmission pipelines and a system of feeder pipelines from nearby gas and oil fields; the plant is limited to a refining capacity of 15,000 barrels of crude oil per day; and the site has been previously used for refining purposes.

**STATE MINERAL RESOURCE POLICIES
PUBLIC RESOURCES CODE SECTION 2762-2763
(POLICY OS-C.9)**

Section 2762

(d) If any area is classified by the State Geologist as an area described in paragraph (2) of subdivision (b) of section 2761, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a), or otherwise has not yet acted pursuant to subdivision (a), then prior to permitting a use in which would threaten the potential to extract minerals in that area, the lead agency shall prepare, in conjunction with preparing any environmental document required by Division 13 (commencing with Section 21000), or in any event if no such document is required, a statement specifying its reasons for permitting the proposed use, and shall forward a copy to the State Geologist and the board for review.

If the proposed use is subject to the requirements of Division 13 (commencing with Section 21000), the lead agency shall comply with the public review requirements of that division. Otherwise, the lead agency shall provide public notice of the availability of its statement by all of the following:

- (1) Publishing the notice at least one time in a newspaper of general circulation in the area affected by the proposed use.
- (2) Directly mailing the notice to owners of property within one-half mile of the parcel or parcels on which the proposed use is located as those owners are shown on the latest equalized assessment role.

The public review period shall not be less than 60 days from the date of the notice and shall include at least one public hearing. The lead agency shall evaluate comments received and shall prepare a written response. The written response shall describe the disposition of the major issues raised. In particular, when the lead agency's position on the proposed use is at variance with recommendations and objections raised in the comments, the written response shall address in detail why specific comments and suggestions were not accepted.

(e) Prior to permitting a use which would threaten the potential to extract minerals in an area classified by the State Geologist as an area described in paragraph (3) of subdivision (b) of Section 2761, the lead agency may cause to be prepared an evaluation of the area in order to ascertain the significance of the mineral deposit located therein. The results of such evaluation shall be transmitted to the State Geologist and the board.

Section 2763

(a) If an area is designated by the board as an area of regional significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead agency land use decisions involving areas designated as being of regional significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of these minerals to their market region as a whole and not just their importance to the lead agency's area of jurisdiction.

(b) If an area is designated by the board as an area of statewide significance, and the lead agency either has designated that area in its general plan as having important minerals to be protected pursuant to subdivision (a) of Section 2762, or otherwise has not yet acted pursuant to subdivision (a) of Section 2762, then prior to permitting a use which would threaten the potential to extract minerals in that area, the lead agency shall prepare a statement specifying its reasons for permitting the proposed use, in accordance with the requirements set forth in subdivision (d) of Section 2762. Lead agency land use decisions involving areas designated as being of statewide significance shall be in accordance with the lead agency's mineral resource management policies and shall also, in balancing mineral values against alternative land uses, consider the importance of the mineral resources to the state and nation as a whole.

Policy OS-C.16	The County shall require manufacturing and marketing activities and facilities that serve the petroleum industry to be located in the appropriate areas designated by the General Plan.
Policy OS-C.17	The County shall require the timely reclamation of oil and gas development sites upon termination of such activities to facilitate the conversion of the land to its primary land use as designated by the General Plan.
Policy OS-C.18	The County shall establish procedures to ensure that exploration and recovery of mineral resources, including oil and natural gas, will occur under appropriate locational and operational standards within the Agriculture and Westside Rangeland.
Policy OS-C.19	The County shall require non-petroleum-related discretionary projects proposed on abandoned oil fields to demonstrate that abandonment and cleanup have taken place in compliance with regulations administered by the State Division of Oil and Gas (California Public Resources Code Section 2300 et seq.) as part of the due diligence procedures.
Policy OS-C.20	The County shall not allow any building intended for human occupancy to be located near any active petroleum well unless suitable safety and fire protection measures and setbacks are approved by the local fire district.
Policy LU-A.4	The County shall require that the recovery of mineral resources and the exploration and extraction of oil and natural gas in areas designated Agriculture comply with the Mineral Resources Section of the Open Space and Conservation Element.
Policy LU-B.4	The County shall require that the recovery of mineral resources and the exploration and extraction of oil and natural gas in areas designated Westside Range and comply with Sections OS-C, Mineral Resources, of the Open Space and Conservation Element.
Policy LU-C.4	The County may allow the extraction of rock, sand, and gravel resources along the Kings River consistent within the Kings River Regional Plan policies and Section OS-C, Minerals Resources, of the Open Space and Conservation Element.
Policy LU-C.5	The County may allow the extraction of rock, sand, and gravel resources along the San Joaquin River consistent with the Minerals Resources section policies of the Open Space and Conservation Element.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The mineral resources analysis is a qualitative assessment of the effects of existing and potential mineral extraction sites near existing and potential areas of new urban development. The location of new growth in the County is assumed to be primarily in the Fresno-Clovis metropolitan area.

Standards of Significance

For the purpose of this EIR, an impact is considered significant if development under the Draft General Plan would:

TABLE OS-C.1 OIL AND GAS DEVELOPMENT MATRIX				
Major Activities and Facilities		Urban Areas	Established Oil and Gas Fields	Non-Urban Areas
Oil and Gas Exploration, Drilling and Production				
	Exploratory and Production Drilling	○	●	○
	Drill Site and Pumping Equipment	○	●	○
	Production Tanks and Gauging Facilities	○	●	○
	Produced Water Treatment Facilities	○	●	○
	Production Separators (Oil-Gas-Water)	○	●	○
	Oil Field Service Lines	○	●	○
Oil and Gas Field Operations				
	Gas Compressor or Absorption Plant	○	○	○
	Steam Injection Plant	○	○	○
	Other Secondary and Tertiary Recovery Facilities	○	○	○
	Oil Cleaning Plant	X	○	○
	Natural Gas Processing Plants	X	○	○
	LPG Storage	X	○	○
	Major Petroleum Transmission and Trunk Lines	X	○	○
	Tank Farms	X	○	○
	Pumping Plants	X	○	○
Oil and Gas Auxiliary Operations				
	Offices	X	○	X
	Shops	X	○	X
	Laboratories	X	○	X
	Work Camp Living Facilities	X	○	X
	Storage Yards and Storage Facilities	X	○	X
	Oil Well Services	X	○	X
	Oil Refineries	X	X	X
	Limited Oil Refining Plants	X	○	○
● Permitted by Right ○ Subject to Special Permit X Not Permitted				

- result in substantial conflict between existing mineral extraction operations and existing or new urban or suburban land uses; or
- result in the loss of availability of significant mineral deposits in the County.

Impacts and Mitigation Measures

4.11-1 Development under the Draft General Plan could result in the reduction of the amount of land available for mineral resource extraction.

Although the locations of major sand and gravel deposits, oil and natural gas fields, and other mineral commodities are known, not all areas of the County have been comprehensively investigated by the State or the County to identify other mineral deposits and potential land use planning implications. If development were to occur in locations where the presence or extent of extractive mineral resources has not been clearly delineated, access to those minerals could be restricted or eliminated as a result of development. Such effects could occur with or without the project as growth-related development occurs in the incorporated and unincorporated areas of the County. In addition, many areas along the Kings River and a few locations along the San Joaquin River have been designated by the State Geologist as containing regionally significant sand and gravel deposits. Draft General Plan Policies OS-C.2, OS-C.10, and OS-C.18 direct the County to consider information on the location and status of known or potential mineral deposits within the County. This would ensure that mineral resources are identified and recognized in future land use planning efforts in the unincorporated areas. Although many locations containing these deposits are within city limits and, therefore, are not under County jurisdiction, changes in land use or development at these locations would be subject to the requirements of the Surface Mining and Reclamation Act (SMARA) Sections 2762-2763, as indicated in Draft General Plan Policy OS-C.9. In addition, Draft General Plan Policy OS-C.10 would minimize the potential for future development to threaten the availability of mineral resources.

Effective implementation of the policies listed above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.11-1 No mitigation is required beyond Draft General Plan Policies OS-C.2, OS-C.9, OS-C.10, and OS-C.18 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.

Although Draft General Plan policies would reduce potentially significant impacts related to mineral resource extraction within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.11-2 Development under the Draft General Plan could result in land use incompatibilities with adjacent mineral extraction operations.

Development under the Draft General Plan would require the use of aggregate or other mineral resources that could be extracted from existing and future deposits, some of which may be located within or adjacent to river habitats or other environmentally sensitive areas. In addition, some of the anticipated growth under the Draft General Plan could occur adjacent to areas of significant mineral resources designated as MRZ-2 or mineral extraction operations. Conflicts between existing or future mineral resource extraction sites and potential urban and suburban development could occur with the MRZ-2 areas along the San Joaquin River and Kings River. Such conflicts could occur with or without the project as growth-related development occurs in the County. Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5 provide several mechanisms for the County to ensure that mining operations are performed safely and with regard to natural resources, and that land use conflicts are minimized. These policies, which would apply to locations in the unincorporated areas: discourage the development of incompatible land uses in such areas; require establishment of buffer zones; require preparation of operation and reclamation plans that describe how environmental effects of mining will be minimized; and allow the County discretionary authority to permit mining. For petroleum operations, applicable State laws and regulations specify development requirements that must be adhered to.

Effective implementation of the policies listed above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measure

4.11-2 *No mitigation is required beyond Draft General Plan Policies OS-C.1 through OS-C.7, OS-C.9 through OS-C.20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would reduce potentially significant land use incompatibility impacts related to mineral resource extraction within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.11-3 Development under the Draft General Plan would incrementally contribute to a reduction in aggregate resources, which may be depleted prior to 2020.

The Proposed Project would not involve any changes in extractive mineral resource operations. However, as noted in Impact 4.11-2, above, development under the Draft General Plan would increase the number of buildings, roadways, and other structures that would use aggregate materials in their

construction. The greatest amount of growth would occur in the incorporated areas of the East Valley, most of which are located in the Fresno P-C Region. Based on the updated (1999) Fresno P-C Region study, several issues were identified related to the production and future demand of aggregate resources. The 93 million tons of presently permitted PCC-grade aggregate resources (reserves) within the Fresno P-C Region will supply the demand of the region until the year 2011. The anticipated consumption of aggregate through the year 2047 is estimated to be 528 million tons, of which 264 million tons must be PCC quality. Draft General Plan Policies LU-C.4, LU-C.5, and OS-C.11 allow for the continued extraction of rock, sand, and gravel resources along the Kings and San Joaquin Rivers.

Current annual production capacity within the region is less than the annual consumption rate. Aggregate resources along the San Joaquin River are limited. With the Conditional Use Permit granted to CMI, additional deposits will be extracted along the Kings River. However, this would only provide a portion of future demand. Limited aggregate resources are available in the Coalinga area. Consequently, future supplies, including those along the Kings River, may not meet the demand of future growth that could occur with or without the project.

Future growth (with or without the project) would incrementally contribute to reduction of aggregate resources and the subsequent depletion of those resources. The long-term commitment of aggregate resources is, as yet, an unavoidable consequence of urban growth. However, this would not result in any direct significant impacts on the environment because available resources would be protected through implementation of Draft General Plan policies and MRZ-2 designations, as discussed in Impact 4.11-1, above. Specifically, Policies OS-C.9, OS-C.11, and LU-C.4 would apply to aggregate resources along the Kings River, which would be the primary source of aggregate in the Fresno P-C Region in the future. To the extent that Draft General Plan policies and applicable regulations provide for future permitted operations while protecting environmental resources, aggregate could continue to be mined from that area.

Indirect effects on transportation systems, vehicle miles traveled, and associated increases in air emissions or noise levels could occur if new or additional aggregate resources are obtained outside the Fresno P-C Region to meet future demand. It would be speculative to identify where such impacts could occur and their effects on regional resources. Other sources of construction materials may be identified in the future (e.g., quarries), and permitted operations would only be allowed consistent with Draft General Plan policies and applicable regulations, which would minimize potential environmental effects. The depletion of aggregate resources could also have economic effects by limiting future growth and employment opportunities. However, this would not result in a physical change in the environment, and this is considered a ***less-than-significant impact***.

Mitigation Measures

4.11-3 *None required.*

Cumulative Impacts

The cumulative context for loss of mineral resources is development through the year 2020 in the Central Valley, Coast Range and Sierra Nevada foothills, and Sierra Nevada, primarily on undeveloped or unaltered land containing known mineral resources.

4.11-4 Development under the Draft General Plan, in combination with other cumulative development, could result in the reduction of the amount of land available for mineral resource extraction, land use incompatibilities with adjacent mineral extraction operations, and incremental loss of aggregate resources.

Impacts 4.11-1 through 4.11-3, above, consider the effects of growth related directly to the project along with the growth that is projected to occur with or without project. Because Fresno County has been a leading producer of aggregate minerals, the loss of this resource reaches beyond the Central Valley to the extent other regions have relied upon these resources. While other mineral resource areas are available, to the extent that existing or potential future mineral resource areas are developed, or are encroached upon by development, the loss due to cumulative development would be considered ***significant***.

Mitigation Measure

4.11-4 *None available beyond Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.4, and LU-C.5.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.12 AIR QUALITY

INTRODUCTION

Air quality is an environmental factor that helps to define the quality of life throughout the San Joaquin Valley. In Fresno County, ambient air quality conditions presently do not meet all federal or state-level standards. The growth anticipated under the Draft General Plan (including the Proposed Project) could contribute new emissions of air pollutants to the regional airshed and could cause new sources of emissions that would have more localized effects. This section evaluates emissions associated with this growth, and the extent to which General Plan's policies and measures would reduce project-related emissions. Traffic-related, construction and operational air pollutant emissions are addressed, as well as odor and toxic air contaminants.

ENVIRONMENTAL SETTING

Air quality conditions in Fresno County are addressed in Chapter 8, Air Quality, of the *General Plan Background Report (Background Report)*, which is hereby incorporated by reference. To summarize, the San Joaquin Valley Air Basin is defined by the surrounding mountain ranges. The topography creates a sheltered valley that tends to trap stable air and air pollutants. Federal and State ambient air quality standards for ozone (O₃) and particulate matter less than or equal to ten microns in diameter (PM₁₀) are not met in Fresno County. This is due to the combined effect of pollutants that are emitted both upwind of Fresno County and within the borders of the County. Carbon monoxide (CO) concentrations in Fresno County presently meet the standards, but it remains a pollutant of concern, because CO is emitted directly by automobiles and tends to build in high concentrations around traffic congestion.

Ozone is formed in the atmosphere by photo-chemical reactions between reactive organic compounds (ROG) and nitrogen oxides (NO_x) that are emitted throughout the air basin and in areas upwind of the air basin. PM₁₀ tends to be emitted either directly from dust-generating sources or can be formed in the atmosphere as a precipitate of sulfur oxides or nitrogen oxides. Sources of these pollutants and their precursors include mobile sources (e.g., automobiles and trucks), area sources (e.g., farming activities or use of consumer products), and stationary sources (such as industrial facilities).

REGULATORY SETTING

Federal, State, regional, and local governments all have some responsibility for protecting air quality. Federally-defined ambient air quality standards derived by the U.S. Environmental Protection Agency (U.S. EPA) pursuant to the federal Clean Air Act are used throughout the nation to characterize air quality conditions. Additionally, California ambient air quality standards pursuant to the California Clean Air Act provide more stringent standards. Areas with air quality conditions not meeting the standards (i.e., non-attainment) are required to prepare and adopt clean air plans demonstrating the

methods that will be implemented to reach attainment.

Regional air quality management and preparation of the attainment plans for the air basin is accomplished by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD). The district has primary responsibility for control of air pollution from stationary sources. The SJVUAPCD's rules and regulations apply to sources such as paints, water heaters, landfills, dust-generating activities, and a wide range of industrial processes. Along with direct regulation of stationary sources, the SJVUAPCD participates in coordinating regional transportation planning and congestion management efforts that affect air quality.

PLAN ELEMENTS

The Draft General Plan includes policies and programs to reduce emissions and guide county-wide growth. Development under the Draft General Plan would result in growth of population, employment, and developed land uses as described in Chapter 2, Project Description. Expansion of county-wide population, employment, and developed land uses each lead to the expansion of activities that have the potential to generate adverse air quality effects.

The Draft General Plan includes land use and transportation-related strategies that would reduce the air quality effects of the growth anticipated under the Draft General Plan. The land-use related air quality policies address four objectives: to keep growth in existing development areas; to encourage compact development; to encourage mixed-use development; and to encourage pedestrian and transit-oriented development. Policies addressing this strategy are in the Land Use Element. The main air quality-related transportation strategy is to make transportation infrastructure improvements that will reduce motor vehicle trips and vehicle miles traveled and encourage an increase in the share of non-automobile trips. Policies addressing this strategy are included in the Transportation and Circulation Element.

The following policies from the Draft General Plan are relevant to the Proposed Project:

- | | |
|---------------|---|
| Policy OS-G.1 | The County shall develop standard methods for determining and mitigating project air quality impacts and related thresholds of significance for use in environmental documents. The County will do this in conjunction with the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and the cities in Fresno County. |
| Policy OS-G.2 | The County shall ensure that air quality impacts identified during the CEQA review process are fairly and consistently mitigated. The County shall require projects to comply with the County's adopted air quality impact assessment and mitigation procedures. |

Coordination and Cooperation

- | | |
|---------------|--|
| Policy OS-G.3 | The County shall participate with cities, surrounding counties, and regional agencies to address cross-jurisdictional and regional transportation and air quality issues. |
| Policy OS-G.4 | The County shall consult with the SJVUAPCD during CEQA review for projects that require air quality impact analysis and ensure that the SJVUAPCD is on the distribution list for all CEQA documents. |

- Policy OS-G.5 The County shall participate with cities, surrounding counties, and regional agencies in the San Joaquin Valley in efforts to promote consistent air quality programs and implementation programs to the extent possible (e.g., transportation control measures, trip reduction ordinances, indirect source programs, etc.).

Integrated Planning

- Policy OS-G.6 The County shall require all Fresno County transportation improvement projects that increase capacity by adding additional through lanes to be included in regional transportation plans and be consistent with the air quality goals and policies of the General Plan.

Public Facilities/Operation

- Policy OS-G.7 The County shall develop and implement employer-based trip reduction programs for County employees.
- Policy OS-G.8 The County shall encourage its departments to consider telecommuting programs as a trip reduction strategy.
- Policy OS-G.9 The County fleet vehicle operators shall implement vehicle replacement practices that place a priority on replacement of older higher-emission vehicles and on purchasing new vehicles with engines using best available technologies and advanced fuels where feasible, consistent with cost-effective management of the program.
- Policy OS-G.10 The County shall support the use of teleconferencing in lieu of employee travel to conferences and meetings when feasible.

Congestion Management/Transportation Control Measures

- Policy OS-G.11 The County shall encourage the establishment of public/private partnerships to develop satellite and neighborhood work centers for telecommuting.
- Policy TR-A.2 The County shall plan and design its roadway system in a manner that strives to meet Level of Service (LOS) D on urban roadways within the spheres of influence of the cities of Fresno and Clovis and LOS C on all other roadways in the county. Roadway improvements to increase capacity and maintain LOS standards should be planned and programmed based on consideration of the total overall needs of the roadway system, recognizing the priority of maintenance, rehabilitation, and operation of the existing road system.

The County may, in programming capacity-increasing projects, allow exceptions to the level of service standards in this policy where it finds that the improvements or other measures required to achieve the LOS policy are unacceptable based on established criteria. In addition to consideration of the total overall needs of the roadway system, the County shall consider the following factors:

- a. The right-of-way needs and the physical impacts on surrounding properties;
- b. Construction and right-of-way acquisition costs;
- c. The number of hours that the roadway would operate at conditions below the standard;
- d. The ability of the required improvement to significantly reduce delay and improve traffic operations; and

- e. Environmental impacts upon which the County may base findings to allow an exceedance of the standards.

In no case should the County plan and design for worse than LOS D on rural County roadways, worse than LOS E on urban roadways within the spheres of influence of the cities of Fresno and Clovis, or in cooperation with Caltrans and the Council of Fresno County Governments, plan for worse than LOS E on State highways in the County.

Policy TR-A.14 The County shall work with the cities of Fresno County in establishing a system of designated truck routes through urban areas.

Policy TR-A.15 The County shall encourage street designs for interior streets within new subdivisions which protect neighborhoods from the intrusion of through traffic.

Toxic and Hazardous Emissions

Policy OS-G.12 The County shall continue, through its land use planning processes, to avoid inappropriate location of residential uses and sensitive receptors in relation to uses that include but are not limited to industrial and manufacturing uses and any other use which have the potential for creating a hazardous or nuisance effect.

Particulate Matter/Fugitive Dust

Policy OS-G.13 The County shall include fugitive dust control measures as a requirement for subdivision maps, site plans, and grading permits. This will assist in implementing the SJVUAPCD's particulate matter less than ten microns (PM₁₀) regulation (Regulation VIII). Enforcement actions can be coordinated with the Air District's Compliance Division.

Policy OS-G.14 The County shall require all access roads, driveways, and parking areas serving new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.

Policy OS-G.15 The County shall work to reduce PM₁₀ and PM_{2.5} emissions from County-maintained roads by considering shoulder treatments for dust control as part of a road reconstruction project.

Policy TR-A.17 The County should utilize road construction methods that minimize the air, water, and noise pollution associated with street and highway development.

Woodburning

Policy OS-G.16 The County shall encourage the installation of low-emission, EPA-certified fireplace inserts and/or wood stoves, pellet stoves, or natural gas heating appliances in lieu of normal open hearth fireplaces in new houses.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The method of the analysis follows recommendations published in the SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts, also known as the GAMAQI (SJVUAPCD, August 1998). Development under the Draft General Plan would occur over the next twenty years, and

population and employment growth would occur throughout that period. This analysis anticipates that during the life of the General Plan, air quality conditions, the regulatory framework, impact assessment methods, and available mitigation technologies will evolve.

Construction Emissions

Construction activities could include emissions caused by demolition of structures, earth moving activities, travel by construction workers and equipment, operation of construction equipment, application of architectural coatings, and paving. Quantification of construction emissions is not possible at this time because the specific construction activities that would occur under the General Plan are not yet known. The applicability of existing air quality rules, regulations, and guidelines to limit potential emissions from construction activities is considered.

Operational Emissions

Operational activities could include emissions caused by operation of area sources, stationary sources, and mobile sources associated with the projected uses. Examples of area sources are fireplaces, wood stoves, natural gas heating, landscaping, and use of consumer products. These would be expected to occur over the entire County. Stationary sources would include equipment that would typically be operated at industrial or utility service facilities. These could include manufacturing plants, agricultural processing plants, or facilities processing and distributing petroleum products. Growth in area-source emissions is estimated based on use of the area source component of the URBEMIS7G model with the population and employment growth projections. Growth in stationary-source emissions is estimated based on trends projected by the SJVUAPCD and the California Air Resources Board (CARB).

Operation of on-road and off-road motor vehicles results in mobile source emissions. For this EIR, on-road mobile source emissions caused by travel throughout the County are modeled with the CARB's BURDEN7G model. Emission factors in the model are based on the CARB testing vehicle classes for model years after 1970 and operation of vehicle fleet distributions that are specific to Fresno County as developed by the San Joaquin Council of Governments (COG). Vehicle speeds, frequency of start-ups, and application of state-mandated inspection and maintenance programs are each assumed to follow the CARB and COG projections for the base year and 2020. Emission increases are determined based on growth in the total County-wide vehicle miles traveled (VMT) and growth in the overall number of trips for base year and 2020 conditions.

Traffic generated with the future development would affect the Levels of Service (LOS) of the County's road network. Roadways that are congested and/or have heavy traffic volumes have the potential to cause carbon monoxide "hot-spots." Poor roadway or intersection performance on heavily-traveled corridors results in numerous vehicles operating at slow average vehicle speeds which causes increased

emissions of CO. In this manner, localized CO concentrations can be largely related to roadway performance. The SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts indicates that projects could have the potential to cause violations of the CO ambient air quality standards if the roadways affected by the project would operate at LOS E or F (SJVUAPCD GAMAQI, p. 45).

Because potential violations of air quality standards depend greatly on meteorology including seasonal variations of the weather, operational emissions of ROG, NO_x, and PM₁₀ are analyzed under ozone season (summer-time) conditions, and CO emissions are analyzed under winter-time conditions.

Odor

Quantification of odor emissions from the projected development is not possible at this time because the specific sources and receptors that would occur under the General Plan are not yet known. To the extent feasible, this analysis considers the land use projections and evaluates their potential to generate objectionable odors. The potential for future development of sensitive uses to locate near potential sources of odors is also analyzed.

Emissions of Toxic Air Contaminants

Quantification of toxic air contaminant (TAC) emissions from the projected development is not possible at this time because the specific sources and receptors that would occur under the General Plan are not yet known. To the extent feasible, this analysis considers the land use projections and qualitatively evaluates their potential to generate toxic air contaminants. The potential for future development of sensitive uses to locate near potential sources of TACs is also analyzed. Applicability of existing air quality rules and regulations to limit potential emissions of TACs, is considered in the analysis.

Standards of Significance

The SJVUAPCD recommends evaluating air quality impacts in terms of the following air pollution thresholds (SJVUAPCD GAMAQI, Section 4). Using these thresholds, development of the Proposed Project is considered to have a significant effect if any of the following could occur:

- construction emissions associated with development under the General Plan would not be reduced through implementation of effective and comprehensive control measures recommended by the SJVUAPCD;
- development under the General Plan would result in emissions of ozone precursors of more than 10 tons per year (ROG or NO_x);
- localized carbon monoxide concentrations exceeding California Ambient Air Quality Standards;
- generation of odor emissions near existing sensitive receptors or other land uses where people may congregate, or where residential or other sensitive receptor projects, built for the intent of attracting people, propose to locate near existing odor sources; or

- potential exposure of sensitive receptors (including residential areas) or the general public to substantial levels of toxic air contaminants.

Any project that would individually have a significant air quality impact would also be considered to have a significant cumulative air quality impact.

Impacts and Mitigation Measures

4.12-1 Construction activities associated with development under the Draft General Plan would result in emissions of PM₁₀, ozone precursors, and other pollutants.

Construction activities associated with development under the Draft General Plan would result in emissions caused by demolition of structures, earth-moving activities, travel by construction workers and equipment, operation of construction equipment, application of paint, and paving. The Proposed Project would include county-wide development of approximately 24,100 acres of new residential use and approximately 13,700 acres of new non-residential use. Without the Proposed Project, county-wide development of new residential use would be unchanged (24,100 acres), and new development of non-residential use would be reduced to approximately 9,500 acres.

Throughout the General Plan's lifetime, construction- and demolition-related emissions would occur with new development but would vary widely depending on the specific projects in progress at any given time. The primary pollutant of concern during construction activities is particulate matter. Substantial amounts of fugitive dust would be generated during construction activities, especially during earthmoving activities such as grading, excavation, and travel on unpaved surfaces. Operation of heavy construction equipment would also emit nitrogen oxides (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), hydrocarbons (HC), and particulate matter as a result of diesel fuel combustion. Basic control measures for construction emissions of fugitive dust are required for all construction sites by SJVUAPCD Regulation VIII (SJVUAPCD GAMAQI, Table 6-2).

Of the projected development, the vast majority of the construction activities would be related to projects occurring within cities' spheres of influence. On a project-by-project basis, construction emissions would be considered a short-term temporary impact. On the other hand, when considered in the long-term context of the Draft General Plan, construction activities in the unincorporated areas would cause considerable emissions unless reduced by additional measures.

The Draft General Plan includes policies to reduce these effects on a project-by-project basis by incorporating control measures recommended by the SJVUAPCD. For projects that are very large in area, especially intense, or located near a land use that would be especially sensitive to air quality impacts, the SJVUAPCD recommends incorporation of enhanced and additional control measures in addition to the requirements of Regulation VIII (SJVUAPCD GAMAQI, Table 6-3). Operation of heavy construction equipment and the associated exhaust emissions are also addressed with control measures recommended by SJVUAPCD (SJVUAPCD GAMAQI, Table 6-4).

General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 state that the County shall develop standard methods for mitigating project air quality impacts in conjunction with the SJVUAPCD. Implementation of the control measures recommended by the SJVUAPCD in the Guide for Assessing and Mitigating Air Quality Impacts would be effective and comprehensive for reducing construction emissions. Policy TR-A.17 directs that emissions be reduced from County roadway projects. Because these policies would encourage implementation of the measures recommended by the SJVUAPCD, they would reduce construction emissions impacts to a less-than-significant level for the County.

Similar measures to reduce construction emissions are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, this impact is considered **significant**.

Mitigation Measures

4.12-1 No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, OS-G.13 and TR-A.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.

Although Draft General Plan policies would reduce significant impacts related to construction emissions within the unincorporated areas of the County and development within the cities would be required to comply with applicable SJVUAPCD construction emissions standards and control measures, implementation of additional mitigation, as recommended by Draft General Plan policies, within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.12-2 Development under the Draft General Plan would result in emissions of ozone precursors and other pollutants caused by mobile source activity, area sources, and stationary sources.

Mobile Sources

Emissions would be caused during project operation by mobile source activity with growth in vehicle miles traveled and growth in the number of vehicle trips in the County. County-wide daily vehicle miles traveled (VMT) would increase through the life of the General Plan from base conditions of approximately 16,954,000 VMT (1995) to approximately 30,888,000 VMT (2020) under the Proposed Project. County-wide daily trips would increase from base conditions of 2,558,000 trips per day (1995) to 4,099,000 trips per day (2020) under the Proposed Project. This growth in mobile source activity would result in increased emissions from both vehicle exhaust emissions and entrained road dust.

Baseline conditions show that average county-wide trip distances are approximately 6.6 miles one-way. The Proposed Project would result in shorter average trips by generally encouraging less dispersed and more compact development than the current General Plan. Under the Proposed Project, average trip distances would increase to approximately 7.5 miles one-way in 2020. Without the project, average county-wide trip distances would be approximately 7.8 miles. In either case, with or without the project, average trip lengths would be expected to increase above baseline (1995) conditions. The Proposed Project strategies would minimize average trip lengths.

During the period of 1995 through 2020, the CARB's emission standards for motor vehicles will result in emission reductions for each pollutant when considered on a "per VMT" or "per vehicle trip" basis. These emission reductions would be realized because of rigorous state-wide efforts to improve air quality that are independent of implementation of the Proposed Project. Because state-wide emission standards help to reduce mobile source emissions between 1995 and 2020, this analysis compares the Proposed Project with the No Project Alternative (development that would occur without implementation of the Proposed Project). Development anticipated under the Proposed Project would result in more VMT and more daily trips than without the project and, as such, would result in greater emissions of ozone precursors (shown in Table 4.12-1).

Proposed General Plan policies would offset project air quality impacts by reducing reliance on the automobile. Policies for congestion management and transportation control measures (Policies OS-G.3, OS-G.5 and OS-G.7 through OS-G.11), transportation infrastructure (OS-G.6, and OS-G.15), and land use practices (OS-G.12, and OS-G.14) would each serve to minimize mobile source impacts. These policies encourage increasing the efficiency of the transportation infrastructure, support trip reduction programs, encourage land development patterns that will reduce trips and VMT and increase vehicle occupancy, and facilitate planning for infrastructure that will reduce motor vehicle trips and VMT by encouraging increasing the share of non-automobile trips. Elsewhere in the Draft General Plan, Land Use strategies encouraging growth to remain in existing development areas and encouraging compact, mixed-use, and pedestrian or transit-oriented development would help to minimize mobile source emissions.

Table 4.12-1 shows the estimated net increase in emissions caused by the growth in mobile source operation anticipated under the Proposed Project. The increase in mobile source emissions of ROG and NO_x would be greater than the 10 tons-per-year threshold of significance for all operation-related emissions. These emissions (combined with area source emissions discussed below) would be considered significant. Implementation of the General Plan policies identified above would minimize the impacts of increased mobile source operation, but not to a less-than-significant level.

Area Sources

Area source operation would also be expected to grow with the population and employment projections through the year 2020. Area-source emissions would be due to miscellaneous energy consumption (for example, lighting, heating, ventilation, and refrigeration equipment), wood-stoves, fireplaces, landscaping activities, and use of consumer products related to the operation of the projected land uses. Increases in area source emissions are estimated based on the projected land use growth increment.

TABLE 4.12-1				
ESTIMATED NET INCREASE IN EMISSIONS FROM PROJECT-RELATED OPERATION (RELATIVE TO 2020 WITHOUT PROJECT CONDITIONS)				
Operational Activity	ROG (ton/yr)	NO_x (ton/yr)	CO (ton/yr)	PM₁₀ (ton/yr)
Mobile Sources: On-Road Motor Vehicles	69.3	262.8	1,379.7	153.2
Area Sources: Energy Use	37.3	489.5	205.4	0.9
Area Sources: Landscaping	16.8	1.3	137.3	0.3
Area Sources: Consumer Products	990.0	---	---	---
Significance Thresholds	10.0	10.0	---	---
Notes:	Emission estimates based on use of CARB's BURDEN7G/URBEMIS7G model. Mobile source emission estimates include entrained road dust (PM ₁₀).			
Source:	EIP Associates, 1999.			

Existing SJVUAPCD rules and regulations and implementation of the General Plan policies would help to minimize the air quality impacts due to increased area source activity. The CARB has established performance standards for consumer products and architectural coatings that help to reduce emissions of organic compounds, and the SJVUAPCD has implemented rules restricting sale of non-EPA certified wood heaters and limiting emissions from new residential water heaters. Additionally, the Air Quality Element of the General Plan includes Policy OS-G.16 to further reduce emissions from wood-burning.

Table 4.12-1 shows the estimated net increase in emissions caused by the growth in area source operation anticipated under the Proposed Project. The increase in area source emissions of ROG and NO_x would be greater than the 10 tons-per-year threshold of significance for all operation-related emissions. These emissions (combined with mobile source emissions discussed above and stationary source emissions discussed below) would be considered significant. Implementation of the General Plan Policy OS-G.16 would minimize the impacts of increased area source operation, but not to a less-than-significant level.

Stationary Sources

Stationary sources would be associated with many of the land uses anticipated in the General Plan. These sources would include facilities in the service industry, such as gasoline service stations or dry cleaning establishments, and other facilities that may be involved with light and heavy industry. These could include manufacturing or food processing facilities, mining facilities, cement plants, or power plants.

Existing SJVUAPCD rules and regulations would help to minimize the air quality impacts due to increased area source activity. The SJVUAPCD's rules provide for the air district to review new and modified stationary sources and generally require installation of best available control technology and securing emission offsets. With these requirements in place, emissions from stationary sources that would be associated with industrial and commercial development would not be expected to increase substantially over existing conditions. Growth in stationary source emissions would be reviewed by the SJVUAPCD on a project-by-project basis. Based on this information, operation of stationary sources would not contribute substantially to increased emissions associated with operation of the Proposed Project. No significant impact is expected to occur due to stationary sources.

A majority of the growth in emissions related to operation would occur without implementation of the Proposed Project. Based on growth projections for 2020 without the project, County-wide daily VMT and daily trips would be anticipated to grow from 1995 conditions to 30,164,000 VMT and 3,866,000 trips, respectively. This means that growth without the project would account for approximately 85 percent of the trips anticipated with the project and 95 percent of the VMT anticipated with the project. Similar fractions of growth in area source emissions would be expected to occur regardless of implementation of the project.

It is also important to note that the majority of the growth in emissions related to operation would occur within the jurisdiction of the cities. Under the Proposed Project, less than 10 percent of the county's population and employment growth between 1996 and 2020 would be expected to occur in the unincorporated areas. The remainder of the growth is projected to occur within the spheres of influence of the incorporated areas, and would be expected to ultimately come within the cities' jurisdiction through annexation. The growth in emissions would occur throughout the county, but would tend to be centered around the localities experiencing the increased population and employment.

As shown in Table 4.12-1, operation of the project, including implementation of the General Plan policies, would cause emissions of ozone precursors (ROG and NO_x) in amounts which would exceed the 10 tons-per-year significance thresholds. Because the emissions of ozone precursors due to project operation would exceed the threshold, the increase in air emissions would be a significant impact.

With implementation the Draft General Plan policies included with the Proposed Project, the County will reduce vehicle trips, reduce vehicle miles traveled, encourage use of low emission vehicles, improve traffic flows, and reduce congestion. For crafting air quality policies, the County considered ideas from other plans and guidance by reviewing documents published throughout the state. The General Plan policies incorporate the technically and economically feasible methods identified during the review. There are no reasonable mitigation measures available for the County to implement that would reduce the impact of mobile source emissions to a less-than-significant level.

Implementation of the following mitigation measures would reduce impacts due to project operation emissions of area sources. These measures are recommended by the SJVUAPCD in Table 6-7 in the Guide for Assessing and Mitigating Air Quality Impacts. It is not possible to reliably quantify the effectiveness of these measures, because there are no measures available to further reduce mobile source emissions, and the County cannot compel other jurisdictions to enforce these measures. Therefore, the impacts due to project operation would be considered **significant**.

Mitigation Measure

4.12-2 *None available beyond Draft General Plan Policies OS-G.3, OS-G.5 through OS-G.10, OS-G.12, and OS-G.14 through OS-G.16 for the County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Development within the cities and County would be required to comply with applicable SJVUAPCD standards and control measures. Reductions in air emissions within the incorporated areas could also be achieved, to the extent that incorporated areas participate in regional transportation planning efforts. However, implementation of additional measures, which are reflected in the Draft General Plan policies within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.12-3 Development under the Draft General Plan could result in localized violations of the CO standards.

Because traffic generated by the Proposed Project could reduce the Level of Service (LOS) of roadway links or intersections throughout the county, the potential exists for localized build-up of carbon monoxide (CO) to occur near the congestion. In extreme cases, the congestion and heavy traffic could cause CO levels to increase to the point of becoming a localized "hot-spot" or violation of the ambient air quality standards. In efforts to eliminate potential CO "hot-spots," State-level emission control programs for tailpipe emissions of carbon monoxide have resulted in dramatic reductions of ambient carbon monoxide concentrations over the past ten to fifteen years. As discussed in the *Background Report*, Fresno County, including the Fresno Urbanized Area, has been designated as an area that is in attainment with the carbon monoxide standards.

The SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts regards projects to have the potential to cause violations of the CO ambient air quality standards if the roadways affected by the project would operate at LOS E or F (SJVUAPCD GAMAQI, p. 45). As shown in Section 4.4, Transportation and Circulation, growth anticipated under the Draft General Plan would result in several roadways operating at LOS E or F during peak-hour periods of the day. This traffic congestion would result in potentially significant air quality impacts due to elevated localized concentrations of CO.

The Draft General Plan includes policies to minimize traffic congestion. Policies OS-G.6 through OS-G.11 would preserve the capacity of the existing roadway network and encourage alternative transportation modes. Furthermore, transportation policies of the General Plan that would aim to manage congestion would have the added benefit of reducing localized CO effects caused by heavy traffic. In addition, Policy TR-A.2 provides Level of Service standards specifying that the County plan and design its roadway system to meet LOS C on roadways outside the spheres of influence of Fresno and Clovis and LOS D in the urban areas.

Because the target LOS (of Policy TR-A.2) on all roads in the County is LOS D or better, these roadways and intersections would not be expected to cause localized violations of the carbon monoxide standards. Planning for operation of state highways at LOS E would be allowed under certain exceptions depending upon the physical and operating considerations of the location. Policies TR-A.14 and TR-A.15 encourage traffic routes away from sensitive land uses. Effective land use planning around congested highways would help to reduce the possibilities of exposing sensitive receptors to elevated CO concentrations; however, in many presently congested locations existing development may not allow future expansion or construction of buffer areas.

Localized increases of CO concentrations would, by definition, be most likely to occur in the more dense, incorporated areas of the County. The Economic Development Strategy encourages incorporation of new urban areas that may be created at the bounds of existing incorporated areas, while minimizing the creation of new urbanized areas within the unincorporated areas of the County. To the extent that the strategy would guide growth, and potential traffic congestion, to areas within the spheres of influence of the cities, severe congestion and heavy traffic flows would not be as common in the unincorporated areas of the County, so localized increases of CO would not be as likely to occur in these areas.

In summary, existing conditions show that the region-wide CO concentrations trends demonstrate attainment with the ambient air quality standards, and the General Plan policies specify that planning and design efforts would strive for performance of LOS D or better. Implementation of proposed General Plan policies would reduce congestion occurring as a result of growth in the County, which would help minimize carbon monoxide levels at intersections. However, some roadways would continue to operate at unacceptable service levels, so some violations of state or federal CO standards could occur. Such violations would become increasingly rare, and would end by 2020, due to improvements in fuels and the vehicle fleet.

Congestion-reduction measures, including roadway improvements, are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the CO standard violations could occur within the cities, particularly in the near term.

Because CO violations could occur in the near-term, and the County cannot compel cities to adopt congestion relief and air quality measures, this impact is considered **significant**.

Mitigation Measures

4.12-3 *No mitigation is required beyond Draft General Plan Policies OS-G.6 through OS-G.11 and TR-A.2, TR-A.14, and TR-A.15 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Reductions in CO emissions within the incorporated areas could be achieved, to the extent that incorporated areas participate in regional transportation planning efforts. However, implementation of Draft General Plan policies within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.12-4 Development under the Draft General Plan could result in placement of sensitive land uses near potential sources of objectionable odors or in new potential sources of objectionable odors.

Development under the Draft General Plan would include land uses that may include sources of objectionable odors. Objectionable odors would typically be associated with agricultural, industrial, and some commercial uses. Odors may be generated regardless of whether the Proposed Project is implemented. The occurrence and severity of odor impacts depends on numerous factors. The nature, frequency, and intensity of the source, the wind speeds and direction, and the sensitivity of the receiving location each contribute to the potential intensity of the impact. While offensive odors rarely cause any physical harm, they can be unpleasant and cause distress among the public and generate citizen complaints.

Sources of odors are typically regulated by nuisance provisions of local zoning and public health codes, and specific policies of the General Plan would help to reduce these impacts. Rule 4102 of the SJVUAPCD rules and regulations prohibits emission of air contaminants, or odors, that may cause nuisance or annoyance to the public. This rule would effectively reduce potential odor impacts from non-agricultural operations; however, agricultural operations, including growing of crops or raising of animals, are specifically exempt from the prohibition. Because some agricultural operations could result in objectionable odors and development under the General Plan could result in odor-sensitive land uses near agricultural operations, odor impacts from these types of sources would create a nuisance.

The General Plan includes policies to reduce odor nuisances on a project-by-project basis by incorporating analysis and mitigation methods recommended by the SJVUAPCD. The SJVUAPCD's Guide for Assessing and Mitigating Air Quality Impacts provides screening-levels for evaluating potential odor sources depending on the source's distance from potentially odor sensitive land uses (SJVUAPCD GAMAQI, Table 4-2). According to the SJVUAPCD, the land use compatibility and the history of odor complaints for neighboring sources or similar existing sources should be considered along with feasible mitigation measures (including provision of buffer zones) on a project-by-project basis. For example, food processing facilities, feed lots, and dairies located or proposed to be located within one mile of sensitive land uses would warrant an analysis of odor effects. In general, other agricultural operations would not warrant a detailed analysis.

General Plan policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 state that the County shall develop standard methods for mitigating project air quality impacts in conjunction with the SJVUAPCD. Implementation of the control measures recommended by the SJVUAPCD in the Guide for Assessing and Mitigating Air Quality Impacts would minimize the potential for odor impacts to occur. Because these policies would encourage implementation of the measures recommended by the SJVUAPCD, they would reduce potential odor impacts for the County.

Similar measures to reduce odor nuisances are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.12-4 No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.

Although Draft General Plan policies would reduce the potential for individuals to be exposed to objectionable odors within the unincorporated areas of the County and development within the cities would be required to comply with applicable SJVUAPCD standards and control measures, implementation of additional mitigation, as recommended by Draft General Plan policies, within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.12-5 Development allowed under the General Plan could result in placement of sensitive land uses near potential sources of toxic air contaminants or in new potential sources of toxic air contaminants.

Development allowed under the General Plan would include land uses that may include sources of toxic air contaminants (TACs). Depending upon the nature of each individual facility, some level of TAC emissions could be associated with manufacturing industries, food or petroleum product processing industries, or service industries. Such effects would occur with or without the Proposed Project.

The SJVUAPCD evaluates all projects requiring air quality permits for emissions of toxic air contaminants, regardless of their location in unincorporated or incorporated areas. Sources with emissions in sufficient quantities to cause a probability of contracting cancer for the maximally exposed individual of more than 10 in one million are required to undergo a public notification process. (More information regarding regulation of toxic air contaminants is provided in the *Background Report*, Chapter 8.)

Specific policies of the General Plan would further reduce impacts due to potential emissions of TACs.

With implementation of Policies OS-G.12 of the Air Quality Element, the County would require locating sensitive land uses and potential sources of toxic and hazardous emissions with adequate buffer space to minimize adverse effects of the emissions. The SJVUAPCD Guide for Assessing and Mitigating Air Quality Impacts provides specific screening-level thresholds for evaluating potential TAC sources and considering mitigation on a project-by-project basis. According to the SJVUAPCD Guide, an adequate buffer space would need to reduce impacts so that (1) the probability of contracting cancer for the maximally exposed individual (MEI) does not exceed 10 in one million, and (2) the ground-level concentrations of non-carcinogenic toxic air contaminants would result in a hazard index of less than 1 for the MEI. These SJVUAPCD criteria and standards would also apply to unincorporated areas as well.

Through General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 the County will develop standard methods for mitigating project air quality impacts in conjunction with the SJVUAPCD. Implementation of the procedures and measures required by the SJVUAPCD in the Guide for Assessing and Mitigating Air Quality Impacts to address TAC emissions would further reduce the potential for TAC impacts to occur. Because emissions reductions through source control or pollution prevention would occur through permit conditions enforced by the SJVUAPCD, the risk of exposure to toxic air contaminants is considered a ***less-than-significant impact***.

Mitigation Measures

4.12-5 *None required.*

Cumulative Impacts

The cumulative context is the San Joaquin Valley Air Basin, which includes 27,000 square miles of the Central Valley, including Fresno County.

4.12-6 Development under the Draft General Plan, in combination with other cumulative development, would result in emissions of pollutants caused by mobile source activity, area sources, and stationary sources.

Operational emissions from mobile and stationary sources will increase as activity levels in the Air Basin increase, offset to the extent that technological advancements continue to decrease relative emission levels and improve control technology through 2020 as anticipated. The release of toxic and odor emissions in proximity to sensitive receptors will increase as industrial and similar activities increase and separation of uses becomes more difficult within developed areas. Again, however, improvements in industrial processes and emission control would reduce these emissions. Construction air quality impacts are highly localized and would be mitigated on a project-specific basis.

The project would generate air emissions beyond defined significance thresholds. The project and non-project development in Fresno County and elsewhere within the Air Basin could contribute to an increase in air emissions throughout the San Joaquin Valley Unified APCD. Increased development could make achievement of the Air Districts Attainment Plan goals more difficult. Draft General Plan policies would partially offset the effects of increased emissions from development under Fresno County. However, because of the regional nature of air quality impacts, and County's inability to ensure that District or locally adopted policies would be enforced within the APCD, the cumulative air quality impacts are considered **significant**.

Mitigation Measures

4.12-6 *None available beyond Draft General Plan Policies OS-G.1 through OS-G.16, and TR-A.2, TR-A.14, TR-A.15, and TR-A.17.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.13 SEISMIC AND GEOLOGIC HAZARDS

INTRODUCTION

This section describes the impacts of seismic and geologic hazards on development anticipated under the Draft General Plan. This section focuses on how development could be affected by earthquakes and related seismic hazards, landslides, expansive soils, and erosion. Issues related to subsidence due to groundwater withdrawal are presented in Section 4.8, Water Resources

ENVIRONMENTAL SETTING

Seismic hazards and conditions in Fresno County are described in Chapter 9.2 of the *General Plan Background Report (Background Report)*. Information on expansive soils and erosion potential is included in Chapter 7.2 of the *Background Report*. The relationship between groundwater withdrawal and subsidence is discussed in Chapter 5.4, of the *Background Report*. These chapters are hereby incorporated by reference and summarized below.

Seismic Hazards

There are a number of active and potentially active faults within and adjacent to Fresno County. Faults within Fresno County and major active and potentially active faults in the region are described below. Their locations are shown on Figure 9-2 in the *Background Report*, and a description of their activity is included in Chapter 9, Safety, in the *Background Report*. Two of the active faults, which are located near Coalinga and Panoche in the West Valley, have been designated Alquist-Priolo Earthquake Fault Zones (EFZ). Most of Fresno County, from approximately Interstate 5 (I-5) east, is located in Seismic Zone 3, as defined by the most recent California Uniform Building Code. Areas in the Coast Range and foothills and a small area along the Fresno County-Inyo County boundary are located in Seismic Zone 4 (see Figure 9-4 in the *Background Report*).

Groundshaking is the primary seismic hazard in Fresno County, because of the County's seismic setting and record of historical activity. Most of the already urbanized locations in the East and West Valleys and Sierra Nevada Foothills areas are subject to less intense seismic effects than locations in the Coast Range Foothills and Sierra Nevada Mountain areas.

Liquefaction is a process whereby soil is temporarily transformed to a fluid form during intense and prolonged groundshaking. Areas most prone to liquefaction are those that are water saturated (e.g., where the water table is less than 30 feet below the surface) and consist of relatively uniform sands that are loose to medium density. No specific County-wide assessments to identify liquefaction hazards have been performed. Areas where groundwater is less than 30 feet below the surface occur primarily in the valley. However, soil types in the area are not conducive to liquefaction because they are either too

coarse or too high in clay content. Areas subject to 0.3g acceleration or greater are located in a small section of the Sierra Nevada along the Fresno-Inyo Counties boundary, or along the Coast Range foothills in western Fresno County. However, the depth to groundwater in such areas is greater than in the valley, which would minimize liquefaction potential as well.

Settlement can occur in poorly consolidated soils during groundshaking. During settlement, the soil materials are physically rearranged by the shaking to result in a less stable alignment of the individual minerals. Settlement of sufficient magnitude to cause significant structural damage is normally associated with rapidly deposited alluvial soils, or improperly founded or poorly compacted fill. These areas are known to undergo extensive settling with the addition of irrigation water, but evidence due to groundshaking is not available. The only urban area directly affected by settlement is the city of Coalinga. Fluctuating groundwater levels may have changed the local soil characteristics. Sufficient subsurface data is lacking to conclude that settlement would occur during a large earthquake; however, the data is sufficient to indicate that the potential exists.

Landslides and Avalanches

Certain areas in Fresno County are more prone to landsliding than others (see Figure 9-6 in the *Background Report*). Such areas can be found in the foothill and mountain areas where fractured and steep slopes are present (as in the Sierra Nevada), where less consolidated or weathered soils overlie bedrock (e.g., the Coast Range), or where inadequate ground cover accelerates erosion. Other areas where steep slopes are present, however, are not heavily populated and most are located in federal or State lands, although roadways such as State Route (SR) 168 in eastern Fresno County and SR 198 in western Fresno County could be affected by landslides in the event of an earthquake or heavy rain. For example, during the 1995 storm event in California, a fairly large landslide occurred on Los Gatos Road, which is a significant local access road west of Coalinga. California Division of Mines and Geology (CDMG) geologists determined that catastrophic failure was unlikely, but long-term road maintenance could be compromised due to undercutting of the slope by the creek below the road. There is no risk of large landslides in the valley area of the County due to its relatively flat topography. There is, however, the potential for small slides and slumping along the steep banks or river or creeks in the valley.

Avalanche potential is greatest at the higher elevations of the Sierra Nevada in eastern Fresno County. Recreational facilities in open space and park areas under U.S. Forest Service or other federal or State agency jurisdiction where development is precluded could be subject to avalanche hazard. However, most of these areas are inaccessible during periods of highest avalanche potential.

Other Geologic Hazards

Fresno County is not located in an area susceptible to seiches or tsunamis.

The Mono Lake-Long Valley Area is adjacent to the north and east of northernmost areas of Fresno County and includes such features as Mono Craters and Long Valley calderas and numerous active and potential faults. The Mono Lake-Long Valley Area is considered an active volcanic region of California.

At the northernmost tip of Fresno County, lava flows, steam blasts, or base surges could occur. Northern portions of the Silver Divide (including Duck Lake and Fish Creek) could be subject to tephra (ejected volcanic material) hazards. This particular area of Fresno County is unpopulated, not easily developable, and is situated in the high peaks of the Sierra Nevada; therefore, potential safety hazards would be limited to individuals visiting the area.

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Soils that are particularly subject to subsidence include those with high silt or clay content. Subsidence caused by groundwater withdrawal generally presents a more serious problem, since it can affect large areas. Oil and gas withdrawal, on the other hand, tends to affect smaller, localized areas. Some areas of the Central Valley have subsided more than 20 feet during the past 50 years. In some areas along the valley trough and in parts of western Fresno County, groundwater pumping has caused subsidence of the land surface. Subsidence has been a problem in the Westlands Water District and the Pleasant Valley Water District.

Soils

Expansive Soils

Expansive soils are those that greatly increase in volume when they absorb water and shrink when they dry out. Expansion is measured by shrink-swell potential, which is the relative volume change in soil with a gain in moisture. If the shrink-swell potential is rated moderate to high, damage to buildings, roads, and other structures can occur. Soils exhibiting a high to moderately high shrink-swell potential generally occur in a northwest-trending belt approximately parallel to the Friant-Kern Canal foothills in Kings Canyon National Park in the Sierra Nevada, and along Fresno Slough from Madera County to Kings County. The locations of these soil associations that exhibit high to moderately high expansion potential in eastern Fresno County are shown in Figure 7-1 in the *Background Report*. Comprehensive information regarding expansive soils in the western part of Fresno County (west of Fresno Slough) is not provided in the soil survey report published in 1950 for that area (*Soils of Western Fresno County California*). However, recent local investigations conducted under the auspices of the Natural Resource Conservation Service Hanford Office for the Westlands Water District have identified areas of expansive soils that roughly parallel the San Luis Drain west of Tranquility and San Joaquin.

Erosion

Natural forces, both chemical and physical, are continually at work breaking down soils. Erosion poses two hazards: it removes soils, thereby undermining roads and buildings and producing unstable slopes; and it deposits eroded soil in reservoirs, lakes, drainage structures, and on roads as mudslides. In the eastern Fresno County area, soils exhibiting moderately high to high erosion potential are located in the Sierra Nevada and the foothills, as shown on Figures 7-2 and 7-3 in the *Background Report*, and generally coincide with land slope areas that exceed 30 percent. Many of the soils are located within the boundaries of the Sierra National Forest, Sequoia National Forest, or Kings Canyon National Park, which would limit their availability for intensive development. Within the valley, erosion is generally not problematic except for areas containing Rossi soil east of the Fresno Slough from approximately Mendota to Fish Slough near Helm. Severe erosion potential has also been identified along the San

Joaquin River Bluff. Along the main bypass floodway of Fresno Slough, widely spaced gullies in a trellis pattern have eroded the soils where subsiding floodwaters drain back into the deeper main flood channel. In western Fresno County, most soils associated with the Kettleman series appear to be subject to moderate to severe sheet and gully erosion potential. Areas where Kettleman soils are present are located primarily west of I-5 in the Coast Range foothills. As noted in the *Soils of Western Fresno County* report, although the Panoche and Panhill soils are classified as exhibiting no erosion under natural conditions, their physical properties make them particularly susceptible to erosion as a result of human activity. These soils are located extensively throughout the western area and are especially prevalent in areas on recent alluvial fans in the central part of the western area.

REGULATORY SETTING

The following subsection is a brief summary of the regulatory context under which soils and geologic hazards are managed at the federal, State, and local levels.

Seismic and Structural Safety

The State of California provides minimum standards for building design through the California Building Standards Code (California Code of Regulations (CCR), Title 24). The California Uniform Building Code (CUBC) is based on the Uniform Building Code (UBC) used widely throughout the U.S. (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 29 regulates excavation, foundations, and retaining walls; and Chapter 70 regulates grading activities, including drainage and erosion control. The State earthquake protection law (California Health and Safety Code 19100 et seq) requires that buildings be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Specific minimum seismic safety requirements are set forth in Chapter 23 of the UBC. Installation of underground utility lines must comply with industry standards specific to the type of utility (e.g., National Clay Pipe Institute for sewers and American Water Works Association for water lines). These standards contain specifications for installation and design.

State regulations and engineering standards related to geology, soils, and seismicity are reflected in the Fresno County building standards. Construction and design would be required to comply with the latest standards at the time of construction. Both the UBC and County require preparation of a geotechnical study to identify site-specific conditions. The results of such geotechnical studies provide design criteria that ensure structural integrity and public safety of proposed development, particularly during seismic events. Issues addressed include seismic design, slope protection, and ongoing engineering/geotechnical review, as well as site preparation, grading, and foundation design, as stipulated in the UBC and local building regulation. The recommendations of the geologic and soils reports must be incorporated in the design of foundations and buildings. Earthquake-resistant design and materials are required to meet or exceed the current seismic engineering standards of the UBC Seismic Zone 3 or 4 requirements, depending on the location.

Grading and Erosion

The primary concern with erosion relates to increased sedimentation in receiving water from construction site runoff and urban development. Regulations pertaining to the management of erosion/sedimentation as they relate to the protection of water resources are summarized in Section 4.8, Water Resources, of this EIR.

The Fresno County Grading Ordinance (Section 7002, March 1991) stipulates safety and environmental control measures for construction practices. The Ordinance sets forth rules and regulations to control excavation, grading, and earthwork construction, including fills and embankments. The Ordinance also establishes the administrative procedure for issuance of permits, and provides for approval of plans and inspection of grading construction. All grading activities are required to be permitted by the County's Building Official with the exception of various kinds of grading that are indicated in the Ordinance. The Ordinance also sets forth other requirements that must be met before any permit is issued. The County requires erosion control measures and inspections to be made by the Building Official.

PLAN ELEMENTS

Development under the Draft General Plan would increase the number of people in existing incorporated areas, primarily Fresno and Clovis, and their spheres of influence. Development in western Fresno County and other unincorporated areas would be limited. The General Plan would result in residential, commercial, industrial, and public uses being constructed in areas subject to the seismic and geological conditions described above. The Draft General Plan contains the following policies that address seismic and geological conditions.

- | | |
|---------------|--|
| Policy HS-D.1 | The County shall continue to support scientific geologic investigations that refine, enlarge, and improve the body of knowledge on active fault zones, unstable areas, severe groundshaking, avalanche potential, and other hazardous geologic conditions in Fresno County. |
| Policy HS-D.2 | The County shall ensure that the General Plan and/or County Ordinance Code is revised, as necessary, to incorporate geologic hazard areas formally designated by the State Geologist (e.g., Earthquake Fault Zones and Seismic Hazard Zones). Development in such areas, including public infrastructure projects, shall not be allowed until compliance with the investigation and mitigation requirements established by the State Geologist can be demonstrated. |
| Policy HS-D.3 | The County shall require that a soils engineering and geologic-seismic analysis be prepared by a California-registered engineer or engineering geologist prior to permitting development, including public infrastructure projects, in areas prone to geologic or seismic hazards (i.e., fault rupture, groundshaking, lateral spreading, lurchcracking, fault creep, liquefaction, subsidence, settlement, landslides, mudslides, unstable slopes, or avalanche). |
| Policy HS-D.4 | The County shall require all proposed structures, additions to structures, utilities, or public facilities situated within areas subject to geologic-seismic hazards as identified in the soils engineering and geologic-seismic analysis to be sited, designed, and constructed in accordance with applicable provisions of the Uniform Building Code (Title 24 of the California Code of Regulations) and other relevant professional standards to minimize or prevent damage or loss and to minimize the risk to public safety. |

Policy HS-D.5	Pursuant to the Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code, Chapter 7.5), the County shall not permit any structure for human occupancy to be placed within designated Earthquake Fault Zones unless the specific provisions of the Act and Title 14 of the California Code of Regulations have been satisfied.
Policy HS-D.6	The County shall inventory unreinforced masonry structures, including emergency facilities and other critical facilities constructed prior to 1948, used for human occupancy (excluding single-family residential structures), and evaluate the facilities for seismic safety. If found below acceptable standards, the County shall implement a program to mitigate potential hazards.
Policy HS-D.7	The County shall ensure compliance with State seismic and building standards in the evaluation, design, and siting of critical facilities, including police and fire stations, school facilities, hospitals, hazardous material manufacture and storage facilities, bridges, large public assembly halls, and other structures subject to special seismic safety design requirements.
Policy HS-D.8	The County shall require a soils report by a California-registered engineer or engineering geologist for any proposed development, including public infrastructure projects, that requires a County permit and is located in an area containing soils with high “expansive” or “shrink-swell” properties. Development in such areas shall be prohibited unless suitable design and construction measures are incorporated to reduce the potential risks associated with these conditions.
Policy HS-D.9	The County shall seek to minimize soil erosion by maintaining compatible land uses, suitable building designs, and appropriate construction techniques. Contour grading, where feasible, and revegetation shall be required to mitigate the appearance of engineered slopes and to control erosion.
Policy HS-D.10	The County shall require the preparation of drainage plans for development or public infrastructure projects in hillside areas to direct runoff and drainage away from unstable slopes.
Policy HS-D.11	The County shall not approve a County permit for new development, including public infrastructure projects where slopes are over thirty (30) percent unless it can be demonstrated by a California-registered civil engineer or engineering geologist that hazards to public safety will be reduced to acceptable levels.
Policy HS-D.12	In known or potential landslide hazard areas, the County shall prohibit avoidable alteration of land in a manner that could increase the hazard, including concentration of water through drainage, irrigation, or septic systems, undercutting the bases of slopes, removal of vegetative cover, and steepening of slopes.
Policy HS-D.13	The County shall not approve a County permit for new development, including public infrastructure projects, in known or potential avalanche hazard areas unless it can be demonstrated by a California-registered engineer or engineering geologist that the structures will be safe under anticipated snow loads and avalanche conditions.

Policy HS-D.14	Whenever zoning is employed to restrict the use of land subject to severe geologic hazards (e.g., landslides), the County shall designate parcels so restricted for open space uses.
Policy HS-D.15	The County Board of Review or other subsequently-appointed body shall serve as the review body on appeals from seismic and geologic hazard requirements.
Policy LU-B.12	<p>The County shall require a preliminary soils report for discretionary development projects when the project site is subject to moderate or high risk landslide potential and has slopes in excess of fifteen (15) percent.</p> <p>If the preliminary soil report indicates soil conditions could be unstable, a detailed geologic report by a registered geologist and registered civil engineer, or a registered engineering geologist, shall be required indicating the suitability of any proposed or additional development.</p>

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The analysis of potential seismic and geological impacts is based on information compiled and presented in the *Background Report*. This information includes available technical reports and published information, correspondence, and consultation with knowledgeable agency personnel. The analysis is qualitative, and evaluates the extent to which development under the Draft General Plan could be affected by known seismic and geologic hazards. The analysis assumes that growth would continue to occur primarily in areas that are already urbanized.

Seiches, tsunamis, or volcanic events and their associated hazards are not considered to be a safety concern in Fresno County. Avalanche potential is greatest at the higher elevations of the Sierra Nevada in eastern Fresno County. However, most of these areas are inaccessible during periods of highest avalanche potential, and no new development is proposed for those areas. Therefore, these issues are not analyzed in this EIR. For a discussion of subsidence related to groundwater withdrawal, please see Section 4.8, Water Resources.

Standards of Significance

For purposes of this EIR, an impact may be deemed significant if development under the Draft General Plan would:

- expose people or structures to potential substantial risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic groundshaking, seismic-related ground failure (e.g., liquefaction);
- expose people or structures to potential substantial risk of loss, injury, or death as a result of landslides, erosion, or other unstable slope conditions;

- expose structures to substantial increased risk of damage as a direct result of subsidence due to groundwater withdrawal; or
- create substantial risks to life or property due to the presence of expansive soils.

Impacts and Mitigation Measures

4.13-1 Development under the Draft General Plan would increase the number of people and structures who could be exposed to seismic hazards.

Based on the historic seismicity of the region, it is probable that portions of Fresno County would be affected by at least one moderate to large earthquake during the 20-year timeframe of the General Plan.

For example, the 1983 Coalinga earthquake was a significant seismic event in western Fresno County. Because of the variety of geologic units and soil types throughout the County, the extent of damage would depend on the specific physical characteristics of the underlying soils, rock types, duration and intensity of shaking, and other factors. Development under the Draft General Plan would increase the number of people who could be exposed to seismic hazards. The increase in population that could be exposed to seismic hazards would be identical with or without the project. Earthquake-induced groundshaking would be the primary hazard. Groundshaking and related secondary effects (e.g., liquefaction, lateral spreading, landslides, or other ground failure) could result in injury, loss of life, or property damage due to damage or failure of structural and non-structural building components. In addition, utility service could be disrupted due to damage or destruction of infrastructure, which could result in unsanitary or unhealthful conditions (e.g., broken water supply or sewer lines), or possible fires or explosions from damaged natural gas lines. Emergency response services could be delayed if roadways are damaged.

Recommended measures to reduce the potential for life safety and property damage would be identified in site-specific geotechnical studies prepared for new development. Prior to the issuance of building permits, project applicants would be required to demonstrate that the proposed development complies with all required regulations and standards pertaining to seismic hazards. The evaluation of potential seismic hazards and incorporation of appropriate design and construction features and effective land use planning is required by State law and is reflected in General Plan Policies HS-D.2, HS-D.4, HS-D.5, HS-D.6, and HS-D.7. These State laws and regulations apply equally to cities within the unincorporated areas of the County.

There are no significant constraints to development related to seismic hazards within the County or incorporated areas that cannot be mitigated through implementation of applicable regulations and codes and standard engineering practices. Implementation of applicable CUBC and local building code and permitting requirements would minimize the potential for adverse effects on people and property due to seismic activity. Although more people would be exposed to seismic hazards, assuming compliance with all applicable regulations, standards, and codes, development under the Draft General Plan would not expose people or property to any new or substantially different risks associated with seismic hazards compared to existing conditions and impacts would be reduced to a ***less-than-significant level***.

Mitigation Measures

4.13-1 *None required.*

4.13-2 Future development near Coalinga and Panoche in western Fresno County could expose people and property to hazards associated with surface rupture or fault creep from active faults designated as Alquist-Priolo Earthquake Fault Zones.

The Nunez and Ortigalita faults in western Fresno County are classified as active faults and have been designated Alquist-Priolo Earthquake Fault Zones. An active fault may pose a risk of surface fault rupture. Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Fault rupture almost always follows preexisting faults, and the rupture may occur suddenly during an earthquake or slowly in the form of a fault creep.

Buildings, structures, roadways, and infrastructure located on or adjacent to an active fault could be severely damaged or destroyed by surface rupture or fault creep, resulting in injury, death, or property damage. Sudden displacements are more damaging to structures because they are accompanied by groundshaking. Fault creep offsets and deforms curbs, roadways, and building foundations, which can also increase the risk to human health and property.

The communities that could be affected by fault rupture are not anticipated to experience a substantial amount of growth, with or without the project. Nonetheless, the Alquist-Priolo Earthquake Fault Zoning Act requires that cities and counties require a geologic investigation to demonstrate the proposed development will not be constructed across active faults. Projects include all land divisions and most structures for human occupancy. 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). Policy HS-D.5, which incorporates the Alquist-Priolo law, combined with other policies that require preparation of site-specific geotechnical studies, continued research, and use of that information to design and construct projects (Policies HS-D.1, HS-D.2, HS-D.3, HS-D.4, and HS-D.7), would ensure that potential hazards associated with fault rupture would be reduced to levels required by State laws and regulations, regardless of whether the development occurs in incorporated or unincorporated areas of the County. Therefore, impacts related to active faults would be ***less than significant***.

Mitigation Measures

4.13-2 *None required.*

4.13-3 Development under the Draft General Plan could expose an increased number of people to hazards associated with unreinforced masonry buildings.

Older buildings constructed before building codes were adopted, and some newer buildings constructed before earthquake-resistant provisions were included in the codes, could be damaged during an earthquake. Unless the buildings are identified and properly reinforced, building occupants, visitors, or workers could be exposed to potential hazards from falling debris or structural failure. Older masonry buildings without seismic reinforcement (unreinforced masonry) are the most susceptible to the type of structural failure that can result in injury or death. Wood-frame buildings one or two stories high (e.g., single-family dwellings) are considered to be the most structurally resistant to earthquake damage.

General Plan Policy HS-D.6 directs the County to identify unreinforced masonry buildings and methods to improve their safety during an earthquake. This would reduce potential impacts to less-than-significant levels within unincorporated areas in the County by ensuring that the structural safety of these structures would be improved so the hazard to building occupants from earthquakes would be reduced. However, such programs may not exist or have not been fully implemented within all incorporated areas where most of the future growth, with or without the project, would occur. Therefore, this impact is considered **significant**.

Mitigation Measures

4.13-3 *No mitigation is required beyond Draft General Plan Policy HS-D.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although General Plan policies would reduce potentially significant impacts related to unreinforced masonry buildings within unincorporated areas of the County, implementation of such programs within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact remains significant and unavoidable.

4.13-4 Development under the Draft General Plan could increase the number of people in areas subject to landslide hazard.

Mountainous areas in eastern and western Fresno County are potentially susceptible to landslides. Probable future slides can also be anticipated in areas where landsliding has already taken place. Slopes covered with deep soils, or hillsides heavily saturated with groundwater are potential slide areas, as are areas where bedding or jointing of rock materials and hill slope directions are similar. A landslide into a lake has the potential to produce a wave that could affect waterfront development. Slides along river banks and streams could also affect adjacent development, particularly along certain portions of the San Joaquin River where such instability has been observed.

Little or no development would occur in steep, mountainous areas. The greatest potential for development to be affected by landslide hazard would be in the unincorporated foothills. Growth in the foothills, with or without the project, would increase the number of structures that could be placed on materials susceptible to landslide. Some development could occur along the San Joaquin River and local streams, both in incorporated areas and unincorporated areas. Locations along streams and rivers

could be maintained as open space, or buffers and setbacks could be incorporated into site design to protect species and habitat, water quality, and views, and to provide recreational opportunities. This would minimize the amount or density of development that could be exposed to landslide hazard in those areas.

General Plan Policies HS-D.10 through HS-D.12 and LU-B.12 would ensure that hazards related to landslides within the unincorporated areas are properly identified and that potential hazards are minimized through land use planning and building permitting processes. However, similar policies may not exist for all cities under whose jurisdiction most of the future growth, with or without the project, would occur. Therefore, this impact is considered **significant**.

Mitigation Measures

4.13-4 *No mitigation is required beyond Draft General Plan Policies HS-D.10 through HS-D.12 and LU-B.12 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although General Plan policies would reduce potentially significant impacts related to erosion within unincorporated areas of the County, implementation of such requirements within incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact remains significant and unavoidable.

4.13-5 Additional development could occur in areas with expansive soils.

Some areas of the County are underlain by soils that are moderate to highly expansive. Development under the Draft General Plan would result in construction of new buildings and structures on expansive soils. The presence of expansive soils could cause damage to building foundations or floor slabs if volume changes due to moisture variations occur in the subgrade materials. Utility lines, roadways, or other project features that cross adjacent soil unit boundaries where expansive properties differ could be even more susceptible to damage. The potential for expansive soils to result in structural or property damage would increase personal safety risks and risk of property damage. General Plan Policies HS-D.1 and HS-D.8 reflect the County's commitment to minimizing hazards related to construction on expansive soils. In addition to identifying areas of expansive soil potential, development, including infrastructure projects, would be required to conduct site-specific geotechnical studies as part of the application and approval process to identify both the potential hazards resulting from construction on expansive soils, and necessary design and construction features (e.g., use of soil amendments to reduce shrink/swell properties of soil, specialized foundation design, removal of expansive soil at foundation sites, and replacement with non-expansive soil) to minimize or prevent such hazards.

Potential impacts related to expansive soils would occur with or without the project as growth occurs in the County. A site-specific geotechnical study must be prepared as part of the development process, regardless of whether the location is within incorporated or unincorporated areas of the County. Further, all new building construction and design must comply with specific UBC requirements. Therefore, this impact is considered **less than significant**.

Mitigation Measures

4.13-5 *None required.*

4.13-6 Additional development could affect the rate or extent of erosion.

Erosion is frequently accelerated by site preparation activities such as excavation and grading and cuts and fills. Exposed rock or soil surfaces resulting from site preparation (e.g., cuts and fills and vegetation removal) can lead to increased erosion. Erosion potential can also be enhanced by changing the permeability or runoff characteristics of the soil, or by modifying or creating new pathways for drainage. After development, slopes that are not effectively contoured, compacted, or revegetated may be susceptible to erosion. In addition to potential adverse effects on water quality from increased sediment loads carried in runoff, as discussed in more detail in Impact 4.8-5, erosion can result in slope instability during construction and after development is complete. Unless erosion controls are in place, people and structures could be exposed to increased risk of injury or damage as a result of mudslides, landslides, or other downslope movement of soil or rock. Development in the foothills and along river and stream banks would be most susceptible to erosional effects. Such hazards could occur with or without the project as growth and associated development in the County increases.

General Plan Policies HS-D.9, HS-D.10, HS-D.11, and HS-D.14 identify steps that must be taken during the planning and permitting process in unincorporated areas to identify erosion hazards and methods (through design and construction) to reduce the risk to the public and the environment from erosional processes. Although these policies would address development in unincorporated areas in the foothills, similar policies may not exist for all cities under whose jurisdiction most of the future growth, with or without the project, would occur. Therefore, this impact is considered **significant**.

Mitigation Measures

4.13-6 *No mitigation is required beyond Draft General Plan Policies HS-D.9, HS-D.10, HS-D.11 and HS-D.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although General Plan policies would reduce potentially significant impacts related to erosion within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact remains significant and unavoidable.

Cumulative Impacts

For seismic and geologic hazards, the impacts are not considered cumulatively considerable because all of the impacts would be site-specific and would not combine with other similar effects to create a loss or contribute to a cumulative condition.

4.14 HAZARDOUS MATERIALS

INTRODUCTION

The presence of hazardous materials is a part of everyday life that could affect residents, workers, and visitors within the County. Certain activities can pose a risk of exposure to people or the environment due to routine or accidental releases, such as spills, or as a result of possible contamination related to past uses of property. This section describes the potential adverse impacts on human health that could result from the use of hazardous materials and hazards associated with soil or groundwater contamination from past uses.

ENVIRONMENTAL SETTING

The following summarizes information contained in Chapter 9.6 and Chapter 9.7, Safety, Hazardous Waste and Hazardous Materials Emergency Response, in the *General Plan Background Report (Background Report)*, which are hereby incorporated by reference.

Hazardous Materials Use and Hazardous Waste

Various industrial and commercial facilities within the County use and store hazardous materials and generate hazardous waste. Underground storage tanks (USTs) are primarily used to contain gasoline and other petroleum products such as diesel and waste oil. A variety of other hazardous materials and wastes, such as solvents, are also stored in underground storage tanks. Facilities that use and store hazardous materials and wastes must comply with federal, State, and local laws governing hazardous materials/waste handling, storage, transportation, and disposal (described below).

Hazardous waste generators in Fresno County include industries, businesses, public and private institutions, and households. In 1995, there were approximately 400 small-quantity (between 100 and 1,000 kilograms per month) hazardous waste generators, and approximately 300 large-quantity (more than 1,000 kilograms per month) hazardous waste generators. Appendix 9B in the *Background Report* contains a list of large-quantity generators, based on data maintained by the U.S. Environmental Protection Agency (EPA). Waste oil comprises the largest percentage of industrial hazardous waste generated in Fresno County. Nonhalogenated solvents, pesticides, polychlorinated biphenyls (PCBs) and dioxins, and nonhalogenated organic sludges and solids accounted for slightly less. The majority of these businesses are located in the Fresno-Clovis metropolitan area.

There are two operating permitted treatment, storage, and disposal (TSD) facilities in Fresno County. Safety Kleen Corporation operates two TSD facilities in Fresno County, one treatment facility in Reedley and one collection center in Fresno. Parts cleaning solvents (mineral spirits and immersion cleaner) are recycled at the Reedley facility.

Fresno County has prepared a *Hazardous Waste Management Plan* (HWMP) in accordance with *California Health and Safety Code Section 24135 et seq.* The Fresno County HWMP, which was developed in 1988, identifies hazardous waste generators within the County, amounts and types of waste produced, and projected waste generation. In addition, the Plan identifies the need for any potential future locations of treatment, storage, and disposal (TSD) facilities and includes policies and potential impacts for the management of hazardous waste within the County. The major goal of the HWMP is to reduce the need for new hazardous waste facilities by reducing waste at its source through recycling, reduced use of hazardous materials, and public education. The HWMP was, for the second time, submitted to the State in 1992 and was not approved. During the public comment process on the HWMP, Sierra Nevada foothill areas were acknowledged to be unsuited for hazardous waste disposal due to limited road access, fire hazard areas, and the fractured rock aquifers that could not be monitored or effectively cleaned up if a spill occurred.

Contaminated Sites

Pesticide manufacturing/processing, storage, and applicator facilities, industrial manufacturing and processing, and old dumps comprise most of the sites where soil or groundwater contamination has occurred. Twenty sites in Fresno County were identified in the 1988 HWMP as "major contaminated sites." Five sites were included on the federal National Priorities List (NPL). Since 1988, three sites have been certified (i.e., remediation has been completed) by the California Department of Toxic Substances Control. According to the Fresno County Department of Community Health, Environmental Health System, no new major contaminated sites have been identified. In addition to the major sites, approximately 400 smaller sites have been included in the 1998 California Department of Substances Control Hazardous Waste and Substances Site List compiled pursuant to *Government Code* Section 65962.5 ("Cortese List"). The majority of the sites are in the Fresno and Clovis metropolitan area and are related to leaking USTs. A list of sites included in the Cortese List is included in Appendix 9C of the *Background Report*.

Underground Storage Tanks

Leaking USTs, particularly those containing petroleum products, represent the major sources of soil and groundwater contamination in the County. According to the Central Valley Regional Water Quality Control Board (CVRWQCB) Underground Tank Tracking System Database, over 600 underground tank locations in Fresno County, primarily in the Fresno-Clovis metropolitan area, have been identified as contaminated from leaking underground storage tanks. Soil or groundwater contamination due to leaking underground tanks at automobile service stations comprised almost all of the cases. Of the 600, approximately one-third have been closed (i.e., remediated or no further action is required) by Fresno County or the CVRWQCB.

Hazardous Materials Transportation

Hazardous wastes are transported through Fresno County by two modes: truck and rail. Two major north-south roadways are located in Fresno County. State Route 99 is a freeway that runs through the central part of the County. Major rail lines in the vicinity of State Route 99 include Union Pacific and

the Burlington Northern and Santa Fe Railroads. To the west, Interstate 5 traverses the County at the base of the Coast Range foothills. State Routes 33, 41, 43, 63, 145, 168, 180, and 198 provide local service to urban and rural areas in the County. County roads, city streets, and regional and State roadways may be used to transport hazardous wastes from their sources to disposal facilities.

Hazardous Materials Emergencies

Fresno County's Department of Community Health, Environmental Health System coordinates an Emergency Response Team that provides technical oversight and assistance for all emergency situations, including hazardous materials incidents that occur in Fresno County. The team began operation in 1981, and a *Hazardous Materials Emergency Plan* has been developed. The majority of hazardous materials incidents in Fresno County are fuel-spill related. If a hazardous materials incident occurs, an Emergency Response Team is dispatched by the Sheriff's office. When Environmental Health System personnel reach the site, they assist other emergency response personnel in (1) assessing the situation, (2) determining cleanup strategies, (3) overseeing evacuation, if necessary, and (4) certifying that cleanup is complete.

REGULATORY SETTING

The management of hazardous materials and hazardous wastes is regulated independently of the CEQA process at federal, State, and local levels through programs administered by the U.S. Environmental Protection Agency (EPA), agencies within the California Environmental Protection Agency (Cal/EPA), such as the Department of Toxic Substances Control (DTSC) and the Regional Water Quality Control Board (RWQCB), U.S. Department of Transportation (DOT), California Highway Patrol, federal and State Occupational Safety and Health agencies (OSHA), and Office of Emergency Services (OES). A number of these federal and State laws and regulations are administered at the local level by Fresno County. In addition, the Uniform Fire Code and Uniform Building Code include requirements pertaining to hazardous materials and hazardous wastes, which are monitored and enforced at the local level.

For sites where soil or groundwater contamination due to the release of a hazardous substance has been identified or could occur, the oversight of such sites often involves several different agencies that may have overlapping authority and jurisdiction. The DTSC and RWQCB are the two primary State agencies responsible for administering laws and regulations pertaining to hazardous materials release sites. For sites with leaking USTs, the local jurisdiction (Fresno County) would be responsible for oversight and monitoring of any cleanups. Any activities requiring risk management efforts to reduce potential hazards to people or the environment at the project site would be performed under local or State agency regulatory oversight, depending on the nature and extent of the problem, in accordance with established laws and regulations.

Stringent requirements for the development of K-12 schools near sites where hazardous materials are used or may be released into the environment are established in Section 17213 of the State Education Code and in Section 21151.8 of the Public Resources Code.

Demolition and renovation of buildings or structures where certain hazardous materials (e.g., asbestos and lead) are present must comply with State laws and regulations and local air pollution district notification and monitoring requirements.

Stringent federal and state regulations pertaining to container packaging and labeling, vehicle placarding, and manifesting have been established to protect the public and environment during the transport of hazardous materials and wastes. Federal requirements are specified by the U.S. Department of Transportation (DOT) in Title 49 of the Code of Federal Regulations. California regulations include those established by the Department of Toxic Substances Control (Title 22 of the *California Code of Regulations*) and California Highway Patrol (Title 13 of the California Code of Regulations). Transporters carrying hazardous materials and wastes must also adhere to certain routing requirements enforced by the California Highway Patrol under Section 31303 of the *California Vehicle Code*.

The application of restricted agricultural products on farming operations is regulated, monitored, and enforced by the Fresno County Department of Agriculture, Weights and Measures in accordance with the provisions of the California Department of Food and Agriculture Pesticide Regulation Program. Mosquito abatement and vector control services are provided by four special districts within Fresno County according to established guidelines and standards. Those districts are Coalinga-Huron Mosquito Abatement District, Consolidated Mosquito Abatement District, Fresno Mosquito Abatement District, and Fresno-Westside Mosquito Abatement District. Hazardous materials air emissions are regulated, monitored, and enforced by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD).

PLAN ELEMENTS

Development under the Draft General Plan would bring residents, construction workers, employees, and visitors into or near areas with the hazards discussed above. The Draft General Plan contains the following policies regarding hazardous materials and wastes.

Policy HS-F.1	The County shall require that facilities that handle hazardous materials or hazardous wastes be designed, constructed, and operated in accordance with applicable hazardous materials and waste management laws and regulations.
Policy HS-F.2	The County shall require that applications for discretionary development projects that will use hazardous materials or generate hazardous waste in large quantities include detailed information concerning hazardous waste reduction, recycling, and storage.
Policy HS-F.3	The County, through its Hazardous Materials Incident Response Plan, shall coordinate and cooperate with emergency response agencies to ensure adequate county-wide response to hazardous materials incidents.
Policy HS-F.4	For redevelopment or infill projects or where past site uses suggest environmental impairment, the County shall require that an investigation be performed to identify the potential for soil or groundwater contamination. In the event soil or groundwater contamination is identified or could be encountered during site development, the County shall require a plan that identifies potential risks and actions to mitigate those risks prior to, during, and after construction.

Policy HS-F.5	The County shall require that demolition of structures where friable asbestos or other hazardous materials could be released into the environment comply with applicable regulations and standards.
Policy HS-F.6	The County shall work cooperatively with the State Department of Toxic Substances Control and Regional Water Quality Control Board to promote the timely and efficient cleanup of contaminated sites under the regulatory oversight of these agencies.
Policy HS-F.7	The County shall ensure that the mining and processing of minerals in the County is conducted in compliance with applicable environmental protection standards.
Policy HS-F.8	The County shall encourage and promote household hazardous waste information and collection programs.
Policy OS-G.12	The County shall continue, through its land use planning processes, to avoid inappropriate location of residential uses and sensitive receptors in relation to uses that include but are not limited to industrial and manufacturing uses and any other use which have the potential for creating a hazardous or nuisance effect.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

The analysis of potential hazardous materials and hazardous waste impacts is based on information compiled and presented in the *Background Report*. This information included available technical reports and published information, correspondence, and consultation with knowledgeable agency personnel. The analysis is qualitative, and evaluates the extent to which development under the Draft General Plan could be affected by increased use of hazardous materials and development or redevelopment of sites where contamination may be present. The analysis assumes that growth would continue to occur primarily in areas that are already urbanized.

Standards of Significance

For purposes of this EIR, an impact may be deemed significant if development under the Draft General Plan would:

- create a substantial hazard to the public or the environment through the routine transport, use, storage, or disposal of hazardous materials or reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- create a substantial hazard to the public or the environment through development or redevelopment of a contaminated site; or

- adversely affect implementation of a hazardous materials emergency response plan.

Impacts and Mitigation Measures

4.14-1 Development under the Draft General Plan would increase the use of hazardous materials and the generation of hazardous wastes.

The Fresno-Clovis metropolitan area has historically experienced the greatest problems related to hazardous materials and wastes, and development under the Draft General Plan would increase the possibility of exposure of people and the environment to hazardous materials. The increased risks would occur as a result of expansion of industrial processes and commercial activities that use hazardous materials and generate hazardous waste, and through the development/ redevelopment of former industrial, commercial, or agricultural sites where hazardous chemicals were used or disposed.

Increased industrial and commercial activities would generate additional volumes of hazardous waste requiring disposal, and some increase in household hazardous materials would also be expected to occur. Exposure to hazardous materials is expected to be greatest in areas where existing industries or operations ("large-quantity generators") are present. The demolition or renovation of buildings and structures could involve asbestos-containing materials or similar airborne hazards. In addition, continued agricultural operations in the County will involve the use and storage of fertilizers, herbicides, and pesticides, some of which may have harmful effects. Finally, local highways and railroads will continue to transport significant amounts of hazardous materials, thereby exposing nearby people and the environment to potentially hazardous situations. Such increases in the use, storage, and transport of hazardous materials, and the generation of hazardous waste would occur with or without the project as development-related growth occurs in the County and incorporated cities.

General Plan Policies HS-F.1 through HS-F.3, HS-F.5, HS-F.6, HS-F.7, and OS-G.12 direct the County to ensure that hazardous materials use and waste management activities are performed in compliance with applicable laws and regulations and address the need to avoid inappropriate siting of sensitive land uses. These laws and regulations also apply to locations within incorporated areas. Specific laws and regulations pertain to the development of school sites, regardless of the jurisdiction. Policy HS-F.3 would ensure hazardous materials incidents emergency response capabilities are maintained, including city-County mutual aid agreements. These policies are also applicable to agricultural operations, where pesticides, fertilizers, and herbicides may be used near residential or mixed-use development, or where mosquito and vector control operations involving the use of hazardous materials for abatement activities are necessary. Policies HS-F.2 and HS-F.8 encourage reductions in hazardous waste generation, which would reduce the amount of hazardous materials used and stored, would reduce the demand on County hazardous waste facilities, and would reduce the potential for soil or groundwater contamination as a result of spills or leaks. The transport of hazardous materials and wastes on local roadways would continue to be subject to applicable federal and State regulations. In the event of a hazardous materials incident on a local roadway, Policy HS-F.3 would provide for local fire protection and other emergency response agencies to ensure adequate County-wide response to accidents or spills.

Because federal and State laws and regulations governing hazardous materials management are equally applicable to cities and counties, there would be no substantial difference in effects between the unincorporated and incorporated areas for growth that would occur with or without the Proposed Project. The Draft General Plan policies reinforce the need for compliance to ensure that growth would not create a substantial hazard to the public or environment through the routine transfer, use, storage, or disposal of hazardous materials. Therefore, impacts related to hazardous materials and wastes would be ***less than significant***.

Mitigation Measures

4.14-1 *None required.*

4.14-2 Development under the Draft General Plan would increase the risk of exposure to existing soil and groundwater contamination.

Development under the Draft General Plan would increase the possibility of exposure of people and the environment to hazardous materials through the development and redevelopment of former industrial, commercial, or agricultural sites where hazardous chemicals were used or disposed. Exposure to hazardous materials is expected to be greatest in areas where existing or past activities have resulted in soil or groundwater contamination, generally in the incorporated areas. The potential for encountering contaminated soil or groundwater during site development activities would occur with or without the project as development-related growth occurs in the County.

The identification and effective management of contaminated sites in unincorporated areas of the County would be addressed through implementation of General Plan Policies HS-F.4 through HS-F.6. These policies would ensure that the development or redevelopment of sites where soil or groundwater contamination has been identified or where buildings may contain hazardous constituents can proceed safely and would be managed to the satisfaction of regulatory agencies with jurisdictional authority over the affected sites. Although these policies would address development in unincorporated areas, similar policies may not exist for all cities under whose jurisdiction most of the future growth, with or without the project, would occur. Therefore, this impact is considered ***significant***.

Mitigation Measures

4.14-2 *No mitigation is required beyond General Plan Policies HS-F.4 through HS-F.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although General Plan policies would reduce potentially significant impacts related to contaminated sites within unincorporated areas of the County, implementation of such requirements within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

Cumulative Impacts

The cumulative context is county-wide development through the year 2020.

4.14-3 Development under the Draft General Plan, in combination with cumulative development, would increase the use of hazardous materials and the generation of hazardous wastes.

The Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the project. The difference between the project and not approving the project is the growth that would occur in the employment sector and the mix of employment and the patterns of development that would occur in the unincorporated area. Impacts 4.14-1 and 4.14-2, above, considers the effects of growth related directly to the project along with the growth that is projected to occur with or without project. Consequently, the impacts address both cumulative (partially) and project-specific impacts.

Where a significant and unavoidable impact has been identified for county-wide growth, the project contribution to that impact would be considered cumulatively considerable, even if on a project-specific level, it may be considered less than significant.

Hazardous waste would be generated in conjunction with hazardous materials used in future development, or as a result of cleanup of contaminated sites redeveloped for new uses. Hazardous wastes would require treatment and/or disposal at permitted facilities, which also accept such wastes from other locations in the State. The project would contribute considerably to hazardous waste impacts. Therefore, cumulative impacts related to hazardous waste generation and disposal are considered significant.

Mitigation Measures

4.14-3 *None available beyond General Plan Policies HS-F.1 through HS-F.8 and OS-G.12.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.15 NOISE

INTRODUCTION

Noise is often defined simply as unwanted sound, and thus is a subjective reaction to characteristics of a physical phenomenon. The growth anticipated under the General Plan (including the Proposed Project) could cause increased activity of existing and future noise sources and could result in existing or future noise sensitive uses being exposed to noise sources. The noise consequences of the population and employment projections including the General Plan's policies and measures are addressed in this section.

ENVIRONMENTAL SETTING

The standard unit of sound amplitude measurement is the decibel (dB). The A-weighted decibel scale (dBA) approximates the sensitivity of the human ear to the audible range of frequencies. Rating scales are available to analyze the adverse effect of community noise on people. Since environmental noise fluctuates over time, these scales consider that the effect of noise upon communities is largely dependent upon the total acoustical energy content of the noise, as well as the time of day when the noise occurs.

- L_{eq} , the equivalent energy noise level, is the average acoustic energy content of noise for a stated period of time. Thus, the L_{eq} of a time-varying noise and that of a steady noise are the same if they deliver the same acoustic energy to the ear during exposure. For evaluating community impacts, this rating scale does not vary, regardless of whether the noise occurs during the day or the night.
- Both the Community Noise Equivalent Level (CNEL) and the day-night average noise level (L_{dn}), are 24-hour average L_{eq} s with an additional "penalty" added to noise occurring during the evening and nighttime hours to account for the greater nocturnal noise sensitivity of people.
- L_n is the value of noise levels that are exceeded "n" percent of the time. This is used to characterize sustained versus unsustained noise levels. For instance, L_{50} is the noise level that is exceeded 50 percent of the time during a measurement period.

Existing noise conditions in Fresno County are addressed in Chapter 10, Noise, of the *General Plan Background Report (Background Report)*, which is incorporated by reference. To summarize, roadway traffic is probably the most pervasive source of noise throughout the County. The most prevalent individual traffic noise sources are the two primary north-south freeways Interstate 5 (I-5) and State Route 99 (SR 99), and the many other major roadways within the County including sections of SRs 33, 41, 43, 63, 145, 168, 180, 198, and 269 (and Herndon, Shaw, and Clovis Avenues within Fresno and Clovis city limits).

Other expressways and arterials within the unincorporated County also have substantial local influences on noise levels. The most intense traffic noise sources tend to be those with heavy truck traffic and/or high proportions of nighttime traffic. Cross-sectional views of distances to existing 70, 65, and 60 dBA L_{dn} noise contours were provided in Charts 10-4 through 10-8 the *Background Report* for selected segments of roadways. As illustrated in the charts, existing noise levels along many of these roadways are above 70 dBA L_{dn} . For heavily-traveled portions of SR 99, the noise is above 70 dBA L_{dn} for uninsulated areas within 500 feet of the centerline. Table 4.15-1 lists the estimated noise levels and distances to noise contours for the roadway segments depicted in Charts 10-4 through 10-8.

TABLE 4.15-1 ESTIMATED EXISTING NOISE LEVELS AND DISTANCES TO NOISE CONTOURS				
Roadway/Railroad	Baseline 1995 L_{dn} (dBA) ¹	Distance from Centerline ²		
		70 dBA	65 dBA	60 dBA
I-5: Panoche Road to Nees Avenue	84	340	720	1550
SR 99: Adams to Clovis	85	510	1200	2620
SR 33: South of Manning	73	70	170	400
SR 41: North of Mt Whitney to Harlan	76	120	260	590
SR 145: South of SR 180	78	140	330	700
BNSF Railroad Mainline	79	170	410	870
UP/SP Railroad Mainline	78	130	270	570
Notes: ¹ L_{dn} estimated at 50 feet from centerline. ² Distance measured in feet from centerline. SOURCE: EIP Associates, 1999.				

Besides roadway noise, railroads, airports, and fixed sources of noise also affect localities throughout the County. Both the Burlington Northern/Santa Fe and the Union Pacific (formerly Southern Pacific) railway companies operate north-south mainlines through the County. Along these routes, fast-moving freight and passenger trains are sources of whistle or warning noise, engine noise, and noise from rolling stock. The primary airports located in the County are the Fresno Yosemite International Airport, the Fresno-Chandler Downtown Airport, the Coalinga Airport, and the Lemoore Naval Air

Station. Other smaller general aviation facilities operate in cities throughout the County but are much less important sources of noise because their traffic tends to be less frequent and made up of smaller, quieter aircraft. Existing noise level contour maps for the major roadways, the railroads, and the airports are shown in the *Background Report*. Noise levels are above 70 dBA L_{dn} within about 150 feet of the railroads. Contour maps for each of the airports show that most existing residential development is outside the 60 dBA CNEL contours.

Industrial and other fixed noise sources are dispersed throughout the County. According to the *Background Report*, the notable noise generating industrial sources are agricultural processing operations and mining or building/landscaping materials processing, such as cement batch plants. Most of the activities generate relatively sustained noise levels rather than series of discrete peak events. The *Background Report* provides a description of the hours of operation of some of these facilities and also provides a description of existing noise levels monitored in their vicinity. As shown in the *Background Report*, noise levels were higher than 50 dBA L_{50} near many of the fixed sources.

The results of a community noise survey are also presented in the *Background Report*. The community noise survey shows that most of the communities in the unincorporated portions of the County have light levels of activity and are relatively quiet. Measured daytime noise levels ranged between the high-30s dBA to the mid-50s dBA L_{eq} .

REGULATORY SETTING

Federal, state, and local government each have some responsibility for providing environmental noise control. The Office of Noise Control at the California Department of Health Services published guidelines for evaluating the compatibility of various land uses as a function of community noise exposure and created a model community noise ordinance. The *Land Use Compatibility for Community Noise Environments* chart is provided in the *Background Report* (Chart 10-1 of the *Background Report*; also available from OPR, 1998), and the components of the *Model Community Noise Control Ordinance* are outlined in the *Background Report*. State-level noise control regulations apply to new multifamily residential construction through the California State Building Code (Title 24 of the California Code of Regulations), which establishes standards for building design that will limit maximum L_{dn} or CNEL noise levels to 45 dBA in any habitable room.

Other state and federal means of noise control include noise limits for transportation sources in the California Vehicle Code and highway noise abatement criteria from the Federal Highway Administration and the California Department of Transportation. The Federal Aviation Regulation Part 150 Airport Noise Compatibility Program is designed to reduce the effect of airport noise on the surrounding communities as airports expand, and Title 21 of the California Code of Regulations establishes noise standards for airports and sets forth the responsibilities of the regional Airport Land Use Commissions, which prepare land use compatibility plans with thorough evaluation of airport noise.

The Fresno County Noise Control Ordinance (Fresno County Code Chapter 8.40) includes baseline standards for exterior and interior noise that are consistent with the previous Fresno County General Plan Noise Element, adopted in December of 1975. County standards apply specifically to noise exposure at residences, schools, hospitals, churches, and libraries. The ordinance provides exterior and interior noise standards to be achieved during both daytime and nighttime hours, and it provides limitations on construction activities. These standards are shown in the *Background Report* (Tables 10-10a and 10-10b).

PLAN ELEMENTS

The Fresno County General Plan includes a Health and Safety Element with noise policies to manage sources of noise and protect noise sensitive land uses. Implementation of the General Plan anticipates growth of population, employment, and developed land uses as shown in the Project Description. Expansion of County-wide population, employment, and developed land uses each lead to the expansion of activities that have the potential to generate adverse noise effects.

The Draft General Plan contains the following policies to address noise.

- | | |
|---------------|---|
| Policy HS-G.1 | The County shall require that all proposed development incorporate design elements necessary to minimize adverse noise impacts on surrounding land uses. |
| Policy HS-G.2 | The County shall require new roadway improvement projects to achieve and maintain the normally acceptable noise levels shown in Chart HS-1: "Land Use Compatibility for Community Noise Environments." |
| Policy HS-G.3 | The County shall allow the development of new noise-sensitive land uses (which include, but are not limited to, residential neighborhoods, schools, and hospitals) only in areas where existing or projected noise levels are "acceptable" according to the Chart HS-1: "Land Use Compatibility for Community Noise Environments." Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to these levels. |
| Policy HS-G.4 | <p>So that noise mitigation may be considered in the design of new projects, the County shall require an acoustical analysis as part of the environmental review process where:</p> <ul style="list-style-type: none"> a. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels that are "generally unacceptable" or higher according to the Chart HS-1: "Land Use Compatibility for Community Noise Environments;" b. Proposed projects are likely to produce noise levels exceeding the levels shown in the County's Noise Control Ordinance at existing or planned noise-sensitive uses. |
| Policy HS-G.5 | Where noise mitigation measures are required to achieve acceptable levels according to land use compatibility or the Noise Control Ordinance, the County shall place emphasis of such measures upon site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, earthen berms, and building construction practices. The County shall consider the use of noise barriers, such as soundwalls, as a means of achieving the noise standards after other design-related noise mitigation measures have been evaluated or integrated into the project. |

- Policy HS-G.6 The County shall regulate construction-related noise to reduce impacts on adjacent uses in accordance with the County's Noise Control Ordinance.
- Policy HS-G.7 Where existing noise-sensitive uses may be exposed to increased noise levels due to roadway improvement projects, the County shall apply the following criteria to determine the significance of the impact:
- a. Where existing noise levels are less than 60 dBLdn at outdoor activity areas of noise-sensitive uses, a 5 dBLdn increase in noise levels will be considered significant;
 - b. Where existing noise levels are between 60 and 65 dBLdn at outdoor activity areas of noise-sensitive uses, a 3 dBLdn increase in noise levels will be considered significant; and
 - c. Where existing noise levels are greater than 65 dBLdn at outdoor activity areas of noise-sensitive uses, a 1.5 dBLdn increase in noise levels will be considered significant.
- Policy HS-G.8 The County shall evaluate the compatibility of Proposed Projects with existing and future noise levels through a comparison to Chart HS-1, "Land Use Compatibility for Community Noise Environments."
- Policy HS-G.9 The County shall not allow the development of new residential land uses in areas exposed to existing or projected levels of noise from aircraft operations at any airport or air base which exceed 60 dBLdn or CNEL.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Traffic and Railroad Noise Sources

Increased traffic on the County's roadways and railroads is analyzed for the increase in noise that would be associated with the growth anticipated by the General Plan. Based on the cross-sectional views of distances to existing L_{dn} noise contours provided in the *Background Report*, existing L_{dn} s were estimated at the reference distance of 50 feet from the segments of roadways and the railroad mainlines shown in the *Background Report*. The analysis of future traffic noise levels is performed using the Federal Highway Administration's Highway Traffic Noise Prediction Model (FHWA-RD-77-108). Increases in the average daily traffic that would be associated with the development anticipated under the plan are applied to the existing noise levels to model L_{dn} s under baseline conditions and conditions considering implementation of the Proposed Project.

Airport Noise Sources

Airport noise contours for future conditions are available as part of each airport's Master Plan. The noise contour maps for many of the general aviation airports in Fresno County and the Lemoore Naval

Air Station were prepared in the early 1980s. The noise contour maps for the Fresno Air Terminal, the Sierra Sky Park Airport, and the Harris Ranch Airport were prepared in the middle 1990s. These maps and the available airport plans characterize airport noise exposures.

Fixed Noise Sources

To characterize noise levels due to existing and future noise sources, the fixed noise source descriptions contained in the *Background Report* are referenced. To assume the worst-case future conditions, future fixed noise sources anticipated under the General Plan were assumed to locate near noise-sensitive land uses.

All noise levels analyzed are ambient exterior noise levels for each of the modeled locations. Any increase in interior noise levels is assumed to be the same as the increase in exterior noise levels presented in this section. For example, if project-related traffic would cause a 3 dBA change to exterior noise levels, a 3 dBA change would also be experienced indoors.

Standards of Significance

Noise impacts resulting from implementation of the Proposed Project are assessed by the following criteria. The first criterion pertains to noise exposure guidelines defined in the *Background Report* and considers land use compatibility and compliance with existing noise regulations. The second criterion pertains to the increase in noise levels that would be caused as a result of development under the Proposed Project. Noise impacts would be considered significant if development under the General Plan would:

- result in a condition where land use compatibility criteria are not satisfied (General Plan Policy HS-G.3, Chart HS-1) or the County Noise Control Ordinance is violated (Fresno County Code Chapter 8.40);
- cause the L_{dn} at an existing sensitive receptor to increase as shown:
- where existing noise levels are less than 60 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 5 dB L_{dn} increase in noise levels will be considered significant;
- where existing noise levels are between 60 and 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 3 dB L_{dn} increase in noise levels will be considered significant; or
- where existing noise levels are greater than 65 dB L_{dn} at outdoor activity areas of noise-sensitive uses, a 1.5 dB L_{dn} increase in noise levels will be considered significant.

Impacts and Mitigation Measures

4.15-1 Development under the Draft General Plan would increase traffic on roadways and railroad activity which would result in exposure of sensitive receptors to unacceptable noise conditions.

Overall traffic volumes on the County's roadways, and, to a lesser extent, use of the railroads, are expected to increase due to growth in population and employment anticipated under the Draft General Plan. Along roadways that experience a two-fold increase in traffic, noise levels would be expected to increase by approximately 3 dBA. A greater traffic increase on any roadway would cause a greater noise increase, and this increase would be intensified by any increases in travel speed or truck traffic caused by development allowed under the Draft General Plan. During the life of the Draft General Plan, increased activity along the roadways and the railroads could expand the existing noise impacts and expose more residential neighborhoods and other noise-sensitive areas to unacceptable noise conditions. New transportation projects including new roadway improvement projects and/or new transit projects would require project-specific analysis of noise effects. Without measures to reduce this impact, increased traffic noise would be considered potentially significant.

Development of new sensitive receptors in areas affected by unacceptable noise conditions is discussed separately in Impact 4.15-4, below. For information purposes, existing and future traffic noise levels along the roadways identified in the *Background Report* are estimated in this analysis and summarized in Table 4.15-2. As shown in Table 4.15-3, by 2020 noise levels would increase by more than 1.5 dB in areas that are currently experiencing noise levels well over 65 dB Ldn, which would represent a significant impact.

TABLE 4.15-2			
ESTIMATED EXISTING AND FUTURE TRAFFIC NOISE LEVELS (INCLUDING THE NO PROJECT ALTERNATIVE, YEAR 2020)			
Roadway/Railroad	Baseline 1995 L_{dn} (dBA)	2020 without Project L_{dn} (dBA)	2020 with Proposed Project L_{dn} (dBA)
I-5: Panoche Road to Nees Avenue	84	86	86
SR 99: Adams to Clovis	85	88	88
SR 33: South of Manning	73	73	73
SR 41: North of Mt Whitney to Harlan	76	80	80
SR 145: South of SR 180	78	80	80
BNSF Railroad Mainline	79	79	79 ⁽¹⁾
UP/SP Railroad Mainline	78	78	83 ⁽¹⁾
Notes: L _{dn} estimated at 50 feet from centerline. Based on existing conditions in <i>Background Report</i> and anticipated traffic increases. ⁽¹⁾ Consolidation of the BNSF mainline traffic onto the Union Pacific mainline from Calwa to the San Joaquin River would be supported by proposed policy TR-E.1. The remainder of the Union Pacific mainline would not be affected and would remain approximately 78 dBA L _{dn} . No change is assumed for the remainder of the BNSF mainline.			
SOURCE: EIP Associates, 1999.			

TABLE 4.15-3 ESTIMATED DISTANCES TO NOISE CONTOURS (INCLUDING THE NO PROJECT ALTERNATIVE; YEAR 2020)									
Roadway/Railroad	Baseline 1995 (ft to L _{dn} contour)			2020 No Project (ft to L _{dn} contour)			2020 with Proposed Project (ft to L _{dn} contour)		
	70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA	70 dBA	65 dBA	60 dBA
I-5: Panoche Road to Nees Ave.	340	720	1550	500	1060	2260	500	1060	2270
SR 99: Adams to Clovis	510	1200	2620	810	1840	1470	850	1920	4340
SR 33: South of Manning	70	170	400	80	190	430	80	200	460
SR 41: North of Mt Whitney to Harlan	120	260	590	190	430	950	210	460	1020
SR 145: South of SR 180	140	330	700	200	440	980	200	450	1000
BNSF Railroad Mainline ⁽¹⁾	170	410	870	170	410	870	170	410	870
UP/SP Railroad Mainline ⁽¹⁾	130	270	570	130	270	570	270	560	1190
Notes: Based on existing conditions in <i>Background Report</i> and anticipated traffic increases. ⁽¹⁾ Consolidation of the BNSF mainline traffic onto the Union Pacific mainline from Calwa to the San Joaquin River would be supported by proposed policy TR-E.1. The remainder of the Union Pacific mainline would not be affected and would remain approximately 78 dBA L _{dn} . No change is assumed for the remainder of the BNSF mainline.									
SOURCE: EIP Associates, 1999.									

Table 4.15-3 shows that while the decibel levels for 2020 with and without the project would be similar, the Proposed Project would increase noise levels enough to increase the distance from the study roadways to acceptable noise levels.

Although noise levels would be expected to increase along many of the County's roadways as a result of development anticipated by the Proposed Project, the majority of the impact would be expected to occur without the Proposed Project. In the cases identified in Table 4.15-2, traffic increases without the project would cause noise levels to increase to within 0.5 dBA of the levels anticipated with the Proposed Project. This means that implementation of the Proposed Project would contribute only a small fraction to the anticipated noise increases, and the project's contribution compared to the increase without the project would be negligible.

The draft policies of the General Plan would reduce this impact by providing guidelines for new roadway improvement projects. New roadway improvement projects would be required to achieve noise standards equivalent to those in the noise element (Policy HS-G.2), and increased noise caused by roadway improvement projects that is greater than 5 dBA L_{dn} would be deemed significant by thresholds included in the policies (Policy HS-G.7). Acoustical analyses would be required for projects with noise sensitive uses proposing to locate in areas where the standards of the noise ordinance are exceeded and for transportation-related projects likely to exceed the standards of the noise element at existing or planned sensitive uses (Policy HS-G.4). Other state and federal means of noise control

include noise limits for transportation sources in the California Vehicle Code and highway noise abatement criteria from the Federal Highway Administration and the California Department of Transportation. These requirements along with implementation of the above General Plan policies would reduce the impact of traffic noise sources to a level that would be less than significant for the County. Similar measures to reduce traffic noise levels are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.15-1 No mitigation is required beyond Draft General Plan Policies HS-G.2, HS-G.4, and HS-G.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.

Effective implementation of the policies cited above would reduce traffic- and rail-related noise generation impacts for development that occurs within the County's jurisdiction to a less-than-significant level. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable.

4.15-2 Development under the Draft General Plan would result in increased airport activity, which would increase noise levels.

Noise exposures from operations at the County's airports are expected to increase due to growth in airport operations that may be caused by growth in population and employment anticipated under the Proposed Project, and as a result of the development of the airports in accordance with their Master Plans. For example, the Fresno Air Terminal, in the *Airport and Environs Plan* (FAT, 1992), reports that before the year 2010 the total annual operations at the airfield could increase from approximately 200,000 operations per year in 1996 to a maximum of 400,000 operations per year in 2010. During the life of the General Plan, which extends to 2020, increased activity at this airport and the other airports in the County could expand the airports' noise impacts to expose residential neighborhoods to unacceptable noise conditions. The potential for development of new sensitive receptors in areas affected by unacceptable airport noise is discussed separately in Impact 4.15-4, below.

Existing requirements for airports would reduce the noise impacts of increased airport activity. Title 21 of the California Code of Regulations establishes noise standards for airports and establishes responsibilities of the regional Airport Land Use Commissions, which prepare land use compatibility plans with thorough evaluations of airport noise. Additionally, the Federal Aviation Regulation Part

150 Airport Noise Compatibility Program is designed to reduce the effect of airport noise on the surrounding communities as airports expand. Such measures are required for airports within the incorporated cities. With these requirements in place, the impact of increased airport activity on noise levels would be ***less than significant***.

Mitigation Measures

4.15-2 *None required.*

4.15-3 Development under the Draft General Plan would result in increased fixed noise source activity or new fixed noise sources, which would result in exposure of sensitive receptors to unacceptable noise conditions.

The potential for noise exposure due to industrial and other fixed noise sources would be expected to increase due to expansion of existing operations of noise sources or addition of new noise sources near sensitive land uses during the life of the Draft General Plan. Noise impacts may occur due to construction activities, new industrial activities, or other fixed noise sources that occur near existing or future sensitive uses. Generally, without barriers, construction equipment can generate noise levels of up to 86 dB at 50 feet and 83 dB at 100 feet. Industrial and agricultural operations can also generate loud noises. The potential for existing or future sensitive uses, including residential areas, to be exposed to unacceptable noise levels from construction or other non-transportation noise is considered a ***significant impact***.

The Fresno County Noise Control Ordinance (Fresno County Code Chapter 8.40) specifies standards for sources of excessive noise affecting residences, schools, hospitals, churches, and libraries. Sources causing exterior noise levels in sensitive areas to exceed 50 dBA daytime L_{50} or 45 dBA nighttime L_{50} are prohibited by the ordinance, and non-emergency construction activities are limited to daytime hours. Noise from air conditioning and refrigeration equipment, waste and garbage collection equipment, and electrical substations are also specifically addressed by the ordinance. The noise ordinance would, therefore, reduce the impact of construction activities, new industrial activities, and other fixed noise sources on sensitive uses. The County health officer is responsible for enforcement of the ordinance.

The policies of the Draft General Plan would further reduce this impact by guiding development of new noise sensitive uses. The General Plan would specify that the County not allow development of new noise sensitive uses in areas where existing and projected non-transportation related noise levels exceed the thresholds of the noise ordinance (Policy HS-G.3). The General Plan would also specify that the County limit construction noise according to the noise ordinance (Policy HS-G.6). Enforcement of the noise ordinance and implementation of the Draft General Plan policies would reduce the impact of fixed noise sources to a level that would be less than significant for the County.

Similar measures are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, this impact is considered ***significant***.

Mitigation Measures

4.15-3 *No mitigation is required beyond Draft General Plan Policies HS-G.3 and HS-G.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce fixed noise source impacts for development that occurs within the County's jurisdiction to a less-than-significant level. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable.

4.15-4 Development under the Draft General Plan could result in placement of new sensitive receptors in areas with existing or future unacceptable noise conditions.

Development anticipated under the Proposed Project would include adding new residential and other sensitive uses to the County, throughout the incorporated cities and to some extent in the unincorporated areas. A total of approximately 81,600 new single family dwelling units and 29,300 multiple family dwelling units would be added to the County during the 20-year timeframe life of the Draft General Plan. Existing noise levels along major roadways are shown in the *Background Report* to be above 70 dBA L_{dn} , and according to Land Use Compatibility Guidelines (*Background Report*, Chart 10-1), residential use in areas with L_{dn} s over 70 dBA would be considered "generally unacceptable." This is considered a **significant impact**.

The general land use strategies of the Proposed Project encourage increasing the concentration of population and employment in the incorporated areas of the County (primarily in Fresno and Clovis). Because increased density in the urbanized areas would be encouraged by the Proposed Project, the County would be more likely to encourage future residential projects and other sensitive-use projects to locate in areas that could be exposed to frequent or substantial urban noise. In this manner, this impact would be intensified by the general land use strategies of the Proposed Project. The level of noise impact would depend on a variety of project-specific conditions including location of sensitive uses (e.g., the orientation and setback of sensitive uses) and shielding or insulation of sensitive uses from known noise sources.

Noise levels along heavily-traveled expressways and arterials within the unincorporated County are expected to grow during the life of the Draft General Plan, as discussed separately in Impact 4.15-1 above. Based on the noise contours shown in the *Background Report*, the distances to the future 70, 65, and 60 dBA L_{dn} noise contours are calculated and shown in Table 4.15-3. For example, on heavily-traveled portions of SR 99, the existing noise is above 70 dBA L_{dn} for uninsulated areas within 500 feet of the centerline. This would expand to more than 800 feet in 2020 with traffic anticipated under the Proposed Project.

Existing building code requirements specify that multiple family residential buildings are required to include noise insulation (Title 24 of the California Code of Regulations). The amount of insulation is based on worst-case exterior noise levels existing either at the time that the building permit is issued or any time in the future ten or more years. For multiple family dwellings (including new hotels, motels, dormitories, etc.), the building noise insulation requirements in Title 24 would provide substantial protection so that interior noise levels would be reduced to acceptable levels.

The Fresno County Noise Control Ordinance (Fresno County Code Chapter 8.40) specifies standards for sources of noise affecting residences, schools, hospitals, churches, and libraries. The ordinance provides protection to existing sensitive land uses from sources of excessive noise, but it does not discourage future sensitive uses from locating near existing noise sources.

The policies of the Draft General Plan would reduce the effect of urban noise levels on a project-by-project basis by guiding development of new noise sensitive uses. To identify Proposed Projects that would not be compatible with the noise environment, the County would evaluate new projects in the context of the Land Use Compatibility criteria (Chart 10-1 of the *Background Report*) (Policy HS-G.8). Furthermore, the Draft General Plan would specify that the County not allow development of new noise sensitive uses in areas where existing and projected non-transportation related noise levels exceed the thresholds of the noise ordinance (Policy HS-G.3). Acoustical analyses would be required for projects with noise sensitive uses proposing to locate in areas where the standards of the noise ordinance are exceeded and for transportation-related projects likely to exceed the standards at existing or planned sensitive uses (Policy HS-G.4). Development of new residential land uses would not be allowed in areas exposed to excessive noise from aircraft operations (Policy HS-G.9). Implementation of these policies would reduce impacts due to land use compatibility to a less-than-significant level for the County. Similar measures to protect new residential uses and other sensitive receptors from unacceptable noise levels are available to, and in many cases required by, city governments. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Therefore, the impact is considered **significant**.

Mitigation Measures

4.15-4 *No mitigation is required beyond Draft General Plan Policies HS-G.3, HS-G.4, HS-G.8, and HS-G.9 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Effective implementation of the policies cited above would reduce this impact to a less-than-significant level for development that occurs within the County's jurisdiction. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) that occurs within other jurisdictions. For these reasons, the impact would remain significant and unavoidable.

Cumulative Impacts

The cumulative context for traffic noise is provided by the FCMA traffic model (see Section 4.4, Transportation and Circulation), which accounts for traffic due to development throughout the County and surrounding Fresno County and surrounding areas, through the year 2020. Therefore, Impact 4.15-1 evaluates the project-specific and cumulative impact related to traffic noise. Other noise sources are more localized and would not combine with cumulative development outside of the County.

4.15-5 The Draft General Plan, in combination with other cumulative development, would result in increases in mobile and fixed noise source levels, resulting in permanent increases in ambient noise levels that could affect sensitive receptors.

The Proposed Project by itself (i.e., the growth attributable directly to the Draft General Plan policies plus the increment attributable to the Economic Development Strategy) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the Project. The project will have a more noticeable difference in future conditions related to growth that would occur in the employment sector, the mix of employment, and the patterns of development that would occur in the unincorporated area. Since workplaces are typically the areas of a community generating noise, this growth will create additional noise sources. Intensification of land use may result in additional sensitive receptors being located within the noise contours outlined above either because the contours expand over time to include the sensitive receptors or because of shifts in land use patterns and intensification that increase the number of sensitive receptors within the contours.

The project would contribute considerably to these impacts by increasing mobile and fixed source noise throughout the County. In addition to noise impacts within Fresno County, growth activities attributable to the Project will also contribute to noise impacts in areas adjacent to the County with decreasing intensity as mobile source noise activities increase over time. These impacts are considered ***significant***.

Mitigation Measures

4.15-5 *No mitigation is available beyond Draft General Plan Policies HS-G.1 through HS-G.9.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

4.16 VISUAL QUALITY

INTRODUCTION

Visual quality is generally defined as those features of a landscape that attract viewer interest and promote a favorable impression. Visual quality is subjective in nature and definitions of what is pleasing visually will vary from individual to individual. The following section addresses project impacts on the visual resources and aesthetic character of Fresno County's natural environment. Issues include potential impacts to scenic views and vistas and impacts associated with an increase of urban light sources within the area.

Topics discussed in this section that overlap other sections of this EIR include: open space, streets and highways, biological resources, and rangelands.

ENVIRONMENTAL SETTING

The physical environment is a key component in planning for future county growth since it contributes directly to the perceived desirability of the county as a place to live, work, and visit. This, in turn, has consequences for the economic vitality of the county since it affects the types and quantity of businesses and residents that ultimately will settle in Fresno County.

Fresno County has a diverse visual landscape that gradually changes from east to west. Starting from the east are the Sierra Mountains which are rich in coniferous forests and provide scenic views of the varied topography. There are several large reservoirs such as Millerton Lake, Huntington Lake, and Shaver Lake scattered throughout the Sierra which provide recreational as well as scenic opportunities. The San Joaquin and Kings Rivers, which originate high in the Sierra Mountains, are the county's two major rivers. Two scenic highways, Highway 168 and Highway 180, extend down from the Sierras and terminate in the Eastside Valley area. In addition, there are several scenic drives that wind their way through the Sierra and Sierra Foothill areas. The County's built environment is located throughout the valley and much of it located along the Highway 99 corridor. Agricultural lands consisting of orchards, vineyards, ranches, and various row crops start on the fringe of these communities and extend to cover much of the valley floor. These large farms provide a sense of open space, emphasize the county's rural and farming heritage, and allow motorists opportunities for unrestricted panoramic views. The Coastal Foothills, containing gentle rolling hills with scattered oak trees, extend westward past Interstate 5. Due to the continuous unrestrictive views of adjacent coastal foothills, Interstate 5 (I-5) is an officially designated scenic highway.

REGULATORY SETTING

The California Department of Transportation (Caltrans) administers the California Scenic Highway Program, which is the only official program in Fresno County designed to protect and enhance scenic/visual resources. The goal of the California Scenic Highway Program is to preserve and enhance the natural beauty of California. The program develops and implements a scenic corridor protection program containing five accepted land use planning standards. A legislatively- appointed body, the Departmental Transportation Advisory Committee (DTAC), has the responsibility of recommending program criteria, reviewing applications and recommending eligible highways for official scenic highway designation, and advising the Director of Caltrans to revoke the official designation of any existing scenic highway which is no longer in compliance with the program. Other regulations that assist in minimizing impacts from urban land uses, to some extent, include County zoning and development standards and regulations.

PLAN ELEMENTS

The Draft General Plan contains the following policies aimed at preserving scenic views and panoramas and designating and maintaining scenic roadways including highways, scenic drives, and landscaped drives.

Scenic Resources

- Policy OS-K.1 The County shall encourage the preservation of outstanding scenic views, panoramas, and vistas wherever possible. Methods to achieve this could include encouraging private property owners to enter into open space easements for designated scenic areas.
- Policy OS-K.2 The County shall identify and map significant scenic resources within the County and shall develop a program to manage these resources.
- Policy OS-K.3 The County should preserve areas of natural scenic beauty and provide for public access to scenic vistas by purchasing sites for park use.
- Policy OS-K.4 The County should require development adjacent to scenic areas, vistas, and roadways to incorporate natural features of the site and be developed to minimize impacts to the scenic qualities of the site.

Scenic Roadways

- Policy OS-L.1 The County designates a system of scenic roadways that includes landscaped drives, scenic drives, and scenic highways. Definitions and designated roadways are shown in the text box below.
- Policy OS-L.2 The County shall manage designated landscaped drives and adjacent land based on the following principles:
 - a. Maintenance and improvement of landscaped drives should be directed toward preserving and enhancing the quality of the landscape within the right-of-way. Where deemed necessary or desirable, the Board of Supervisors should, by resolution, assume responsibility for maintenance and improvement of landscaped drives; and
 - b. Development of land adjoining landscaped drives should be planned and designed to preserve the quality and integrity of the roadside landscape.

- Policy OS-L.3 The County shall manage the use of land adjacent to scenic drives and scenic highways based on the following principles:
- a. Timber harvesting within or adjacent to the right-of-way shall be limited to that which is necessary to maintain and enhance the quality of the forest;
 - b. Proposed high voltage overhead transmission lines and towers shall be routed to minimize detrimental effects on scenic amenities visible from the right-of-way;
 - c. Installation of signs visible from the right-of-way shall be limited to business identification signs, onsite real estate signs, and traffic control signs necessary to maintain safe traffic conditions. All billboards and other advertising structures shall be prohibited from location within view of the right-of-way;
 - d. Intensive land development proposals including, but not limited to, subdivisions of more than four lots, commercial developments, and mobile home parks shall be designed to blend into the natural landscape and minimize visual scarring of vegetation and terrain. The design of said development proposals shall also provide for maintenance of a natural open space area 200 feet in depth parallel to the right-of-way. Modification of the setback requirement may be appropriate when any one of the following conditions exist:
 - 1) Topographic or vegetative characteristics preclude such a setback;
 - 2) Topographic or vegetative characteristics provide screening of buildings and parking areas from the right-of-way;
 - 3) Property dimensions preclude such a setback; or
 - 4) Development proposal involves expansion of an existing facility or an existing concentration of uses.
 - e. Subdivision proposals shall be designed to minimize the number of right-of-way access drives;
 - f. Developments involving concentration of commercial uses shall be designed to function as an integral unit with common parking areas and right-of-way access drives; and
 - g. Outside storage areas associated with commercial activities shall be completely screened from view of the right-of-way with landscape plantings or artificial screens which harmonize with the natural landscape.
- Policy OS-L.4 The County shall require proposed new development along designated scenic roadways within urban areas and unincorporated communities to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute their fair share of funding for future undergrounding.
- Policy OS-L.5 The County road improvement projects involving designated scenic roadways shall be constructed to insure that consideration is given to preservation of ornamental trees consistent with public safety standards and accepted road design.
- Policy OS-L.6 The County shall request city, State, and Federal agencies to maintain County-designated landscaped drives, scenic drives, and scenic highways under their jurisdictions in a manner consistent with the goals and policies in this section.
- Policy OS-L.7 The County shall encourage the State of California to landscape urban freeway and highway routes which pass through Fresno County.
- Policy OS-L.8 The County shall encourage cities within Fresno County to develop complementary policies and principles to enhance the visual qualities of streets and highways within their boundaries.

- Policy OS-L.9 The County shall work with the Department of Transportation to pursue scenic highway designation from the State of California for the State highway segments eligible for such designation (including those listed in the text box below and any other segments added),
- Policy LU-B.11 The County shall require that new development requiring a County discretionary permit be planned and designed to maintain the scenic open space character of rangelands including view corridors of highways. New development shall utilize natural landforms and vegetation in the least visually disruptive way possible, and use design, construction and maintenance techniques that minimize the visibility of structures on hillsides, ridgelines, steep slopes, and canyons.

IMPACTS AND MITIGATION MEASURES

Method of Analysis

Aesthetics and visual resources are subjective by nature, and therefore the level of a project's visual impact is difficult to quantify. In addition, it is difficult to estimate the impact development would have on scenic resources, since individual development projects can enhance the aesthetic quality of an area. Therefore, this analysis was conducted qualitatively, assessing potential growth implications of the Land Diagram, including the potential degradation of the existing visual character of the county, particularly its scenic resources. The Draft General Plan policies are evaluated to determine the extent to which they would protect existing resources, and minimize the degradation of visual quality.

Standards of Significance

For the purposes of this EIR, a significant environmental impact would occur if the Proposed Project would:

- result in a land use pattern that significantly changes the existing visual quality of the region, such as natural viewsheds or scenic vistas;
- eliminate visual resources either directly or cumulatively; or
- cause the production of light and glare which results in negative aesthetic effects to adjacent lands.

Impacts and Mitigation Measures

4.16-1 Development under the Draft General Plan could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources.

Fresno County contains a variety of terrain and vistas that could be considered scenic, particularly views of rural farmland, the foothills and the Sierra Nevada. Land development anticipated under the Draft

General Plan could alter these views by converting undeveloped areas to urban uses. In addition, views could be interrupted by multistory buildings. Specific impacts on visual resources cannot be addressed until particular development projects are identified and reviewed. The potential loss or degradation of such resources is considered a **significant impact**.

It should be noted that most of the development occurring by 2020, approximately 89 percent of total acreage, would occur whether or not the Proposed Project was adopted. Furthermore, more than 93 percent of projected development (by acreage) would occur within incorporated areas and proximate areas within cities' spheres of influence. New development within existing urban areas is likely to be consistent with its surrounding visual character, and less likely to occur in areas considered scenic than development in the unincorporated areas, which are generally more rural than the cities. At the same time, larger scale, multistory buildings, which could block long distance views, would be more likely to be constructed in urban areas.

The proposed General Plan contains several policies that minimize potential visual impacts from new development. Policies OS-K.1, OS-K.2, OS-K.3, and OS-K.4 would maintain the existing visual quality by encouraging the preservation of outstanding scenic views, panoramas, and vistas; developing programs to manage these resources; ensuring public access to scenic vistas; and requiring development adjacent to scenic areas, vistas, and roadways to incorporate natural features of the site and be developed to minimize impacts to the scenic qualities of the site. Policy OS-L.4 requires proposed new development along designated scenic roadways to underground utility lines on and adjacent to the site of proposed development or, when this is infeasible, to contribute its fair share of funding for future undergrounding. Policy LU-B.11 requires that new development, including grading, be planned and designed to maintain the scenic open space character of rangelands, including view corridors of highways. It also requires that new development utilize natural landforms and vegetation in the least visually disruptive way possible, and use design, construction and maintenance techniques that minimize the visibility of structures on hillsides, ridgelines, steep slopes, and canyons.

Since much of the county's scenic resources such as scenic highways, scenic drives, mountains, and forests are located away from the urban development areas and no new significant amount of development is planned in the rural areas of the county, implementation of the Draft General Plan policies would ensure that the visual quality of the unincorporated areas is not substantially altered by new development. Therefore, impacts on scenic views are considered less than significant for Fresno County. Similar measures are available to, and required by some of the cities in the county. However, the County cannot ensure that similar measures would be enforced for development (whether related to the Proposed Project or not) within cities under whose jurisdiction most of the future growth would occur. Furthermore, the development of over 37,000 acres, even if it occurs primarily within urban areas, would substantially alter the visual character of some areas. Therefore, the impact is considered **significant**.

Mitigation Measures

4.16-1 *No mitigation is required beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.*

Although Draft General Plan policies would minimize alterations to the visual quality of the unincorporated areas of the County, implementation of similar policies within the incorporated areas is not within the County's jurisdiction to monitor and enforce. Therefore, the impact is considered significant and unavoidable.

4.16-2 Development under the Draft General Plan would introduce new sources of light and glare into development areas and surrounding rural areas.

Future development under the Draft General Plan would increase the amount of light in the county due to street lighting, flood lights, security lighting, private residential lights, and automobile headlights.

Within the unincorporated areas, new development would introduce a ambient urban light to a very rural area with only isolated lighting at present. The increase in development throughout the county (incorporated and unincorporated areas) will substantially increase the amount of ambient light, interfering with views of the night sky, especially in more urbanized areas, and altering the nighttime character of the county. This is considered a **significant impact**.

Mitigation Measures

4.16-2 *In approving new development, the County shall require that lighting standards be designed and constructed to minimize the project contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive (e.g., residences, hospitals) properties.*

The above mitigation measure(s) would reduce the effects of "spillover" light, but not to a less-than-significant level, for development under the County's jurisdiction. Even this type of light fixture would be visible, so it could change the rural character of some of the unincorporated areas (where there are very few or no lights at present). Furthermore, the majority of new lighting would occur in areas that are outside of County jurisdiction. Similar measures would be available to other jurisdictions, but the County cannot ensure that they are implemented. For these reasons, the impact is considered significant and unavoidable.

Cumulative Impacts

The cumulative context is county-wide development through the year 2020.

4.16-3 Development under the Draft General Plan, in combination with other development in the County, could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources and the introduction of new sources of light and glare into development areas and surrounding rural areas.

Much of the Central Valley is characterized by rural agricultural lands. The foothills and Sierra Nevada are sparsely populated, and retain much of their natural character. The development of the Project, in combination with the other development in the Central Valley would extend the urban edge by converting currently undeveloped land to urban and suburban uses. Views along rural or scenic highways would change with the introduction of residential and commercial development, streets, and night lighting. Rural communities may lose some of their small-town character as they grow. Because it would foster growth associated with economic development, the Project would contribute considerably to the cumulative alteration of the visual character of the Central Valley. This is considered a **significant impact**.

Mitigation Measures

4.16-3 *None available beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 and Mitigation Measure 4.16-2.*

Implementation of the Draft General Policies listed above would reduce the project's contribution to this significant cumulative impact, but not to less-than-significant levels, and such measures would not reduce the cumulative effect to less-than-significant levels. Therefore, the cumulative impact would remain significant and unavoidable.

5. OTHER CEQA CONSIDERATIONS

Cumulative Impacts

CEQA requires the analysis of impacts due to cumulative development that would occur independent of, but during the same timeframe as, the project under consideration, or in the foreseeable future. In this context, cumulative impacts are those that if added to the impacts of the Draft General Plan would increase the severity, or the significance of impacts of the Draft General Plan. By requiring an evaluation of cumulative impacts, CEQA attempts to minimize the potential that large-scale environmental impacts would be ignored due to the project-by-project nature of project-level analyses contained in EIRs.

Cumulative analyses need not be undertaken in the same manner as those aimed at evaluating the project under consideration. According to Section 15130(b) of the CEQA Guidelines,

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as provided of the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness. The following elements are necessary to an adequate discussion of cumulative impacts:

- (1) Either:
 - (A) A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency, or
 - (B) A summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or areawide conditions. Any such planning document shall be referenced and made available to the public at a location specified by the Lead Agency...
- (2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
- (3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable options for mitigating or avoiding any significant cumulative effects of the proposed projects.

The CEQA Guidelines go on to recognize that by their nature cumulative impacts, and their respective mitigation measures, are not necessarily under the control of the lead agency, and may not necessarily be project specific in nature. Section 15130 of the CEQA Guidelines states:

With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinances or regulations rather than the imposition of conditions on a project-by-project basis.

As discussed in Chapter 4, the context for determining cumulative impacts is countywide development through the year 2020. The Proposed Project by itself (i.e., the growth attributable directly to the Economic Development Strategy and the Draft General Plan policies) represents a relatively small portion of the growth projected to occur in the county by 2020, because the population growth would be unchanged by the project. The difference between the project and not approving the project is the growth that would occur in the employment sector and the mix of employment and the patterns of development that would occur in the unincorporated area.

Each of the impacts identified in Chapter 4 considers the effects of growth related directly to the project along with the growth that is projected to occur in the County with or without project. Consequently, most of the impacts identified in Chapter 4 address both cumulative (at least partially) and project-specific impacts. In some cases, such as the loss of biological resources and the increase in air pollutants, the cumulative context extends beyond the boundaries of the county, because the particular resource that is affected covers a larger region than the county.

The following is a summary of the significant cumulative impacts that have been identified for the Proposed Project.

Land Use

No cumulative impacts were identified for Land Use.

Agriculture

- Permanent loss of important farmland, reduction in agricultural production, and an increase in the non-renewal and cancellation of Williamson Act Contracts.

Transportation

- Increases in passenger vehicle and truck traffic volumes and congestion on rural and local roadways and State highways.

Wastewater, Storm Drainage and Flooding

- Increases in stormwater runoff that could increase flooding potential.
- Increases in wastewater flows and stormwater runoff containing pollutants that could affect receiving water quality.

Public Services

- Increased demand for police protection services and facilities.

- Increased demand for fire protection and emergency services.
- Increased demand for parks and recreation facilities.
- Increased demand for libraries.

Cultural Resources

- Loss of or damage to subsurface prehistoric resources.
- Devaluation, disturbance, alteration or destruction of historic areas, sites, and structures.

Water Resources

- Increased demand for water supply and water treatment and delivery systems.
- Changes in aquifer characteristics.
- Increases in stormwater runoff containing constituents that could adversely affect receiving quality.

Biological Resources

- Loss of wetland habitat.
- Loss of habitat for special-status wildlife species.
- Loss of habitat for special-status plants.
- Loss of heritage or landmark trees.
- Loss of riparian and aquatic habitat.
- Loss of grassland habitat.

Forestry Resources

- Conversion of forest lands to non-forest uses.
- Creation of land use incompatibilities between timber operations and other land uses.

Mineral Resources

- Potential loss of land available for mineral resource extraction.

Air Quality

- Increase in air pollutant emissions, including PM₁₀, CO, ROG, and NO_x, caused by mobile source activity, area sources, and stationary sources.

Seismic and Geologic Hazards

No cumulative impacts were identified for Seismic and Geologic Hazards.

Hazardous Materials

- Increase in hazardous waste generation.

Noise

- Increases in mobile and fixed noise source levels, resulting in permanent increases in ambient noise levels that could affect sensitive receptors.

Visual Quality

- Substantial alteration to the existing visual character of the region and/or visual access to scenic resources (including introduction of new sources of light and glare to rural areas).

Growth Inducing Effects

Introduction

An EIR must discuss the ways in which a proposed project could foster economic or population growth or the construction of additional housing in the vicinity of the project and how that growth would, in turn, affect the surrounding environment (see CEQA Guidelines Section 15126.2[d]). Growth can be induced in a number of ways, including through the elimination of obstacles to growth, or through the stimulation of economic activity within the region. The discussion of the removal of obstacles to growth relates directly to the removal of infrastructure limitations or regulatory constraints that could result in growth unforeseen at the time of project approval.

Two issues must be considered when assessing the growth-inducing effects of a project:

- **Elimination of Obstacles to Growth:** The extent to which additional infrastructure capacity or a change in regulatory structure would allow additional development in the county and region; and
- **Promotion of Economic Expansion:** The extent to which the Proposed Project could cause increased activity in the local or regional economy. Economic effects can include both direct effects, such as the direction provided by the Economic Development Strategy, which is intended to stimulate certain kinds of economic activity, and indirect or secondary effects, such as increased commercial activity needed to serve a new population.

Elimination of Obstacles to Growth

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing effect. A physical obstacle to growth typically involves the lack of public service

infrastructure. The extension of public service infrastructure, including roadways, water mains, and sewer lines, into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth.

The Proposed Project does not include specific plans for new infrastructure, and it would not remove any regulatory or physical obstacles to growth. However, the Draft General Plan policies provide for the expansion of infrastructure to accommodate new growth in the unincorporated areas. The cities would also need to expand their infrastructure to serve new development. To the extent that new infrastructure is sized to serve only existing and planned development (including growth related to the Proposed Project), growth inducement would not occur. However, if infrastructure is oversized it could induce growth by making capacity readily available to new development.

Economic Effects

Direct Effects on Growth

As discussed in Chapter 2, Project Description and Demographic Information, the county's population is anticipated to increase from approximately 770,000 (1996) to approximately 1,115,000 by 2020. This population growth is based on California Department of Finance projections, and would occur whether or not the Proposed Project is adopted. Therefore, the Proposed Project would not have a direct effect on population growth in the county. However, the Proposed Project would direct the manner in which the anticipated increase in population occurs, to the extent that it is within the County's jurisdiction, through the Draft General Plan policies. In addition, the Proposed Project is intended to direct growth toward the urban areas, with only seven percent of new development occurring in the outside of cities and their spheres of influence. If successful, the Proposed Project would increase population growth in some cities (compared to growth without the project), but would not affect total population growth in the county.

While the Proposed Project would not alter the amount of population growth, it would induce growth in non-residential sectors. The Economic Development Strategy, which is part of the project, is designed to achieve a substantial reduction in the County's unemployment rate through changes in the economy by altering the mix and amount of employment-generating development in the cities and unincorporated areas of the county. As shown in Table 2-10 in Chapter 2, there would be substantial increases in office and industrial uses associated with the Proposed Project (compared to conditions without the project). This increase in employment would be a direct effect of the Proposed Project.

The environmental effects of the projected increase in county population and increased economic activity are addressed in Chapter 4 of this Draft EIR.

Indirect Effects on Growth

Increased industrial, commercial and residential development typically generates a secondary or indirect demand for other services. For example, Fresno's growing population will require additional goods and services, such as groceries, entertainment and medical services, which will stimulate economic activity in these sectors. The expansion of these activities will require more land and create environmental impacts. The growth projections provided in Chapter 2 include this secondary economic activity, so the effects of such growth are evaluated in Chapter 4 of this Draft EIR.

Because the Proposed Project would not alter the population projections, the secondary effects of increased residential demand for goods and services is independent of the project. The Proposed Project would result in greater employment-generating uses, which could generate a secondary demand for goods and services to support new and expanding business. In this way, the Proposed Project could be growth-inducing.

Summary

In summary, the Proposed Project would not induce additional population growth in the county, but would increase the amount of economic activity due to changes in the employment-generating uses. Therefore, the Proposed Project would be growth-inducing. The environmental effects of growth due to the Proposed Project are evaluated in Chapter 4.

Significant Irreversible Environmental Effects

Under CEQA, an EIR must analyze the extent to which a plan's primary and secondary effects would commit resources to uses that future generations will probably be unable to reverse [CEQA Guidelines Section 15126(f)].

Implementation of the Proposed Project would result in the irreversible commitment of certain natural resources. The most notable significant irreversible impacts are commitment of energy resources in the form of natural gas and electricity, increased generation of pollutants, and the short-term commitment of non-renewable and/or slowly renewable natural and energy resources such as lumber and other forest products, mineral resources, and water resources for residential and nonresidential development throughout the county.

Development under the Proposed Project would use substantial natural resources both during and after construction. During construction, fossil fuels and building materials (e.g., wood and aggregate) would be consumed. As construction of specific projects is completed, fossil fuels would be consumed by employee and resident vehicle use, heating and cooling of buildings, and generation of electricity. The use of these resources is unavoidable consequences of development. The magnitude of this use would be partially offset by required compliance with Title 24 and other energy conservation measures and the implementation of the Transportation Systems Management Plan intended to reduce the use of single-occupancy vehicles. Please see Chapter 4 for a more complete discussion of the effects of the Proposed Project on specific natural resources.

Significant And Unavoidable Impacts

According to CEQA Guidelines [Section 15126, subd. (b); Section 21000, subd. (b).], a Draft EIR must include a description of those impacts identified as significant and unavoidable should the proposed action be implemented. These impacts are unavoidable because it has been determined that either no mitigation, or only partial mitigation, is feasible. This Section identifies significant impacts that could not be eliminated or reduced to a less-than-significant level by mitigations imposed by the County. The final determination of significance of impacts and of the feasibility of mitigation measures would be made by the County as part of certification action.

The potential environmental impacts that would result from implementation of the Proposed Project are summarized in Table 2-1. In some cases, impacts of development in the unincorporated area would be less than significant with implementation of Draft General Plan polices and after the mitigation measures described in Table 2-1. Impacts of the Proposed Project that would be due to development occurring in other jurisdictions are considered significant and unavoidable, because the County cannot compel other jurisdictions to adopt policies or mitigation that would reduce environmental impacts.

Significant and unavoidable impacts of the Proposed Project, for areas within and outside of the County's jurisdiction, are discussed in detail in Chapter 4, and are listed below. Significant unavoidable cumulative impacts caused by the Proposed Project, along with growth that is projected to occur in the County with or without the project, is provided under Cumulative Impacts, above.

Significant and Unavoidable Impacts for Development within County Jurisdiction

Agriculture

- Permanent loss of important farmland.
- Reduction in agricultural production.
- Increased non-renewal and cancellation of Williamson Act Contracts.

Transportation and Circulation

- Increased traffic volumes on rural roadways, State highways, and urban roadways.
- Increased demand for transit services.
- Increased demand for bicycle facilities.

Wastewater, Storm Drainage and Flooding

- Increased demand for wastewater treatment facilities.
- Increased need for storm drainage facilities.

Public Services

- Increased demand for police and fire protection services, park and recreation facilities, and library services.

Water Resources

- Increased demand for water, potentially leading to groundwater overdraft and loss of groundwater recharge potential.
- Increased need for water treatment and delivery systems.
- Exacerbation of groundwater overdraft conditions, resulting in subsidence, lowering of water tables or alterations to the rate and direction of contaminated groundwater flows.

Biological Resources

- Loss of wetland habitat.
- Loss of habitat for special-status wildlife species.
- Loss of habitat for special-status plants.
- Degradation of riparian and aquatic habitat.
- Loss of grassland habitat.

Air Quality

- Increased emissions caused by mobile source activities, area sources, and stationary sources.

Significant and Unavoidable Impacts for Development Outside County Jurisdiction

The above impacts would be considered significant and unavoidable for development in the incorporated areas. In addition, the following impacts would be considered significant and unavoidable.

Land Use

- Increased potential for residential-agricultural and urban residential-rural residential conflicts.

Agriculture

- Permanent loss of important farmland.
- Reduction in agricultural production.
- Increased non-renewal and cancellation of Williamson Act Contracts.

Transportation and Circulation

- Increased traffic volumes on urban roadways and State highways.
- Increased demand for transit services.
- Increased demand for bicycle facilities.

Wastewater, Storm Drainage and Flooding

- Increased demand for wastewater treatment facilities.
- Increased need for storm drainage facilities.
- Potential exposure of new development to flood hazards.
- Potential exposure of new development to dam failure inundation hazards.

Public Services

- Increased demand for police protection, fire protection and emergency services, parks and recreational facilities and library services.

Cultural Resources

- Disturbance, alteration or destruction of subsurface archaeological prehistoric resources.
- Devaluation, disturbance or destruction of historic areas, sites, and structures.

Water Resources

- Increased demand for water, potentially leading to groundwater overdraft and loss of groundwater recharge potential.
- Increased need for water treatment and delivery systems.
- Exacerbation of groundwater overdraft conditions, resulting in subsidence, lowering of water tables or alterations to the rate and direction of contaminated groundwater flows.
- Increased runoff containing urban contaminants leading to degradation of receiving water quality.
- Degradation of water quality related to individual septic system use.

Biological Resources

- Loss of wetland habitat.
- Loss of habitat for special-status wildlife species.
- Loss of habitat for special-status plants.
- Degradation of riparian and aquatic habitat.
- Loss of grassland habitat.
- Loss of heritage or landmark oak trees.

Mineral Resources

- Reduction in the amount of land available for mineral extraction.
- Land use incompatibilities between mineral extraction operations and adjacent uses.

Air Quality

- Increased air pollutant emissions due to construction activities.
- Increased air pollutant emissions caused by mobile source activities, area sources, and stationary sources.
- Potential violations of localized (intersection) carbon monoxide standards.

Seismic and Geologic Hazards

- Increased exposure of people to hazards associated with unreinforced masonry buildings.
- Increased number of people in areas subject to landslide hazards.
- Increased erosion.

Hazardous Materials

- Increased risk of exposure to existing soil and groundwater contamination.

Noise

- Exposure of sensitive receptors to unacceptable traffic and stationary source noise levels.

Visual Resources

- Substantial alterations to the existing visual character of the region and/or visual access to scenic resources.
- Introduction of new sources of light and glare into rural areas.

6. ALTERNATIVES

Introduction

This section provides an analysis of a reasonable range of alternatives to the Proposed Project. The primary intent of the alternatives evaluation in an EIR, as stated in Section 15126(d) of the CEQA Guidelines, is to “describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.” Further, the Guidelines (Section 15126(d)(1)) state that “the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” The feasibility of an alternative may be determined based on a variety of factors including, but not limited to, site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and site accessibility and control (Section 15126(d)(5)(A)).

The CEQA Guidelines (Section 15126(d)(4)) require that the No Project Alternative and its impacts be evaluated. The “no project” analysis shall “discuss the existing conditions, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The EIR must also identify the environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, then CEQA requires that the EIR also identify an environmentally superior alternative from among the other alternatives (CEQA Guidelines Section 15126(d)(2)).

Project Objectives

Project objectives are used as the basis for comparing project alternatives and determining the extent that the objectives would be achieved relative to the Proposed Project. The County Department of Planning and Resource Management has identified the following objectives for the Proposed Project:

- Diversify the Fresno County economy to provide a broad range of employment opportunities.
- Reduce unemployment and promote the creation of higher wage jobs.
- Minimize conversion of agricultural land.
- Promote compact urban development.

- Minimize destruction and disturbance of natural habitat.
- Enhance the quality of life for residents of Fresno County.

Alternatives To The Proposed Project

Background

In March 1998, the County published a report entitled *Economic and Growth Scenarios: Perspectives on the Year 2020*, which described five economic scenarios. The report, a key document of the County's General Plan, addressed the following issues: the potential for employment and income growth in Fresno County; potential barriers and constraints to achieving economic growth; the County's physical and financial "carrying capacity" for new development; and the physical, financial, and resource implications of various economic and growth scenarios. The document was the basis for discussion in public forums and open houses held throughout the County over a three-month period in Spring 1998. This included a presentation to the planning directors of Fresno County's 15 cities. County staff also distributed questionnaires to elicit residents' preferences regarding the County's future economy and land use patterns. The result was summarized into a list of issues and value statements that was forwarded to the Fresno County Planning Commission.

After three public hearings, the Planning Commission recommended that the Board of Supervisors direct the pursuit of a combination of three economic scenarios. In July 1998, after conducting two public hearings, the Board endorsed the Planning Commission's recommendations with minor modifications.

Alternatives Analyzed in this Draft EIR

The following alternatives are evaluated in this section.

No Project Alternative

CEQA requires the evaluation of the comparative impacts of the "No Project" alternative (CEQA Guidelines Section 15126.6(e)(1)). The No Project alternative refers to the consequences of declining to adopt a project or project alternatives. Two "No Project" alternatives can be considered: "No Development" or "No Action". The No Project/No Development Alternative describes an alternative in which no development would occur, and the current conditions in the planning area would remain.

Under the No Project/No Development Alternative, there would not be additional development in the unincorporated portions of Fresno County. The environmental impacts of the No Project/No Development alternative are best described by the existing conditions described in the General Plan Background Report. However, given that residential and other development is largely market-driven, and that there are existing entitlements for development in the county (and cities), it is unlikely that a

No Project/No Development Alternative would be implemented. Even if the County were to cease approving new projects, new development could continue in the cities. Because most new growth is anticipated to occur in the cities, most of the environmental effects described in Chapter 4 would likely occur even if the County chose to cease development approvals.

The No Project Alternative must also consider the impacts that would occur if the County did not approve the project, but development continued under the current General Plan. This “No Action” Alternative is a more realistic forecast of the consequences of not acting on the Proposed Project. In the case of the General Plan, the No Action Alternative is based on Scenario A from the March 1998 *Economic and Growth Scenarios Report*. The No Project/No Action Alternative assumes that population will grow in accordance with the 1998 Department of Finance projections, identical to those of the Proposed Project, but that the County would not pursue the Economic Development Strategy or adopt the Draft General Plan policies.

Under the No Project/No Action Alternative, county population in 2020 would be 1,113,785, identical to the Proposed Project. The number of households and dwelling units, and the amount of land containing residential units in 2020 would be the same as the Proposed Project. Year 2020 total employment under the No Project/No Action alternative is projected to be 501,350, approximately 100,000 individuals less than the Proposed Project. Job growth would not accelerate as projected for the Proposed Project scenario, and the employment profile would reflect current trends, as described in Scenario A. Only 45 percent of the population in 2020 is projected to have jobs, compared to 54 percent for the Proposed Project. Tables 6-1 and 6-2 show the geographic distribution of land use (acreage) and population, respectively, as compared to the Proposed Project.

Under the No Project/No Action Alternative, population growth in each of the SOIs and unincorporated areas is projected to be identical to the Proposed Project, so the amount of land developed for residential uses would be the same. The No Project/No Action Alternative would not include policies to direct residential growth into the urban areas. Consequently, it is possible that the proportion of residential development in the unincorporated areas would be somewhat higher under this alternative (compared to the Proposed Project), with a corresponding reduction in residential development in the incorporated areas. The extent to which this shift would occur is speculative, so it has not been quantified.

Less land would be needed for employment-generating uses under the No Project/No Action Alternative, because the Economic Development Strategy would not be implemented. Under the No Project Alternative, development in the incorporated and unincorporated areas would use approximately 4 percent less land county-wide than the Proposed Project. Fewer acres would be converted in the incorporated areas of the Eastside Valley, Westside Valley (incorporated and unincorporated areas), Sierra Nevada foothills, and Coast Range foothills.

TABLE 6-1

GEOGRAPHIC DISTRIBUTION OF LAND USE (ACRES) - COMPARISON OF ALTERNATIVES TO PROPOSED PROJECT

Scenario	Proposed Project			No Growth Alternative			High Growth Alternative			Increased Residential Density Alternative			
	1996	2020	% Change	1996	2020	% Change	1996	2020	% Change	1996	2020	% Change	
	Acres	Acres	% PP	Acres	Acres	% PP	Acres	Acres	% PP	Acres	Acres	% PP	
East Valley													
Incorporated (SOI)	65,262	99,472	52%		95,600	46%	-4%	103,949	59%	5%	77,631	19%	-22%
Unincorporated	7,852	2,652	23%		2,618	22%	0%	36,728	368%	281%	2,652	23%	0%
Total	73,114	109,124	49%		105,218	44%	-4%	140,677	92%	29%	87,283	19%	-20%
West Valley													
Incorporated (SOI)	2,418	3,508	45%		3,320	37%	-5%	4,705	95%	34%	2,822	17%	-20%
Unincorporated	796	1,147	44%		1,118	40%	-3%	1,736	118%	51%	1,147	44%	0%
Total	3,214	4,655	45%		4,438	38%	-5%	6,441	100%	38%	3,969	23%	-15%
Sierra Nevada Foothills	1,093	1,319	21%		1,310	20%	-1%	2,768	153%	110%	1,319	21%	0%
Sierra Nevada Mountains	448	491	10%		493	10%	0%	1,375	207%	180%	491	10%	0%
Coast Range Foothills	24	26	8%		27	13%	4%	43	79%	65%	26	8%	0%
Total	1,565	1,836	17%		1,830	17%	0%	4,186	167%	128%	1,836	17%	0%
Incorporated (SOI)	67,680	102,980	52%		98,920	46%	-4%	108,654	61%	6%	80,453	19%	-22%
Unincorporated	10,213	12,635	24%		12,566	23%	-1%	42,650	318%	238%	12,635	24%	0%
County Total	77,893	115,615	48%		111,486	43%	-4%	151,304	94%	31%	93,088	20%	-19%
% Change = % change from 1996 conditions													

% Change = % change from 1996 conditions

%PP = % change relative to Proposed Project

TABLE 6-2

**GEOGRAPHIC DISTRIBUTION OF POPULATION -
COMPARISON OF ALTERNATIVES TO PROPOSED PROJECT**

Geographic Area	Existing 1996	Proposed Project: No Project Alternative and Increased Residential Densities Alternative			High Growth Alternative		
		2020	% Change	% PP	2020	% Change	% PP
East Valley							
Incorporated (SOI)	622,100	929,200	49%		986,336	59%	6%
Unincorporated	<u>87,705</u>	<u>106,197</u>	21%		<u>398,817</u>	355%	276%
Total	709,805	1,035,397	46%		1,385,153	95%	34%
West Valley							
Incorporated (SOI)	30,606	42,094	38%		56,713	85%	35%
Unincorporated	<u>11,142</u>	15,346	38%		<u>23,766</u>	113%	55%
Total	41,748	57,440	38%		80,479	93%	40%
Sierra Nevada Foothills	11,727	13,938	19%		28,704	145%	106%
Sierra Nevada Mountains	6,146	6,711	9%		18,555	202%	176%
Coast Range Foothills	<u>274</u>	<u>299</u>	9%		<u>478</u>	74%	60%
Total	18,147	20,948	15%		47,737	163%	128%
Incorporated Total (SOI)	652,706	971,294	49%		1,043,049	60%	7%
Unincorporated Total	<u>116,994</u>	<u>142,491</u>	22%		<u>470,320</u>	302%	230%
County Total	769,700	1,113,785	45%		1,513,369	97%	36%
% Change - % change from 1996 conditions							
%PP - % change relative to Proposed Project							

The No Project Alternative analyzed in detail in this chapter is the No Action Alternative. The No Development Alternative is best described as the conditions identified in the *Fresno County General Plan Update Background Report*.

High Growth Alternative

This alternative is based on higher growth projections prepared by the California Department of Finance (1997) and Scenario E from the March 1998 *Economic and Growth Scenarios Report*. Under the High Growth Alternative, county population in 2020 would be 1,513,369, approximately 36 percent higher than the Proposed Project. Year 2020 total employment under the High Growth Alternative is projected to be approximately 710,000 or about 207,000 jobs more than the Proposed Project. Tables 6-1 and 6-2 show the geographic distribution of land use (acreage) and population, respectively, as compared to the Proposed Project. Although the population would increase, only 47 percent of the population in 2020 is projected to have jobs, compared to 54 percent for the Proposed Project.

The High Growth Alternative would result in greater need for housing to accommodate projected growth, resulting in the development of approximately 27,000 more acres of residential development than the Proposed Project. Substantial development would occur in the unincorporated county, slightly exceeding the population capacity of current county residential zoning.

Under this alternative, the cities of Huron, San Joaquin, Clovis, Fresno, Reedley, and four of the five unincorporated geographic areas are projected to have land shortages (compared to only one City, Fresno, under the Proposed Project). Overall, the demand for land would exceed the remaining available land within the spheres of influence or planning/specific plan area by approximately 2,900 acres.

Increased Residential Development Densities Alternative

Employment and population projections under this alternative are the same as for the Proposed Project. However, residential development densities would be increased and residential development projections by acreage would therefore be reduced. Higher residential development densities would be comparable to those recommended in the report, *A Landscape of Choice*, which was endorsed by the Board of Supervisors in October 1998. These projections are based on average densities of 6 dwelling units per acre (DU/ac) for single-family housing and 12 units per acre for multi-family housing, as compared to 4 dwelling units per acre (DU/ac) for single-family residences, and 8 DU/ac for multi-family housing under the Proposed Project. Tables 6-1 and 6-2 show the geographic distribution of land use (acreage) and population compared to the Proposed Project.

Total population growth under the Increased Residential Development Densities Alternative and areas where that growth would occur would be identical to the Proposed Project. However, because of greater housing density, there would be less demand for land. The Increased Residential Development Densities Alternative would consume approximately 19 percent less land than the Proposed Project.

Less land would be consumed in the incorporated areas of the East and Westside Valley. Land use in the Sierra Nevada foothills and mountains and Coast Range foothills would be identical to the Proposed Project.

This analysis assumes that this alternative would include the Economic Development Strategy, Landscape of Choice and Draft General Plan policies.

Alternatives Considered But Eliminated From Detailed Analysis

This chapter provides an analysis of a reasonable range of alternatives to the Proposed Project and alternative sites. There are an infinite variety of alternatives that could be considered, including various economic scenarios and configurations of land uses within the county. Analysis of every possible option and/or alternative configuration of land uses would overburden the EIR with an unnecessary level of detail which would be redundant, complex, and confusing, without providing meaningful information. The following alternatives, which were initially considered during the scoping process for the EIR, are not addressed in detail in this EIR because they clearly would be infeasible in relation to project objectives, would not substantially reduce significant impacts of the Proposed Project, and/or would be sufficiently similar to an alternative in the EIR so as not to contribute substantially to informed decisionmaking.

Reduced Population Growth: This EIR does not consider an alternative that assumes a substantially reduced population. Countywide population growth would be the primary source of most impacts in the future, as reflected in the environmental analysis in Chapter 4. Most of the population growth would occur in the incorporated areas. The County cannot restrict growth in these areas, as they are under the jurisdiction of cities. The County could restrict residential development in the unincorporated areas, but as discussed under the No Project/No Development Alternative, such a small portion of population growth is anticipated in the County that eliminating it would not substantially alter the environmental effects of growth. Further, if the County were to limit residential development in the unincorporated areas, the development may simply shift to the cities, so that there would not be a reduction in county-wide population. For these reasons, the EIR does not consider a reduced population alternative.

Alternative Land Use Map: The Proposed Project does not alter the County's land use designations. Because the environmental impacts evaluated in the EIR are the result primarily of project growth and economic activity, changes to the land use map would not substantially alter conclusions about the nature or significance of project impacts.

Off-site Alternative: An offsite alternative can reduce impacts for individual development projects. However, for planning documents for entire jurisdictions, there are no alternate locations to be considered. That is, the location of the county cannot be altered. Therefore, an offsite alternative is not considered.

Analysis of Alternatives

Each alternative was evaluated to determine whether potential environmental effects would be greater or less than the Proposed Project. The following analysis is not intended to evaluate the economic feasibility of an alternative involving an employment profile or housing density that differs from the Proposed Project. Rather, the analysis focuses on whether the employment profile (reflected in the amount of acreage developed for each type of use) or housing density (amount of land developed for residential uses) would result in fewer or more environmental impacts than the Proposed Project. Where environmental impacts would be similar, the analysis indicates, where possible, the magnitude of the impact. The results of the comparative analysis, by issue area, are summarized in Table 6-3.

Because no changes to land use designations are proposed under the Proposed Project or alternatives, the specific location of future development is not the subject of this analysis. Instead, the analysis examines the amount of acreage that would be converted county-wide (and in some cases by geographic region) and the changes in population and employment activity under each alternative.

LAND USE

No Project Alternative

As discussed in Chapter 4.2, the Proposed Project would have a less-than-significant impact related to consistency with other plans and land use compatibility, and disruption of existing communities. Like the Proposed Project, development under the No Project Alternative would need to be consistent with local plans and policies, and would not disrupt or divide an existing community. Existing General Plan policies would generally ensure that new development is compatible with surrounding uses. For these reasons, the land use impacts of the No Project Alternative would be similar to the Proposed Project, and would be less than significant for development in the County.

Like the Proposed Project, the impacts of the No Project Alternative with respect to land use compatibility for development outside of the County's jurisdiction would be significant and unavoidable.

High Growth Alternative

Under the High Growth Alternative, the Draft General Plan policies would ensure that new development under County jurisdiction would be consistent with local plans and compatible with surrounding land uses. This alternative would increase the potential for incompatibilities simply because substantially more growth would occur in the unincorporated areas (a 3-fold increase over existing population, compared to a 22% increase in population under the Proposed Project).

TABLE 6-3 COMPARISON OF ALTERNATIVES TO THE PROPOSED PROJECT			
Resource	No Project Alternative	High Growth Alternative	Increased Residential Development Densities Alternative
Land Use	—	+	—
Agriculture	—	0	—
Transportation and Circulation	—	+	—
Wastewater, Storm Drainage, and Flooding	—	+	—
Public Services	—	+	—
Cultural Resources	—	+	—
Water Resources	—	+	—
Biological Resources	—	+	—
Forestry Resources	—	0	0
Mineral Resources	—	+	0
Air Quality	—	+	0
Seismic and Geologic Hazards	0	+	0
Hazardous Materials	—	+	0
Noise	—	+	—
Visual Quality	0	+	—
Notes:			
+ Impacts would be greater in magnitude, as compared to the Proposed Project.			
- Impacts would be less reduced in magnitude, as compared to the Proposed Project.			
0 Impacts would be similar in magnitude to the Proposed Project.			

Nonetheless, implementation of Draft General Plan policies would reduce potential incompatibilities to a less-than-significant level for development under County jurisdiction. This alternative would not disrupt or divide an existing community. For these reasons, land use impacts under the High Growth Alternative would be less than significant for development under County jurisdiction, but the magnitude of the impacts would be more severe than under the Proposed Project.

Like the Proposed Project, the impacts of the High Growth Alternative with respect to land use compatibility for development outside of the County's jurisdiction would be significant and unavoidable.

Increased Residential Development Densities Alternative

The same amount of development would occur under this alternative as under the Proposed Project. However, residential development would be more compact, reducing the likelihood of conflicts with surrounding uses. Like the Proposed Project, the Draft General Plan policies would ensure that new development under County jurisdiction would be consistent with local plans and compatible with surrounding land uses, and this alternative would not disrupt or divide an existing community. For these reasons, land use impacts under the Increased Residential Densities Alternative would be less than significant for development under County jurisdiction, and the magnitude of the impacts would be less severe than under the Proposed Project.

Like the Proposed Project, the impacts of the Increased Residential Development Densities Alternative with respect to land use compatibility for development outside of the County's jurisdiction would be significant and unavoidable.

AGRICULTURE

No Project Alternative

Like the Proposed Project, the No Project Alternative would affect agricultural resources in the County. The No Project Alternative would convert approximately 33,600 acres of farmland to urban land uses, which is 11 percent less conversion of agricultural land than would occur under the Proposed Project (approximately 37,700 acres). Like the Proposed Project, lands converted under the No Project Alternative would be mainly prime and/or important or unique soils. The estimated cost of crop loss resulting from urbanization would be between \$201,606,000 and \$504,015,000, compared to approximately \$226,422,000 to \$566,055,000 in crop loss under the Proposed Project. As with the Proposed Project, the impacts of the No Project Alternative on agricultural resources would be significant and unavoidable. However, because fewer acres would be converted, the impacts would be less severe under the No Project Alternative.

High Growth Alternative

The High Growth Alternative would result in similar, but more severe impacts on agricultural resources, compared to the Proposed Project, because the High Growth Alternative would take substantially more land out of agricultural production. The High Growth alternative would result in approximately 73,411

acres of farmland converted to urban land uses. This is 31 percent more conversion than would occur under the Proposed Project. Lands converted would mainly be prime and/or important or unique soils. Crop loss would result in between \$440,466,000 and \$1,101,165,000, almost double the anticipated loss in crop production that would occur under the Proposed Project. As with the Proposed Project, impacts on agricultural resources would be significant and unavoidable under the Higher Growth Alternative.

Increased Residential Development Densities Alternative

Although the amount of development under this alternative would be the same as the Proposed Project, the number of acres that would be urbanized would be lower, because residential densities would be increased. Therefore, this would convert less agricultural land, approximately 15,200 acres, to urban uses than the Proposed Project. This is 19 percent less agricultural land conversion than would occur under the Proposed Project. Like the Proposed Project, converted lands would be primarily prime and/or important or unique soils. Estimated crop loss would cost \$91,170,000 and \$227,925,000, less than half the crop loss anticipated under the Proposed Project. Although this alternative would have less severe impacts on agricultural resources than the Proposed Project, the impacts would remain significant and unavoidable because the amount of converted acreage would be substantial, and prime and other valuable agricultural soils can not be replaced once they are converted.

TRANSPORTATION AND CIRCULATION

No Project Alternative

Under the No Project Alternative, county-wide daily vehicle miles traveled (VMT) would increase from base conditions of approximately 16,954,000 VMT to approximately 30,164,000 VMT in 2020. County-wide daily trips would increase from approximately 2,558,000 trips per day to approximately 3,866,000 trips per day in 2020. Daily trips would be slightly less (approximately 6 percent) than the Proposed Project. However, the average county-wide trip distances would be approximately 7.8 miles, which is slightly greater than the 7.5 miles associated with the Proposed Project. As with the Proposed Project, roadway segments in the unincorporated and incorporated areas would operate at unacceptable service levels as a result of increased growth. The level of congestion would be slightly reduced, because there would be fewer trips. Nonetheless, the increase in traffic congestion would remain significant and unavoidable.

Like the Proposed Project, the No Project Alternative would increase demand for transit services and bicycle facilities. Because funding for such facilities would not be assured, the demand could exceed capacity of current and planned transit and bicycle infrastructure. This would be a significant and unavoidable impact, although less severe than the Proposed Project, because there would be slightly less demand due to the reduction in employment uses.

Airports

Safety issues associated with airports and airstrips are primarily concerned with hazards posed to departing and landing aircraft and hazards to aircraft on the ground. Population growth under the No Project Alternative would be identical to the Proposed Project. Therefore, the same number of people could be exposed to aircraft crash hazards on the ground. However, the amount of land developed would be slightly less than under the Proposed Project, both for residential and non-residential uses. As with the Proposed Project, such land uses are allowed within close proximity to airports, and development is subject to stringent federal and State regulations and local land use compatibility guidelines. Therefore, the No Project Alternative would result in the same less-than-significant impact as the Proposed Project. Because the amount of developed land would be less, there would be a commensurate reduction in the risk to property, and the impact would be reduced in magnitude, as compared to the Proposed Project.

High Growth Alternative

Total county-wide average daily trip generation under this alternative is projected to be approximately 5,093, about 24 percent higher than the number of trips under the Proposed Project. Projected county-wide vehicle miles traveled (VMT) under this alternative is expected to be approximately 40,240,000, or about 30 percent higher than the Proposed Project. Assuming only those roadway improvements contained in the COFCG's 2016 RTP, about 16 million VMT would be subject to level of service F. Approximately 23.5 million miles would be subject to LOS D through F. These levels are substantially higher than the corresponding totals for the Proposed Project, particularly in the unincorporated areas. Overall, transportation and circulation effects would be greater than those associated with the Proposed Project, and, like the Proposed Project, these impacts would be significant and unavoidable.

Under this alternative demand for transit, bicycle, and pedestrian facilities would increase by approximately 40 percent compared to the Proposed Project due to the higher population growth. Because funding for such facilities would not be assured, the demand could exceed capacity of current and planned transit, bicycle and pedestrian infrastructure. This would be a significant and unavoidable impact, and more severe than the Proposed Project.

Airports

The High Growth Alternative would result in a greater number of people and properties that could be exposed to aircraft crash hazards on the ground, as compared to the Proposed Project. However, as described above, implementation of federal and State regulations would reduce this risk, so effects would be similar to the Proposed Project.

Increased Residential Development Densities Alternative

Because the number of new residences would be the same as the Proposed Project, this alternative would generate a similar number of daily person trips. If the increased density was achieved by increasing the proportion of multifamily and other high-density housing, the number of trips would

be reduced, because higher density housing typically generates fewer trips per unit than lower density housing. The total vehicle miles traveled could be reduced as well, as more compact development could result in people living closer to their jobs and neighborhood services. While the average number and length of trips may be reduced relative to the Proposed Project, there could be increased congestion in some areas. If higher density development occurs in urban areas without transit and other non-automotive facilities, or if people simply choose to continue to drive, then congestion on urban streets could increase. For these reasons, traffic impacts would likely be similar to the Proposed Project, but slightly less severe due to the more compact nature of residential development.

Like the Proposed Project, this alternative would increase demand for transit services and bicycle facilities. More compact urban development could increase demand for such facilities. At the same time, non-automotive facilities are easier to provide, and may be more likely to be funded, in urban areas than rural areas, because more people can be served in a smaller area. Furthermore, infill development would take advantage of unused capacity in existing systems. For these reasons, impacts on transit and bicycle facilities would be less severe than the Proposed Project. Nonetheless, the impact would remain significant and unavoidable, because funding for such facilities would not be assured.

Airports

Safety issues associated with airports and airstrips are primarily concerned with hazards posed to departing and landing aircraft and hazards to aircraft on the ground. Population growth under the Increased Residential Development Densities Alternative would result in an increase in population identical to the Proposed Project. Although housing densities would be greater than the Proposed Project, and, consequently, a greater number of people and structures that could theoretically be exposed to aircraft crash hazards on the ground, restrictions on maximum densities for residential and non-residential uses and acceptable uses in airport safety zones for each airport would be imposed.

This alternative would not alter airport uses or flight patterns, and aircraft operations would be subject to stringent federal and State laws and regulations. Therefore, impacts would be the same as the Proposed Project.

WASTEWATER, STORM DRAINAGE, AND FLOODING

No Project Alternative

Wastewater

Under the No Project Alternative, development through 2020 would result in relatively less urban growth and commensurately more rural residential development. The incremental volume of wastewater collected and treated would probably be lower than under the Proposed Project. However,

there would still be an increase in wastewater flows, which could result in the need for some improvements to centralized wastewater systems. Thus, there would be no substantial difference between the No Project Alternative and the Proposed Project in this respect.

Under the No Project Alternative, more rural residential development would occur than under the Proposed Project. This would result in the installation of a higher number of new individual septic systems, which would not be subject to the siting and density standards established in the Draft General Plan. Consequently, impacts related to the need for and use of individual septic systems could be greater in magnitude than with the Proposed Project.

Storm Drainage and Flooding

Because the No Project Alternative would result in relatively less urban growth and commensurately more rural residential development than the Proposed Project, there would be less impervious coverage and greater opportunity for on-site percolation of rainwater and storm drainage under this alternative. Thus the overall potential for drainage and flooding impacts would be lower than under the Proposed Project. However, when effective implementation of urban drainage and flood control programs and development mitigation requirements is considered, along with the Draft General Plan policies that support and enhance those programs, there would be little difference in the net drainage and flooding impacts between the Proposed Project and the No Project Alternative. However, the relative impacts under the Proposed Project may be slightly greater due to the increase in unmitigated downstream flooding potential from incremental development in some smaller cities.

As with the Proposed Project, new development proposed within special flood hazard areas as delineated by FEMA on the FIRMs would be subject to the County's Flood Plain Management Ordinance, which specifies development standards to avoid flood damage and minimize loss of flood conveyance or storage volume. The application of this ordinance to new projects, together with the existing General Plan policies would minimize potential flooding impacts to new development in the unincorporated areas. The relatively greater increment of rural residential growth that would occur under the No Project Alternative would also be subject to the County's Flood Plain Management Ordinance and policies. The County's Flood Plain Management Ordinance would apply equally to new development under the No Project Alternative. For these reasons, the potential exposure to flooding under the No Project Alternative would be similar to the Proposed Project.

As with the Proposed Project, new development would generally be protected from dam inundation by existing policies of the Division of Dam Safety. However, not all areas subject to dam failure inundation have been clearly delineated, so it is possible that the siting of new development or adoption of emergency planning actions may not be in place in some locations within the County. This potential would be greater under the Proposed Project, because it provides for more development in areas subject to dam failure inundation than the No Project Alternative.

As with the Proposed Project, under the No Project Alternative most growth would occur in the urban areas. The County cannot compel the cities to develop ordinances or adopt policies to protect people and property from flooding hazards, or ensure that similar storm drainage management policies and practices would be implemented. Therefore, these impacts may remain significant and unavoidable for development outside of the County's jurisdiction.

High Growth Alternative

Wastewater

The High Growth Alternative would result in substantially more urban residential development than the Proposed Project, so more wastewater would be generated, requiring additional conveyance and treatment facilities. Depending on their size, location and design, these facilities could affect biological and other natural resources, as well as create incompatibilities with surrounding land uses. The Draft General Plan policies would reduce the environmental effects of expanded and new wastewater facilities; however, because the size, location and design of such facilities has not been determined, the specific impacts of such facilities cannot be assessed at this time. Therefore, this impact would remain significant and unavoidable, and would be more severe than under the Proposed Project.

Rural development would also be substantially higher, so there would be an increase in the installation of new individual septic systems relative to the Proposed Project. As with the Proposed Project, the siting and density standards established in the Draft General Plan would ensure that septic-related impacts would be less than significant.

Storm Drainage and Flooding

Because this alternative would substantially increase the amount of development occurring in the county (36,000 more acres developed than under the Proposed Project), impervious coverage would increase relative to the Proposed Project, leading to more stormwater runoff and less opportunity for on-site percolation of rainwater. Consequently, the overall potential for drainage and flooding impacts would be higher than under the Proposed Project. Effective implementation of urban drainage and flood control programs, along with the Draft General Plan policies that support and enhance those programs, would reduce the effects of increased impervious surface. As with the Proposed Project, the impact would remain significant and unavoidable, because the location and effects of drainage facilities needed to accommodate additional runoff cannot be determined at this time. Storm drainage and flooding impacts would be increased relative to the Proposed Project.

As with the Proposed Project, new development proposed within special flood hazard areas as delineated by FEMA on the FIRMs would be subject to the County's Flood Plain Management Ordinance, which specifies development standards to avoid flood damage and minimize loss of flood

conveyance or storage volume. The application of this ordinance to new projects, together with the Draft General Plan policies would minimize potential flooding impacts to new development in the unincorporated areas. Nonetheless, the impact would be more severe due to the increased population and associated development.

As with the Proposed Project, new development would generally be protected from dam inundation by existing policies of the Division of Dam Safety. However, not all areas subject to dam failure inundation have been clearly delineated, so it is possible that the siting of new development or adoption of emergency planning actions may not be in place in some locations within the county. This potential would be greater under the High Growth Alternative than the Proposed Project, because development and population growth would increase substantially (by approximately 40 percent).

As with the Proposed Project, under the High Growth Alternative most development would occur in the urban areas. The County cannot compel the cities to develop ordinances or adopt policies to protect people from flooding hazards, or ensure that similar storm drainage management policies and practices would be implemented. Therefore, these impacts may remain significant and unavoidable for development outside of the County's jurisdiction.

Increased Residential Development Densities Alternative

Wastewater

Under the alternative, development levels would be the same as under the Proposed Project, so a similar amount of wastewater would be generated. Like the Proposed Project, the increase in wastewater flows could result in the need for some improvements to centralized wastewater systems. Thus, there would be no substantial difference between the Increased Residential Development Densities Alternative and the Proposed Project in this respect.

Under the Increased Residential Development Densities Alternative, incremental rural development levels would be lower than under the Proposed Project. This would result in the installation of fewer new individual septic systems. Consequently, impacts related to the need for and use of individual septic systems could be less severe than with the Proposed Project.

Storm Drainage and Flooding

Because 22,000 fewer acres would be developed under the Increased Residential Development Densities Alternative, less impervious coverage would be created than under the Proposed Project. As a result, there would be less stormwater runoff and greater opportunity for rainwater percolation. The overall potential for drainage and flooding impacts would be less severe than under the Proposed Project. However, when effective implementation of urban drainage and flood control programs and development mitigation requirements is considered, along with the Draft General Plan policies that support and enhance those programs, there would be little difference in the net drainage and flooding impacts between this alternative and the Proposed Project.

As with the Proposed Project, new development proposed within special flood hazard areas as delineated by FEMA on the FIRMs would be subject to the County's Flood Plain Management Ordinance, which specifies development standards to avoid flood damage and minimize loss of flood

conveyance or storage volume. The application of this ordinance to new projects, together with Draft General Plan policies would minimize potential flooding impacts to new development in the unincorporated areas. For these reasons, the potential exposure to flooding under the this alternative would be similar to the Proposed Project.

As with the Proposed Project, new development would generally be protected from dam inundation by existing policies of the Division of Dam Safety. However, not all areas subject to dam failure inundation have been clearly delineated, so it is possible that the siting of new development or adoption of emergency planning actions may not be in place in some locations within the County. This impact would be the same as under the Proposed Project.

As with the Proposed Project, under this alternative most growth would occur in the urban areas. The County cannot compel the cities to develop ordinances or adopt policies to protect people from flooding hazards, or ensure that similar storm drainage management policies and practices would be implemented. Therefore, these impacts may remain significant and unavoidable for development outside of the County's jurisdiction.

PUBLIC SERVICES

No Project Alternative

Law Enforcement

Population growth under the No Project Alternative would be identical to and would occur in the same locations as the Proposed Project, so the number of law enforcement personnel and number of stations would be the same as the Proposed Project. However, because approximately 4 percent less land in the incorporated areas and 1 percent less land in the unincorporated areas would be developed, the number of structures would be fewer than under the Proposed Project. Therefore, law enforcement impacts would be somewhat reduced in magnitude, as compared to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Fire Protection and Emergency Services

Similar to law enforcement, the demand for fire protection and emergency services personnel would be the same as the Proposed Project. However, because economic growth would not occur as envisioned for the Proposed Project, the number of non-residential structures would be lower than under the Proposed Project. Response times could be slightly less than the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Parks and Recreation

Implementation of the No Project Alternative would result in the same population as the Proposed Project. Therefore, the ratio of parkland to residents would be the same as for Proposed Project, and impacts would be the same. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Schools

Because population growth under the No Project Alternative would be the same as the Proposed Project, impacts on schools would be identical. As with the Proposed Project, impacts on schools would be less than significant.

Solid Waste

The amount of residential solid waste generated under the No Project Alternative would be identical to the Proposed Project, so impacts would be similar. However, with less economic development, the amount of non-residential solid waste would be less. Overall, impacts on solid waste facilities would be slightly less than the Proposed Project, and would be less than significant.

Library Facilities

Population growth under the No Project Alternative would be identical to, and would occur in the same locations as, the Proposed Project. Because population growth under the No Project Alternative would be the same as the Proposed Project, impacts on libraries would be identical. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

High Growth Alternative

Law Enforcement

Implementation of the High Growth Alternative would result in an increase in the unincorporated and incorporated population that is greater than the increase assumed for the Proposed Project. This would require an additional 385 Sheriff's officers compared to the 28 additional patrol officers required for the Proposed Project to maintain a ratio of 1.09 officers to 1,000 residents. This alternative would also require approximately 7 percent more officers in local police forces. Therefore, law enforcement impacts would be greater in magnitude under this alternative, compared to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Fire Protection and Emergency Services

Implementation of the High Growth Alternative would increase the population requiring fire protection and emergency services by approximately 36 percent. Depending on where the additional population is located, this could further delay provision of services to areas within the County, especially the eastern foothill area, which currently maintains an ISO rating of 9. Therefore, fire protection and emergency services impacts would be slightly increased in magnitude, as compared to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Parks and Recreation

The population growth under this alternative would be 36 percent greater than the growth assumed under the Proposed Project. The increase would be 230 percent in the unincorporated areas, and would decrease the ratio of parkland per 1,000 residents to less than the required 5 to 8 acres of improved parkland per 1,000 residents. Therefore, implementation of this alternative may not meet the Draft General Plan standards for improved parkland and would result in greater impacts than the Proposed Project.

Schools

Development under the High Growth Alternative would result in an increased population in the incorporated and unincorporated areas that is approximately 36 percent greater than the Proposed Project. This would result in the need for more school facilities than needed to serve the Proposed Project. Implementation of this alternative would result in school impacts that would be greater in magnitude than the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Solid Waste

Implementation of the High Growth Alternative would result in population growth that is greater than the growth assumed under the Proposed Project. This would result in an increase in the generation of solid waste to be collected and disposed of at the County landfills. Therefore, solid waste impacts under this alternative would be slightly increased in magnitude, as compared to the Proposed Project. This impact would be less than significant.

Library Facilities

The population growth under the High Growth Alternative would be greater than the growth assumed under the Proposed Project. This would increase the need for additional library services compared to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Increased Residential Development Densities Alternative

Law Enforcement

Population growth under the Increased Residential Development Densities Alternative would be identical to the Proposed Project, so the number of law enforcement personnel and number of stations would be the same as the Proposed Project. Because approximately 22 percent less land in the incorporated areas would be developed, the area to be covered would be less than the Proposed Project, so response times would likely be faster than under the Proposed Project. Therefore, law enforcement impacts would be reduced in magnitude, compared to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Fire Protection and Emergency Services

Similar to law enforcement, the demand for fire protection and emergency services personnel would be the same as the Proposed Project. Response times would be faster than with the Proposed Project, because housing would be concentrated in a smaller area. The amount of non-residential development would be identical to the Proposed Project, so structural fire hazard risks would be similar. There would be no difference in the amount of development in unincorporated areas subject to wildland fire hazard, so risks associated with wildland fires would be the same as the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Parks and Recreation

Population growth under the Increased Residential Development Densities Alternative would be the same as the Proposed Project and would result in the same ratio of parkland per 1,000 residents as the Proposed Project. Therefore, this alternative would have the same impact on parks and recreation as the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Schools

Population growth under the Increased Residential Development Densities Alternative would be the same as the Proposed Project, so impacts on schools would be identical. As with the Proposed Project, these impacts would be less than significant.

Solid Waste

The amount of residential and non-residential development would be the same as the Proposed Project, so impacts on solid waste facilities would be identical, and would be less than significant.

Library Facilities

Because population growth under the Increased Residential Development Densities Alternative would be the same as the Proposed Project, the impacts on library facilities would be identical. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

CULTURAL RESOURCES

No Project Alternative

Land that has been used for certain types of agricultural production, grazing or other activities that do not require extensive excavation and/or grading, or that is undeveloped, could contain cultural resources, particularly near drainages and in woodlands. Urbanized areas that have been developed are not as likely to contain buried resources, although historic structures (e.g., buildings and bridges) may be more prevalent. As with the Proposed Project, urbanization associated with future growth could damage or destroy archaeological or prehistoric resources, if present, during excavation and/or grading.

The No Project Alternative would result in a slight reduction in the amount of undeveloped land converted to urban uses in the incorporated areas of the Eastside Valley and in the Westside Valley, Sierra Nevada foothills, and Coast Range foothills, as compared to the Proposed Project. Although cultural resources may be present in these areas, the effects would be reduced in magnitude because less land would be disturbed. With slightly less development in the incorporated areas, known historic resources may be less affected than might occur with the Proposed Project.

High Growth Alternative

Under the High Growth Alternative, more urbanization would occur in the unincorporated areas of the Eastside Valley, Sierra Nevada foothills, and Sierra Nevada than under the Proposed Project (approximately 60,000 total acres compared to approximately 2,100 acres). Records indicate that most Native American tribes in the area lived near rivers and streams and wildlife resources, particularly in the Sierra Nevada foothills, so these areas would be more likely to contain prehistoric resources.

In the Sierra Nevada foothills, for example, there would be a greater probability of encountering such resources because 1,675 acres would be developed, as compared to 232 acres under the Proposed Project. Therefore, impacts to cultural resources could be more severe than under the Proposed Project.

Increased Residential Development Densities Alternative

The Increased Residential Development Densities Alternative would affect approximately 20 percent less land (approximately 22,000 acres) than the Proposed Project. Projected land use in the unincorporated areas would be identical to the Proposed Project. Although the locations for increased housing densities have not been identified, existing urbanization and future development in the incorporated areas is less likely to affect known or potential cultural resources than the Proposed Project because of the moderate reduction in land that would be converted to urban uses.

WATER RESOURCES**No Project Alternative**

Under the No Project Alternative, development in the incorporated and unincorporated areas would use approximately 4 percent less land county-wide than the Proposed Project. Fewer acres would be converted in the incorporated areas of the Eastside Valley, Westside Valley (incorporated and unincorporated areas), Sierra Nevada foothills, and Coast Range foothills. As with the Proposed Project, the creation of impervious surfaces associated with urbanization would increase the amount of runoff, which could affect water quality. An increase in impervious surfaces could also reduce recharge potential. However, because land demands would be slightly less than the Proposed Project, fewer impervious surfaces would be created, so the magnitude of the impact would be less severe than the Proposed Project.

Under the No Project Alternative, there would be substantial population growth, which would increase demand for domestic water supply, treatment and conveyance. Demand for domestic water would be less under the No Project Alternative than under the Proposed Project, because there would be less non-residential development. Like the Proposed Project, the increased demand would be a significant and unavoidable impact, because the location and nature of facilities to provide water have not been identified, so their impacts cannot be determined at this time.

High Growth Alternative

The total amount of land developed under the High Growth Alternative in 2020 would be approximately 151,300 acres, approximately 31 percent more than the Proposed Project. Most of the development would occur in the unincorporated areas, where existing urban development is limited.

Conversion of undeveloped areas to urban uses would create substantially more impervious surfaces than the Proposed Project, which would result in more runoff that could contain urban contaminants.

In the foothills areas, increased slopes would compound this effect by increasing the rate of runoff.

In the valley areas, the amount of area available for recharge could be decreased because downward migration of rainwater and applied irrigation water would be reduced. This effect would not be as pronounced in the foothills and mountains, where shallower depth to bedrock would tend to limit downward migration. Although new development would be required to implement Best Management Practices to control urban contaminants in runoff, as would be required for the Proposed Project, the magnitude of this impact would be greater than the Proposed Project because the volume of runoff containing urban pollutants would be greater.

This alternative would have a substantially greater population than the Proposed Project. Non-residential development would increase as well. Therefore, the demand for water supply, treatment and conveyance would be substantially greater than the Proposed Project, and would be a significant and unavoidable impact.

Increased Residential Development Densities Alternative

Under the Increased Residential Development Densities Alternative, development in the incorporated and unincorporated areas would use approximately 20 percent less land county-wide than the Proposed Project. Approximately 22,000 fewer acres would be converted in the incorporated areas of the Eastside Valley and approximately 700 acres less in the Westside Valley. The amount of acreage affected in unincorporated areas would be the same as the Proposed Project. To the extent that the disturbance or conversion of undeveloped land to urban uses (assuming most of the undeveloped land is in the unincorporated areas) could increase the amount of runoff or reduce recharge potential, as with the Proposed Project, the magnitude of the impact would be similar to the Proposed Project for those areas. With approximately 20 percent less land consumed in the incorporated areas, potential effects on water quality and recharge could be substantially reduced, as compared to the Proposed Project, because fewer impervious surfaces would be created.

Because the levels of development would be the same, there would be little difference in demand for water supply, treatment and conveyance between this alternative and the Proposed Project. The demand for water would be slightly lower, because fewer acres would be landscaped, and the higher density housing units would typically have lower average daily water demands than the densities proposed under the project. Nonetheless, demand for additional water supply, treatment and conveyance would increase substantially over existing conditions, so the impact would remain significant and unavoidable.

BIOLOGICAL RESOURCES

No Project Alternative

Under the No Project Alternative, development in the incorporated and unincorporated areas would use approximately 4 percent less land (approximately 4,000 acres) county-wide than the Proposed Project. Fewer acres would be converted in the incorporated areas of the Eastside Valley, Westside Valley (incorporated and unincorporated areas), Sierra Nevada foothills, and Coast Range foothills. To the extent that the disturbance or conversion of undeveloped land could affect resident and migratory species and habitat, as with the Proposed Project, the magnitude of the impact would be slightly less severe than the Proposed Project. However, impacts on biological resources would remain significant and unavoidable due to the substantial acreage that would be developed.

High Growth Alternative

Under the High Growth Alternative, the combined development in the SOIs and the unincorporated areas of the county is projected to consume 73,411 acres, which is approximately twice as much land required for the Proposed Project. The most intense urbanization would occur in the unincorporated areas of the Eastside Valley, Sierra Nevada foothills, and Sierra Nevada (approximately 60,000 total acres, as compared to approximately 2,100 acres with the Proposed Project). Growth in these three areas has a greater potential for converting natural habitats and would have a greater effect on biological resources than the Proposed Project. In particular, giant garter snake, remaining vernal pools, and special-status species supported by the seasonally-ponded environment (such as fairy shrimp and rare plants) could be more severely affected in the Eastside Valley than with the Proposed Project because approximately 28,876 acres would be disturbed, as compared to 1,800 acres with the Proposed Project.

Urbanization of more land in the Sierra Nevada foothills (1,675 acres, as compared to 232 acres under the Proposed Project) could affect many species of raptors (including the California spotted owl), special-status plants associated with serpentine soils, and migratory corridors for wildlife. In the Sierra Nevada Mountains area, more intense development (927 acres, as compared to 32 acres with the Proposed Project) could affect the spotted owl and large forest carnivore habitat. As with the Proposed Project, impacts on biological habitats would be significant and unavoidable.

Increased Residential Development Densities Alternative

Under the Increased Residential Development Densities Alternative, development in the incorporated and unincorporated areas would use approximately 20 percent less land county-wide than the Proposed Project. Approximately 22,000 fewer acres would be converted in the incorporated areas of the Eastside Valley and approximately 700 acres less in the Westside Valley. The amount of acreage affected in unincorporated areas would be the same as the Proposed Project. To the extent that the disturbance or conversion of undeveloped land (e.g., in the unincorporated areas) could affect resident and migratory species and habitat, as with the Proposed Project, the magnitude of the impact would be similar to the Proposed Project for those areas. With approximately 20 percent less land consumed in the incorporated areas, potential effects on biological resources could be substantially reduced, as compared to the Proposed Project. Nonetheless, such impacts would likely be significant and unavoidable, because of the substantial land (15,000 acres) that would be converted to urban uses.

FORESTRY RESOURCES

No Project Alternative

Almost all of the timberlands in Fresno County lie within the southern part of the Sierra National Forest and the northern portion of the Sequoia National Forest. The No Project Alternative would involve slightly less development in those areas than the Proposed Project. In the Coast Range foothills, there would be a negligible (1-acre) increase in land demand. If timber resources were affected in the Coast Range, this could be offset by the reduction in Sierra Nevada timberlands. Consequently,

timberlands would not be affected to any greater extent than would occur with the Proposed Project. Implementation of the No Project Alternative, which would result in a population increase identical to the Proposed Project, would increase the demand for timber resources for construction. However, the demand would be similar because residential and non-residential densities would be similar. Consequently, this alternative would not result in any significant impacts on timber resources.

High Growth Alternative

Under the High Growth Alternative, the combined development in the SOIs and the unincorporated areas of the county would consume approximately 73,400 acres, which is approximately twice as much land required for the Proposed Project. Projected growth would be largely accommodated in the unincorporated areas of the Eastside Valley, Sierra Nevada foothills, Sierra Nevada mountains areas.

It is possible that timberlands in or adjacent to the national forests could be affected, either directly through land transfers, or land use incompatibilities could result. The increase in population would also increase the demand for forest products, which could have adverse effects on supply. Consequently, the High Growth Alternative could result in more substantial impacts than the Proposed Project.

Increased Residential Development Densities Alternative

The Increased Residential Development Densities Alternative would involve no development in unincorporated areas, so timberlands would not be affected to any greater extent than would occur with the Proposed Project. Implementation of the No Project Alternative, which would result in a population increase identical to the Proposed Project, would increase the demand for timber resources for construction. However, the demand would be similar and would not result in any new significant impacts on timber resources.

MINERAL RESOURCES

No Project Alternative

The No Project Alternative would result in slightly less development than the Proposed Project, so there would be fewer potential land use incompatibilities and development of land containing mineral resources that could be developed in the future. Effects related to a potential shortage in aggregate materials would be similar to the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

High Growth Alternative

The High Growth Alternative would result in the development of more land at a greater number of locations throughout the county, as compared to the Proposed Project. To the extent that more intense development could preclude access to mineral resources or result in land use incompatibilities,

mineral resources effects would be greater than those identified for the Proposed Project. Although not an environmental effect, aggregate resources would be consumed at a greater rate than the Proposed Project, which could accelerate depletion of the supply. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Increased Residential Development Densities Alternative

Under the Increased Residential Development Densities Alternative, land use demand projections in the incorporated areas in the East and Westside Valleys are approximately 22 percent lower than the Proposed Project, so there would be fewer potential land use incompatibilities and less development of land containing mineral resources that could be developed in the future. Less land would be developed in Eastside Valley communities along the Kings River, which is gaining importance as a locally available source of aggregate materials for the Fresno-Clovis region. Because population growth and economic development would occur identical to the Proposed Project, effects related to a potential shortage in aggregate materials would be the same. Like the Proposed Project, these impacts would be less than significant for development under county jurisdiction, and significant and unavoidable for development within the Cities' jurisdiction.

AIR QUALITY

No Project Alternative

As with the Proposed Project, growth that would occur under the No Project Alternative would increase vehicle emissions. Under the No Project Alternative, VMT and daily trips would be less than the Proposed Project, and trip lengths would be slightly greater. As with the Proposed Project, the growth in vehicle use would result in increased emissions from both vehicle emissions and entrained road dust that would substantially exceed thresholds for ozone precursors. Although there would be fewer trips and VMT, this would not lower emissions a sufficient amount to result in levels lower than the significance thresholds. Similar to the Proposed Project, there are no additional reasonable mitigation measures available to further reduce mobile source emissions. Therefore, mobile source air quality impacts would be significant and unavoidable with the No Project Alternative, although the magnitude of the impact would be somewhat reduced compared to the Proposed Project.

Future growth would result in several roadways operating at LOS E or F during peak-hour periods of the day. Because increased traffic generated by the No Project Alternative could reduce LOS of roadway links or intersections, the congestion and heavy traffic could cause carbon monoxide (CO) levels to result in "hot spots" or violation of ambient air quality standards. Localized increases in CO levels would be most likely to occur in the more dense, incorporated areas of the county, where future growth would occur, similar to the Proposed Project. In the unincorporated areas, severe congestion and heavy traffic would be less common, and localized CO effects would not be as likely. State-mandated programs for tailpipe emissions have resulted in dramatic reductions of ambient CO concentrations, and the Fresno Urbanized Area has been designated in attainment with CO standards.

With slightly fewer VMT and daily trips, and assuming continued efforts to control CO emissions, the No Project Alternative would not result in any greater CO impacts than those that could occur with the Proposed Project. Like the Proposed Project, these impacts would be less than significant for development under County jurisdiction, and significant and unavoidable for development within the cities' jurisdiction.

Continued growth in the County under the No Project Alternative would increase the amount of construction. County-wide development of new residential uses would affect approximately 24,100 acres, identical to the Proposed Project. New development of non-residential uses would be approximately 4,200 acres less than the Proposed Project. Because fewer acres would be disturbed, construction-related criteria air pollutant emissions, including PM₁₀, would be less than those that would be generated by the Proposed Project. Under the No Project Alternative, construction activities would be required to comply with air district rules and regulations, so construction emissions would be less than significant after mitigation. Overall impacts related to construction emissions would be similar to the Proposed Project, but slightly reduced in magnitude.

Under the No Project Alternative, growth in industries and businesses that generate stationary source emissions would occur, but not to levels anticipated for the Proposed Project. Consequently, potential odors, stationary source emissions, and toxic air contaminants would be less than those generated by the Proposed Project, and would be less than significant.

High Growth Alternative

The High Growth Alternative would result in substantially more daily trips and higher VMT than the Proposed Project. As a result, more vehicle miles will be traveled under conditions that tend to increase the rate of air pollutant emissions. Again, congestion impacts would be directed even more toward the Fresno/Clovis SOIs, where about 74 percent of county VMT experiencing LOS F and about 65 percent of county VMT experiencing LOS D through F would occur (see Table 9 in the *Economic and Growth Scenarios Report*). Most of the county-wide population growth would occur in the Fresno/Clovis SOIs, where congestion-related local air pollutant hot spots would be most likely to occur. The projected VMT increase is slightly above California Air Resources Board guidelines in the San Joaquin Valley APCD's Ozone Attainment Demonstration Plan. If the SJVAB continues to make progress towards achieving ozone standards, the emphasis on constraining VMT growth may diminish.

Because more acres would be disturbed, construction-related criteria air pollutant emissions, including PM₁₀, would be greater than those that would be generated by the Proposed Project, and, as with the Proposed Project, would remain significant and unavoidable. As with the Proposed Project, construction activities would be required to comply with air district rules and regulations, and construction emissions would be less than significant after mitigation.

Growth in industries and businesses that generate stationary source emissions would occur, but not to levels anticipated for the Proposed Project. Consequently, potential odors, stationary source emissions, and toxic air contaminants would be less than those generated by the Proposed Project. Odor impacts would be less than significant.

Increased Residential Development Densities Alternative

Under the Increased Residential Development Densities Alternative, fewer acres would be disturbed because there would housing density would be greater. Therefore, construction-related criteria air pollutant emissions, including PM_{10} , would be less than those that would be generated by the Proposed Project. As with the Proposed Project, construction activities would be required to comply with air district rules and regulations, and construction impacts would be less than significant after mitigation.

Vehicle emissions would be similar to the Proposed Project, but less severe, because there would be fewer vehicle trips, and average trip length would be reduced. Nonetheless, the increase in vehicle emissions would be significant and avoidable.

Growth in industries and businesses that generate stationary source emissions would be the same as the Proposed Project, so potential odors, stationary source emissions, and toxic air contaminants impacts would be similar, and would be less than significant.

SEISMIC AND GEOLOGIC HAZARDS

No Project Alternative

Population growth under the No Project Alternative would be identical to the Proposed Project. Therefore, the same number of people would be exposed to seismic and geologic hazards. However, the amount of land developed would be slightly less than the Proposed Project, both for residential and non-residential uses. Less development would occur in incorporated areas of the Eastside Valley and Westside Valley and the Sierra Nevada foothills, where most of the population growth would occur.

As with the Proposed Project, development is subject to numerous State regulations governing the design and construction of buildings. It is not any more or less likely that development would occur in earthquake-prone areas or locations subject to other geologic hazards than would be expected for the Proposed Project. Therefore, the No Project Alternative would result in the same impact as the Proposed Project. However, because the amount of developed land would be less, there would be a commensurate reduction in the risk to property, and the impact would be reduced in magnitude, as compared to the Proposed Project. As with the Proposed Project, these impacts would be less than significant, with the exception of landslide hazards for development occurring outside of the County's jurisdiction.

High Growth Alternative

Implementation of the High Growth Alternative would, in general, expose a greater number of people and structures to seismic and geologic hazards, as compared to the Proposed Project. This alternative would involve a greater amount of growth in the Coast Range foothills, which is prone to more intense seismic effects than the valley floor, as compared to the Proposed Project. The amount of development in the Sierra Nevada foothills would be more than twice that anticipated under the Proposed Project.

Those areas are more susceptible to erosion and landslide hazards than the valley floor. As with the Proposed Project, development would be subject to numerous State regulations governing the design and construction of buildings to minimize such hazards to the extent practical. Consequently, overall impacts would be similar to the Proposed Project, but the extent of injury or property damage could be greater in the event of large-scale events. As with the Proposed Project, these impacts would be less than significant, with the exception of landslide hazards for development occurring outside of the County's jurisdiction.

Increased Residential Development Densities Alternative

Population growth under the Increased Residential Development Densities Alternative would result in an increase in population identical to the Proposed Project. Therefore, the same number of people would be exposed to seismic and geologic hazards. However, because of the increased housing density, the amount of land developed for residential uses would be less than the Proposed Project, so fewer structures would be affected. As with the Proposed Project, development is subject to numerous State regulations governing the design and construction of buildings. It is not any more or less likely that development would occur in earthquake-prone areas or locations subject to other geologic hazards than would be expected for the Proposed Project. Therefore, the Increased Residential Development Densities Alternative would result in the same impact as the Proposed Project, but slightly reduced in magnitude. As with the Proposed Project, these impacts would be less than significant, with the exception of landslide hazards for development occurring outside of the County's jurisdiction.

HAZARDOUS MATERIALS

No Project Alternative

Hazardous materials or consumer products containing hazardous materials are used in industries, businesses, public and private institutions, and households in the county. These activities also produce hazardous waste. The No Project Alternative assumes that population will increase as projected under the Proposed Project, but employment will increase at a lower rate, comparable to historic trends. Thus, the same number of people would be exposed to potential risks associated with the use, storage, transport, and disposal of hazardous materials, although potential workplace exposures may not be as great as the Proposed Project. The increase in population would generate more household-type hazardous waste than the Proposed Project, but the amount and types of hazardous materials used in businesses and industries and the amount of hazardous waste generated may be less than the Proposed Project because employment in the types of industries and businesses would not grow as fast as the Proposed Project. Approximately 4 percent fewer incorporated lands, where soil and groundwater contamination from past uses is more likely to occur, would be converted to urban uses, as compared to the Proposed Project. Consequently, although there would be an increase in population, the potential for encountering or disturbing contaminated land would be less than under the Proposed Project. As with the Proposed Project, these impacts would be less than significant, with the exception of the risk of exposure to contaminated soils or groundwater in areas outside of the County's jurisdiction.

High Growth Alternative

Under the High Growth Alternative, there would be a substantial increase in the number of industries and businesses in which hazardous products may be used. A greater number of people could be potentially exposed to associated hazards, as compared to the Proposed Project. This alternative would develop more land in the unincorporated areas, so redevelopment of known or potentially contaminated sites would pose less of a risk to future populations. Regardless of the amount of the growth and locations where contaminated lands could be redeveloped, numerous federal, State, and local laws and regulations governing hazardous materials would apply, so overall impacts would be similar to the Proposed Project. As with the Proposed Project, these impacts would be less than significant, with the exception of the risk of exposure to contaminated soils or groundwater in areas outside of the County's jurisdiction.

Increased Residential Development Densities Alternative

The Increased Residential Development Densities Alternative assumes that population will increase as projected under the Proposed Project, along with an increase in employment. Thus, the same number of people would be exposed to potential risks associated with the use, storage, transport, and disposal of hazardous materials, but the amount of hazardous potential workplace exposures may not be as great as the Proposed Project. The increase in population would generate the same amount of household-type hazardous waste than the Proposed Project, but there could be more types and quantities of hazardous materials used in businesses and industries and the amount of hazardous waste generated.

The Increased Residential Development Densities Alternative would not develop as much land in the incorporated areas as the Proposed Project, so the potential for encountering or disturbing contaminated land would be less than under the Proposed Project. As with the Proposed Project, these impacts would be less than significant, with the exception of the risk of exposure to contaminated soils or groundwater in areas outside of the County's jurisdiction.

NOISE

No Project Alternative

Traffic-generated noise impacts would occur along many of the county's roadways as a result of future growth in the county. Traffic-related noise increase under the No Project Alternative would cause noise levels to increase to within 0.5 dBA of the levels anticipated with the Proposed Project. This difference in noise levels would not be discernible, so traffic-related noise impacts would be similar to the Proposed Project. As population increases, increased aircraft operations associated with future growth would also occur under the No Project Alternative. Because accelerated economic growth would not occur, however, there could be fewer freight transport flights. Similarly, noise levels from fixed sources (e.g., industries) may not be as great as those that could occur with the Proposed Project.

However, the reduction in aircraft or fixed-source noise levels, if any, would probably not result in a substantial reduction in noise levels, as compared to the Proposed Project. The No Project Alternative

would add new residential and other sensitive uses to the county where individuals could be exposed to existing or future unacceptable noise conditions. However, new growth would occur in the same areas as the Proposed Project, so impacts would be identical. Overall, noise effects associated with the No Project Alternative would be similar to the Proposed Project.

High Growth Alternative

The High Growth Alternative would generate more vehicular traffic than the Proposed Project, which would result in more traffic-related noise. The High Growth Alternative would add a greater number of new residential and other sensitive uses in areas of the county where those individuals could be exposed to existing or future unacceptable noise conditions. Assuming community noise guidelines are implemented, impacts would be similar to the Proposed Project, but more people would be affected. As with the Proposed Project, increased economic development and population would result in increased aircraft operations and a commensurate increase in aircraft noise levels. The High Growth Alternative would involve the development of fewer industrial activities and a corresponding reduction in noise levels from those fixed noise sources, as compared to the Proposed Project. However, retail and public/institutional development would be greater than the Proposed Project, so noise levels from those activities could offset the industrial levels. Overall, noise effects associated with the High Growth Alternative would be somewhat greater in magnitude than the Proposed Project.

Increased Residential Development Densities Alternative

The number and length of vehicle trips under this alternative would be slightly reduced relative to the Proposed Project. The difference in noise levels would not be discernible, so traffic-related noise impacts would be similar to the Proposed Project. As with the Proposed Project, increased aircraft operations associated with future growth would also occur, so aircraft-related noise effects would be the same. Similarly, noise levels from fixed sources (e.g., industries) would be the same as the Proposed Project. The Increased Residential Development Densities Alternative would add new residential and other sensitive uses to the county where individuals could be exposed to existing or future unacceptable noise conditions. However, new growth would occur in the same areas as the Proposed Project, so impacts would be identical. Overall, noise effects associated with the Increased Residential Development Densities Alternative would be similar to the Proposed Project.

VISUAL QUALITY

No Project Alternative

Under the No Project Alternative, the increase in residential development would alter the existing visual character of the county, including the nighttime character. The alteration would be less severe than under the Proposed Project, because there would be less land developed. Nonetheless, the change in visual character would be significant and unavoidable.

High Growth Alternative

Like the Proposed Project, the High Growth Alternative would substantially alter the visual character of the county. Implementation of Draft General Plan policies and mitigation to minimize “spillover” from lights would reduce the visual impacts of this alternative, but they would remain significant and unavoidable. Furthermore, the impacts would be substantially more severe than under the Proposed Project, because more land would be developed.

Increased Residential Development Densities Alternative

Under the No Project Alternative, the increase in residential development would alter the existing visual character of the county, including the nighttime character. The alteration would be less severe than under the Proposed Project, because there would be less land developed. Implementation of Draft General Plan policies and mitigation to minimize “spillover” from lights would further reduce the visual impacts of this alternative, but they would remain significant and unavoidable. Nonetheless, the change in visual character would be significant and unavoidable.

Relationship of Alternatives to Project Objectives

As noted above, objectives of the Proposed Project are used as the basis for comparing project alternatives and determining the extent that the objectives would be achieved relative to the Proposed Project. The following discussion evaluates the extent to which the objectives would be achieved for the No Project, High Growth, and Increased Residential Development Densities Alternatives.

No Project Alternative

The No Project Alternative would accommodate future growth as projected by the Department of Finance, but would not achieve the objectives of the Proposed Project related to economic development and reduced unemployment, because the Economic Development Strategy would not be implemented. Similarly the objectives to promote compact urban development, minimize the destruction and disturbance of natural habitat, and enhance quality of life would not be achieved to as great an extent as under the project, because the Draft General Plan policies would not be adopted.

High Growth Alternative

The High Growth Alternative would achieve the objectives of the Proposed Project, because the Economic Development Strategy and Draft General Plan policies would be adopted.

Increased Residential Development Densities Alternative

Under the Increased Residential Development Densities Alternative, the objectives of the Proposed Project would be achieved because the Economic Development Strategy would be implemented and

Draft General Plan policies would be adopted. This alternative would be more effective at achieving the objectives to compact urban development and minimize destruction and disturbance of natural habitat because residential densities would be higher than under the Proposed Project, and fewer acres would be developed, so the environmental effects of development would be lessened.

Environmentally Superior Alternative

An EIR is required to identify the environmentally superior alternative from among the range of reasonable alternatives that are evaluated. 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.

The Increased Residential Development Densities Alternative would be the Environmentally Superior Alternative. None of the alternatives would avoid any of the significant impacts identified for the Proposed Project. However, the magnitude of impacts could, in some cases, be substantially lessened by the Increased Residential Development Densities Alternative. In addition, the Increased Residential Development Densities Alternative would achieve all of the objectives identified for the Proposed Project. The following discussion summarizes the results of the environmental analysis for each alternative as it relates to selection of the environmentally superior alternative.

Summary of No Project Alternative

The No Project Alternative would result in the same population growth as the Proposed Project, but there would be fewer jobs. Areas where growth would occur under the No Project Alternative would be similar to the Proposed Project – primarily in the incorporated areas of the Eastside Valley. The level of significance of identified impacts would generally be the same as the Proposed Project. However, the magnitude of those impacts would differ. For most issue areas, effects would be similar or slightly reduced in magnitude. Approximately 4 percent less land would be needed to accommodate the No Project Alternative, so impacts that are generally associated with land use conversion (e.g., land use compatibilities, construction-related air emissions and noise, biological resources, cultural resources, water quality) would not be as great as the Proposed Project. The demand for services and utilities would be similar to the Proposed Project, although there could be some reduction in effects on water, wastewater, storm drainage, and solid waste facilities because the demand or contribution from industrial, commercial, or retail operations would not be the same without increased economic growth. Similarly, there could be a slight reduction in traffic volumes and effects on LOS, criteria air pollutant emissions, and noise levels. Hazardous materials and geologic hazards would be similar to the Proposed Project. Therefore, while the No Project Alternative would result in a slight reduction in the magnitude of potential effects, it would not avoid or substantially lessen any significant effects. Consequently, the No Project Alternative would not be considered environmentally superior.

Summary of High Growth Alternative

With the highest population growth and land demand, the High Growth Alternative would result in the development of more land in all areas of the county, particularly in the unincorporated areas. As

a result, effects on natural resources (water, air, and biological resources, for example) would be more severe than those identified for the Proposed Project. Increased growth in the unincorporated areas would place a greater demand on the need for and extension of infrastructure, which would also result in additional impacts on natural resources. More new development would occur in areas susceptible to geologic and fire hazards. The demand for water would be of particular concern, as compared to the Proposed Project. The High Growth Alternative would result in more trips and higher VMT than the Proposed Project, most of which would occur in already-congested areas. Air emissions (both from construction and operation) would be greater than the Proposed Project and would be dispersed over a larger area. The demand on water resources would be substantially greater than the Proposed Project. While the level of significance of impacts would be the same as the Proposed Project, the magnitude of those impacts would be more severe. Therefore, the High Growth Alternative would not avoid or substantially lessen any significant effects and would not be considered environmentally superior.

Summary of Increased Residential Development Densities Alternative

The Increased Residential Development Densities Alternative would result in the same population and economic growth as the Proposed Project, but less acreage would be consumed because of increased housing density. The level of significance of environmental impacts in all issue areas would be the same as the Proposed Project, but, in many cases, the magnitude of the effects would be reduced. The most dramatic of these reductions would occur in land use-related issue areas. Because approximately 22 percent fewer acres would be needed under this alternative, impacts on land use incompatibilities, agriculture, biological resources, water quality, cultural resources, forestry, and mineral resources could be substantially lessened. Because housing would be more concentrated in a smaller area rather than dispersed over a larger area, there would be fewer effects on infrastructure and services. The effects on water supplies, in particular, could be reduced because there would be fewer impervious surfaces limiting recharge, and landscaping demand would not be as great. While the length of vehicle trips may not be as great as the proposed (resulting in less effects on regional air emissions), there could be more localized effects on air quality and noise levels. The Increased Residential Development Densities Alternative would result in less development in areas where there is greater potential for geologic hazards (e.g., severe groundshaking, erosion, landslides), so the risk to people and property would be lessened. Therefore, of the three alternatives, the Increased Residential Development Densities Alternative is the environmentally superior alternative because it would result in the least severe impacts.

7. References

Information contained in the Setting sections in Chapter 4 are taken from the *Fresno County General Plan Background Report, Fresno County, January 2000*. References (both bibliography and persons consulted) for the *Background Report* are provided in Chapters 1.13, 1.14, 2.6, 2.7, 3.5, 3.6, 4.11, 4.12, 5.12, 5.13, 6.6, 6.7, 7.11, 7.12, 8.5, 8.6, 9.9, 9.10, 10.7 and 10.8, which are hereby incorporated by reference.

Other references included in this DEIR include:

Gilbert L. Bertoldi and others, "Ground Water in the Central Valley, California – A Summary Report," *U.S. Geological Survey Professional Paper 1401-A*, 1991, p. A34.

California Basic Education Data System,

http://www.fcoe.k12.ca.us/infoplease/eroll_cbeds_9899.htm.

Fresno County, *Fresno County General Plan Background Report*, Draft, May 1997.

http://www.fcoe.k12.ca.us/infoplease/stats_glance_9899.htm.

http://www.fcoe.k12.ca.us/infoplease/ed_stat_97_98/stats_glnc_97.htm.

Persons Consulted

Harris Hays, Fresno County Public Works and Development, Personal communications, September 1999.

Marion Miller, Fresno County Public Works Resource Management Planning, Waste Origin Summary, written communication, September 8, 1999.

Bill G. Richards, Deputy Chief, Fresno County Fire Protection District, written correspondence to Gina Francis, Fresno County Public Works & Development Department, June 4, 1999.

APPENDIX A

NOTICE OF PREPARATION



Public Works & Development Services Department
Carolina Jimenez-Hogg
Director

NOTICE OF PREPARATION / NOTICE OF PUBLIC SCOPING MEETING

DATE: April 30, 1999

TO: Responsible / Cooperating Agencies and Interested Citizens

FROM: Fresno County Public Works & Development Services Department
Development Services Division
2220 Tulare Street, 6th Floor
Fresno, CA 93721

SUBJECT: NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT /
NOTICE OF PUBLIC SCOPING MEETING

An **EIR project agency scoping meeting** for the above-referenced project will be held on **Wednesday, May 12, 1999 at 1:30 p.m.** in Room 301, Hall of Records, 2281 Tulare St., Fresno.

Please contact us by 10:00 a.m., Monday, May 10, 1999 at (559) 262-4497 if your agency will be sending a representative to the scoping meeting or if you have questions.

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

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study is not attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but **not later than 30 days (June 7, 1999)** after receipt of this notice.

Please send your response to Gina Francis at the address shown above. We will need the name for a contact person in your **agency**.

Project Title: Fresno County General Plan Update

Project Applicant: Fresno County

Date: April 30, 1999

Signature: 

Title: Development Services Manager

Phone: (559) 262-4497

DRAFT EIR FOR THE FRESNO COUNTY GENERAL PLAN UPDATE NOTICE OF PREPARATION

PROJECT BACKGROUND

Prior to the current update, the Fresno County General Plan was last comprehensively updated in 1976. The current General Plan consists of nine countywide topical elements, five regional plans, 13 community plans for the smaller incorporated cities, nine plans for unincorporated communities, nine community plans for the Fresno-Clovis area, and six specific plans (see chart on the following page).

The current General Plan Program is updating and expanding all countywide topical elements, with the exception of the Housing Element which is not scheduled for update until 2002. The following is a tentative list of the titles of the countywide topical elements to be prepared or updated:

- Economic Development
- Land Use
- Transportation
- Parks and Recreation
- Natural Resources (including agriculture and air quality)
- Safety
- Noise
- Public Facilities

The regional plans, community plans, and specific plans will not be updated, although the new General Plan will propose a new framework for all these plans, identify needed changes to the plans based on revisions to the countywide elements, and identify the need for additional regional or community plans.

The General Plan Update is being undertaken in two major phases: the focus of Phase 1 was to establish the foundation and policy direction for the new General Plan; Phase 2 provides for preparation of a Draft General Plan, a Draft EIR, and a Fiscal and Financial Analysis and public review and adoption of the new General Plan. The County is being assisted in the General Plan update by a multi-disciplinary Consultant Team.

DRAFT BACKGROUND REPORT

In 1997, the General Plan Consultants prepared a *Draft General Plan Background Report*, which compiled information on existing conditions and trends concerning all topics being addressed in the General Plan including: land use and population; agriculture; economic conditions and fiscal conditions; transportation and circulation; public facilities and services; recreational, archaeological, historical, and natural resources; air quality; noise; and safety. The Report was completed in May 1997 and distributed in July for public review.

**COMPONENTS OF THE CURRENT FRESNO COUNTY GENERAL PLAN
1999**

COUNTYWIDE GENERAL PLAN ELEMENTS

- Land Use
- Transportation
- Scenic Highways
- Parks and Recreation
- Open Space/Conservation
- Safety/Seismic Safety
- Noise
- Housing
- Public Facilities

REGIONAL PLANS

- Sierra-North Regional Plan
- Coalinga Regional Plan
- Westside Freeway Regional Plan
- Kings River Regional Plan
- Sierra-South Regional Plan

INCORPORATED CITIES/COMMUNITY PLANS

- Coalinga Community Plan
- Firebaugh Community Plan
- Fowler Community Plan
- Kerman Community Plan
- Kingsburg Community Plan
- Huron Community Plan
- Mendota Community Plan
- Orange Cove Community Plan
- Parlier Community Plan
- Reedley Community Plan
- Sanger Community Plan
- San Joaquin Community Plan
- Selma Community Plan

UNINCORPORATED COMMUNITY PLANS

- Biola Community Plan
- Caruthers Community Plan
- Del Rey Community Plan
- Friant Community Plan
- Laton Community Plan
- Riverdale Community Plan
- Shaver Lake Community Plan
- Tranquillity Community Plan
- Lanare Community Plan

FRESNO-CLOVIS COMMUNITY AREA PLANS

- Bullard Community Plan
- Fig Garden Neighborhood Plan
- Clovis Community Plan
- Fresno High-Roeding Community Plan
- McLane Community Plan
- Roosevelt Community Plan
- Edison Community Plan
- Easton Community Plan
- Woodward Park Community Plan

SPECIFIC PLANS

- Shaver Lake Forest Specific Plan
- Bretz Mountain Village Specific Plan
- Wildflower Village Specific Plan
- Millerton Specific Plan
- Del Rio Specific Plan
- Quail Lake Estates Specific Plan

ECONOMIC AND GROWTH SCENARIOS

In March 1998, the County released the *Economic and Growth Scenarios Report*, prepared by County staff and the Consultant Team. The Report assessed the potential for employment and income growth in Fresno County; identified potential barriers and constraints to achieving economic growth; assessed the County's physical and financial "carrying capacity" for new development; and described the physical, financial, and resource implications of various economic and growth scenarios. The Report identified, analyzed, and compared five scenarios for the year 2020:

- Scenario A: Continuation of recent trends for both population and employment growth (base case).
- Scenario B: Significant changes in crop patterns toward higher value per acre agriculture (e.g., cotton to fruit trees).
- Scenario C: Significant increases in industrial development resulting from value-added agricultural business activity and employment (with or without a change in crop patterns).
- Scenario D: Significant change in the mix of basic jobs toward non-agricultural employment.
- Scenario E: Growth driven by population and residential growth, along with associated development of local-serving businesses.

Scenarios B and C were combined in the analysis of comparative impacts.

The Scenarios Report was the basis for discussion in meetings held throughout the county over a three-month period in the spring of 1998. County staff and the General Plan Consultants presented the Economic and Growth Scenarios Report in over 35 public forums and open houses in communities across the county. This included a presentation to the planning directors of Fresno County's 15 cities. Staff also distributed questionnaires to elicit residents' preferences regarding the County's future economy and land use patterns. The result was summarized in a list of issues and value statements which was forwarded to the Fresno County Planning Commission and Board of Supervisors.

BOARD OF SUPERVISORS' POLICY DIRECTION

On July 28, 1998, the Board of Supervisors provided direction to County staff and the General Plan Consultants regarding the "Preferred Economic and Growth Scenario" to be pursued in the General Plan Update and in the preparation of the Economic Development Strategy. The Preferred Scenario is a combination of Economic Scenarios B/C (Shifts in Agricultural Production/Value-Added Agriculture) and D (Non-Agricultural Basic Employment). The Board of Supervisors also endorsed the principles in *A Landscape of Choice Report*, prepared by Growth Alternatives Alliance (see Attachment A, Policy Direction for the General Plan Update).

ECONOMIC AND GROWTH ALLOCATION AND METHODOLOGY REPORT

Following the Board's direction in July 1998, County staff and the General Plan Consultants worked with the city planning directors of Fresno County and the staffs of the Council of Fresno County Governments and the Local Agency Formation Commission (LAFCO) to develop a statistical description of the Preferred Scenario. In developing this description, the Consultants used a slightly revised version of the methodology they used to prepare the *Economic and Growth Scenarios Report* in the Spring of 1998.

The Economic and Growth Allocation and Methodology Report projects future population and job growth countywide through the year 2020, allocates this population and job growth among the county's 15 incorporated cities and five unincorporated geographic sectors of the County, and translates the population growth into demand for residential land and the employment growth into demand for non-residential land.

This economic and growth allocation will be used as a general guide for the expected level and distribution of growth to assist the County staff, General Plan Consultants, and other update participants in drafting General Plan policies and the land use diagram, and in preparing the General Plan EIR.

ECONOMIC DEVELOPMENT STRATEGY

Following the Board's direction in July 1998, the General Plan Consultants prepared a draft of an Economic Development Strategy. The ultimate purpose of the Economic Development Strategy is to provide direction for countywide economic development efforts. The Economic Development Strategy will have broad application in future Board actions including funding allocations, economic development programs, welfare-to-work efforts and related actions. In the near term, the Strategy will guide the drafting of the General Plan.

Following review by the Board in December 1998, a preliminary draft of the Economic Development Strategy dated December 9, 1998, was sent out to over 300 local agencies, organizations, and individuals. Based on review of the comments received, the Board directed the General Plan Consultants to revise the Strategy for future review by the Board and ultimately for adoption by the Board at the end of the update process.

PROJECT LOCATION

Fresno County is located roughly in the center of the San Joaquin Valley, midway between San Francisco and Los Angeles. Fresno County is bordered by the counties of San Benito, Merced, Madera, Mono, Inyo, Tulare, Kings, and Monterey. It stretches approximately 150 miles from the Coast Range Foothills to the eastern slope of the Sierra Nevada. The County's major north-south routes include I-5, SR-99, SR-33, and SR-41 and its major east-west routes include SR-180 and SR-168. The San Joaquin River and Kings River are the County's principal watercourses. There are 15 incorporated cities, all located on the Valley floor. Fresno and Clovis together account for about 80 percent of the total incorporated population and over 61 percent of the County's total population.

PROJECT OBJECTIVES

The following are tentatively identified as the projects principal objectives:

- Diversify the Fresno County economy to provide a broad range of employment opportunities.
- Reduce unemployment and promote the creation of higher wage jobs.
- Minimize conversion of agriculture land.
- Promote compact urban development.
- Minimize destruction and disturbance of natural habitat.
- Enhance the quality of life for residents of Fresno County.

PROJECT CHARACTERISTICS

The project is a comprehensive update of the countywide topical elements (excluding housing) of the Fresno County General Plan. The following is a tentative list of the titles of the countywide topical elements to be prepared or updated:

- Economic Development
- Land Use
- Transportation
- Parks and Recreation
- Natural Resources (including agriculture and air quality)
- Safety
- Noise
- Public Facilities

The timeframe for the updated General Plan will be the year 2020. The General Plan Update assumes that the County will grow from 769,700 in 1996 to 1,113,785 in 2020, consistent with projections released by the California Department of Finance in December 1998. County staff and the General Plan Consultants, with the participation of city planning directors and staffs of the Council of Fresno County Governments and the Local Agency Formation Commission, prepared an allocation model which distributed projected countywide growth for 2020 to the County's 15 incorporated cities and the incorporated area. • Baseline and horizon year comparisons for population and employment are shown on the chart on the next page.

**GEOGRAPHIC ALLOCATION OF POPULATION
AND EMPLOYMENT
1996 and 2020 (Preferred Scenario)**

	POPULATION			EMPLOYMENT		
	1996	2020	Percentage Increase	1996	2020	Percentage Increase
FRESNO COUNTY TOTAL	769,700	1,113,785	45%	370,781	602,021	62%
EAST VALLEY TOTAL	709,804	1,035,397	46%	342,998	562,658	64%
Clovis	69,260	111,534	61%	34,238	63,017	84%
Fowler	5,347	7,142	34%	2,282	3,473	52%
Fresno	445,199	675,981	52%	221,994	381,989	72%
Kerman	8,009	11,015	38%	2,699	4,165	54%
Kingsburg	9,042	11,562	28%	4,137	5,746	39%
Orange Cove	7,186	9,150	27%	2,317	3,526	52%
Parlier	9,967	12,892	29%	3,293	5,075	54%
Reedley	20,928	27,715	32%	8,863	12,535	41%
San Joaquin	3,718	6,291	69%	798	1,629	104%
Sanger	21,577	26,880	25%	8,273	11,986	45%
Selma	21,867	29,038	33%	7,139	10,801	51%
Unincorporated East Valley	87,705	106,197	21%	46,966	58,716	25%
SIERRA FOOTHILLS (county)	11,727	13,938	19%	2,234	3,430	54%
SIERRA NEVADA MTNS (county)	6,146	6,711	9%	906	1,024	13%
WEST VALLEY TOTAL	41,748	57,440	38%	24,610	34,870	42%
Coalinga	9,859	13,042	32%	4,265	6,242	46%
Firebaugh	5,853	7,757	33%	2,626	3,952	50%
Huron	6,267	9,456	51%	2,483	4,328	74%
Mendota	8,627	11,838	37%	2,975	4,661	57%
Unincorporated West Valley	11,142	15,347	38%	12,260	15,687	28%
COAST RANGE FOOTHILLS	274	299	9%	33	38	16%

POSSIBLE IMPACTS

The Draft EIR to be prepared for the Draft General Plan will primarily assess the cumulative impacts of growth and public facility and service requirements to serve projected growth. Pursuant to Section 15060(c) of the State CEQA Guidelines, the County determined that an EIR was required for the Draft General Plan and therefore it was not necessary to prepare an initial study or checklist for this project.

Development that would be accommodated under the Draft General Plan might result in several adverse environmental impacts. These potential impacts were described in general terms in the *Economic and Growth Scenarios Report*, in the comparative analysis of the five economic and growth scenarios. The Draft EIR will assess the following possible impacts of the Draft General Plan:

Land Use, Housing, and Population: Assessment of the impacts of proposed land use changes on land use, housing, and population and analysis of consistency with local, regional, State, and Federal land use plans and policies.

Transportation: Assessment of impacts on transportation, including traffic, transit services and facilities, rail services and facilities, and airport facilities and services. Possible impacts of the General Plan include generation of substantial additional vehicle trips, which may have a substantial impact on existing transportation systems, including various State facilities.

Public Facilities and Services: Assessment of impacts on public facilities and services such as water supply and delivery, wastewater collection and treatment, law enforcement, fire protection, and schools.

Natural Resources and Environment, and Agriculture: Assessment of impacts on natural resources and environment, including the following: water resources; agricultural land; wildlife habitat areas; special-status species; and air quality. Likely impacts include conversion of agricultural land to urban/suburban development, increased demand for the use of limited supplies of groundwater and surface water, and increased air pollutant emissions which could lead to a deterioration in ambient air quality.

Safety: Assessment of impacts on safety issues, including seismic and geologic conditions, wildland and urban fire potential, and flooding.

Noise: Identification and evaluation of future noise levels resulting from traffic, rail operations, and aircraft. Potential impacts of the General Plan include increased noise levels on existing roadways that may result in increased noise exposure for existing noise-sensitive uses.

Mandatory CEQA Sections: Discussion of mandatory CEQA sections, including analysis of alternatives, significant irreversible effects, growth-inducing impacts, and cumulative impact.

ALTERNATIVES

The Draft Environmental Impact Report will consider the following range of alternatives:

- The "Project" (preferred scenario) will be analyzed qualitatively and quantitatively at 2020 assuming population of 1.1 million.
- The "Project" plus major project proposals will be analyzed qualitatively and quantitatively at 2020 assuming population of 1.1 million, but in less detail than the "Project".
- The "Project" will be discussed qualitatively at "buildout" (i.e., some point beyond 2020).
- The "no-project" reflecting existing jobs-to-population ratios will be analyzed qualitatively and quantitatively at 2020 assuming population of 1.1 million, but in less detail than the "Project".
- The analysis of the four (4) economic and growth scenarios identified in *the Economic and Growth Scenarios Report* will be incorporated in the alternatives discussion. These alternatives will be analyzed qualitatively and quantitatively at 2020 assuming population of between 1.4 and 1.5 million.
- The reduced growth alternative will be analyzed qualitatively and quantitatively at 2020 and a population of less than 1.1 million, but will be analyzed in less detail than the "Project".

USES OF THE FINAL EIR

The Final EIR will be certified before the Board of Supervisors formally adopts the updated General Plan. The County may use the Final EIR as a program EIR or first-tier EIR in the approval of subsequent plans and projects. Other local and State agencies may also use the Final EIR in the approval of their own plans and projects.

ADDITIONAL INFORMATION

The following reports provide additional information that reviewers may find useful in understanding the scope of the General Plan Update or the potential environmental effects of the updated General Plan:

- *Draft Background Report*
- *Economic and Growth Scenarios -- Perspectives on the Year 2020*
- *Economic and Growth Scenarios -- Perspectives on the Year 2020 Technical Appendices*
- *Economic and Growth Allocation and Methodology Report*
- *Draft Economic Development Strategy*

These documents are available for review at the Development Services Division of the Fresno County Public Works and Development Services Department, 2220 Tulare Street, Suite "A", Fresno, California and at the Fresno County Main Library, Reference Department, 2420 Mariposa Street, Fresno, California.

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POLICY DIRECTION FOR GENERAL PLAN UPDATE

The Fresno County Board of Supervisors has provided important direction for the preparation of an Economic Development Strategy and a new General Plan ... The Board's July 28, 1998 decision came as the culmination of a County-wide public review of a report called, *Economic and Growth Scenarios: Perspectives on the Year 2020*. The review process featured open houses, meetings, questionnaires and public hearings by both the Fresno County Planning Commission and the Board. A recap of recent events in the Update Program is followed by the text of the direction from the Board of Supervisors.

BACKGROUND

Fresno County's new Economic Development Strategy and General Plan Policy will guide job and population growth and physical development in Fresno County over the next two decades. Therefore, the direction from the Board of Supervisors regarding their preferred economic scenarios and related development and environmental values was one of the most significant decisions to be made by the Board in shaping the County's future.

The Board considered a report entitled: *Economic and Growth Scenarios: Perspectives on the Year 2020*, and recommendations of the Fresno County Planning Commission. This report, a key document of the County's General Plan Update Program, was released in March 1998. It describes five economic scenarios and traces their possible growth-related impacts.

The document was the basis for discussion in meetings held throughout the County over a three-month period in the Spring of 1998. The County's Consultant and County Staff presented the *Economic and Growth Scenarios* report in over 35 public forums and open houses in communities across the County. This included a presentation to the planning directors of Fresno County's 15 cities. Staff also distributed questionnaires to elicit residents' preferences regarding the County's future economy and land use patterns. The result was summarized into a list of issues and value

statements which was forwarded to the Fresno County Planning Commission.

After holding three public hearings, the Planning Commission recommended that the Board of Supervisors direct the pursuit of a combination of three economic scenarios. Under this blend of scenarios, (1) agriculture would continue to be strengthened, emphasizing the production of higher value crops; (2) value-added agriculture would be pursued to extend the role of farming into such areas as food processing; and (3) the County's economy would be further diversified, with the expansion of such industries as information processing, metal working, and machinery operations. The Commission also adopted a number of recommendations based upon issues identified in the public hearings. Commission recommendations were forwarded to the Board of Supervisors in June.

On July 28, 1998, after conducting two public hearings, the Board endorsed the Planning Commission's recommendations with minor modifications. A recurring theme at the public forums, open houses, and public hearings was support for the values contained in *A Landscape of Choice: Strategies for Improving Patterns of Community Growth*, a report prepared by a consortium of interests called the Growth Alternatives Alliance. The Board, in turn, embraced these values, which appear as part of the Board's policy direction.

Fresno County Board of Supervisors: Deran Koligian, District 1 • Sharon Levy, District 2 • Juan Arambula, District 3 • Tom Perch, District 4 • Stan Oken, District 5 • **County Administrative Officer:** William H. Randolph • **Public Works & Development Services Department:** Carolina Jimenez-Hogg, Director • Kerry L. McCants, Development Services Manager • **Consultants:** J. Laurence Mintier & Associates, Applied Development Economics, and associated consultants

DIRECTION REGARDING ECONOMIC AND GROWTH SCENARIOS

The Board directed the Consultant and Staff to pursue Economic Scenarios B/C (Shifts in Agricultural Production/Value-Added Agriculture), and D (Non-Agricultural Basic Employment) in preparing an Economic Development Strategy and Phase II of the General Plan Update.

DIRECTION REGARDING PLANNING PROCESS, ISSUES AND VALUES, AND FUTURE DEVELOPMENT IN THE CITIES AND UNINCORPORATED AREAS

The Board directed the Consultant and Staff to be guided by the following statements in preparing the Economic Development Strategy and General Plan:

1 PLANNING PROCESS

- a. Quality of life and community, as well as economic well-being, are fundamental values that should guide the preparation of the General Plan Update.
- b. The General Plan Update should incorporate the principles contained in *A Landscape of Choice*.
- c. The Plan Update should not move away from current policies of directing growth to the cities and unincorporated communities, and favoring the protection of agricultural land.
- d. The Plan should encourage dialogue with the Cities in Fresno County, Madera County and other organizations having an interest in, or policies for, land use.

2 WATER SUPPLY

Conserve and provide water resources in ways that will sustain human life and are beneficial to agriculture and the natural environment.

3 SAND AND GRAVEL MINING

The General Plan Update should include policies to minimize impacts from mineral extraction in Fresno County and to ensure the restoration and enhancement of the post mining environment for open space and recreational use.

4 RECREATION AND TOURISM

Fresno County's unique complement of recreational and visual resources including rivers, lakes, forests, woodlands, scenic vistas and access to National Parks should be addressed in the Economic Development Strategy and should be protected and enhanced in land use policies.

5 DEVELOPMENT NORTHEAST OF FRESNO-CLOVIS METROPOLITAN AREA

Development in the San Joaquin River-Sierra Foothills area should be guided by a regional plan prepared cooperatively by Fresno County, Madera County, the Cities of Fresno and Clovis, resource organizations, area residents and land owners.

6 ECONOMIC AND GROWTH SCENARIOS

The potential for economic growth related to tourism and recreation should be evaluated and pursued in the Economic Development Strategy.

7 LAND USE PATTERNS/QUALITY OF LIFE

- a. The General Plan Update should identify and evaluate ways to encourage and promote compact development, infill and redevelopment.
- b. The General Plan Update should not provide for additional rural residential development and should identify and evaluate ways to encourage redesignation of undeveloped rural residential land for higher density residential use or for agriculture, depending on its location. Redesignation of undeveloped areas should be sensitive to areas currently developed as rural residential.

Proposed residential designations for undeveloped land lying between existing urban and rural residential development should provide for a graduated transition in density/lot size from higher to lower density between the two respective areas.

- c. The General Plan Update, including the Economic Development Strategy, should recognize the differences among the different geographic areas of Fresno County in terms of cropping, size and scale of agricultural operations, water supply, settlement patterns and transportation facilities.



PRINCIPLES CONTAINED IN *A LANDSCAPE OF CHOICE*

The General Plan Update should be guided by the principles and recommendations from *A Landscape of Choice* as follows:

Utilize urban land as efficiently as possible.

General

- a. The land use element of a general plan should only identify the mix of land uses and a broad range of allowable densities for future development. When development of an area is imminent, specific plans or community plans should be prepared to specify the pattern, location and density of land uses.
- b. Re-designate vacant land for higher density uses or mixed use and provide incentives for assemblage of smaller parcels to create feasible infill projects that meet community goals and objectives.
- c. Create mixed-use zone districts that encourage the combination of residential, commercial and office use on the same site.
- d. Modify design review procedures to create a process that meets planning goals and complements the community vision rather than focusing strictly on rigid numerical standards.
- e. Provide incentives and support projects that are designed to encourage compact growth and higher densities while providing amenities such as bike paths, neighborhood parks, etc. as densities increase.

Residential - General

- a. Thoroughly review and revise zoning ordinances to facilitate moderate increases in density of housing types within the same zone district or neighborhood.
- b. Encourage nodes of higher housing densities (village centers) in areas served by the full range of urban services - neighborhood commercial uses and community centers, public services and transit stops.
- c. Adopt a Traditional Neighborhood Development Ordinance that can serve as an alternative to the standard zoning ordinance and overlay this district over all single family, multiple family and neighborhood commercial zone districts.

Existing Residential Neighborhoods

- a. Retrofit existing neighborhoods to create activity centers or nodes that give the neighborhood an identity.
- b. Prepare neighborhood revitalization plans for areas suited for infill development and insist on public participation throughout the planning process. Further streamline the permitting process and encourage public/private ventures to carry out these plans.
- c. Preserve and enhance existing pedestrian- and transit-oriented neighborhoods by pursuing redevelopment that retains pedestrian orientation and promotes transit use.

Commercial, Industrial and Institutional Uses

- a. Develop policies and standards that facilitate an increase in floor/area ratios for commercial and industrial development by encouraging construction of multi-story office buildings.
- b. Encourage shared use of parking facilities and promote planning for uses that can utilize the same parking area at different times.
- c. Encourage parking structures for certain commercial/industrial projects and establish parking fees that make these structures profitable.

Downtown Redevelopment and Commercial Centers

- a. Promote downtowns and village centers as the primary commercial and financial centers and provide social, institutional and financial incentives to builders and businesses who are willing to locate in these centers.
- b. Improve transportation and public transit access to the downtown of the city.
- c. Maintain Fresno's downtown as the government center for the region by encouraging region-serving local, state and federal governmental offices to locate there.

Institutional Uses

- a. Work with school districts to incorporate school sites into larger neighborhood activity centers that serve multiple purposes.
- b. Incorporate institutional and public land uses into downtown redevelopment and neighborhood revitalization plans.

Develop livable communities that emphasize pedestrian or transit-oriented design.

- a. Develop transit and pedestrian-oriented design guidelines and incorporate them into community plans and specific plans.
- b. Revise local street development standards to make streets more pedestrian-friendly by reducing the overall width of the street right-of-way to a maximum width of 50 feet and reducing the corresponding turn-around width of cul-de-sacs.
- c. Create a task force to evaluate standards for parking requirements and recommend measures to reduce the amount of land devoted to parking and encourage shared use of parking facilities.

Recognize the importance of agriculture and the need to protect productive farmland.

- a. All of the cities of Fresno County should adopt an agricultural element in their general plan.
- b. Within city spheres of influence, encourage an orderly outward expansion of new urban development while providing for new towns and community planning that creates new patterns of compact growth.

- c. Undertake a process that leads to adoption of reasonable urban growth boundary that provides an adequate supply of land to meet projected demand and is administratively expandable.
- d. Create a forum in which multi-jurisdictional land use planning between cities and counties can be achieved.

NOTE: Recommendations from *A Landscape of Choice* are reordered in the listing above. Text has been modified in a few instances.



TRANSPORTATION

Establish and maintain the levels of transportation, communication, and infrastructure necessary for the support of the County's economy.



EDUCATION

Encourage and support educational opportunities and access to training and retraining programs for County residents.

NEXT STEPS

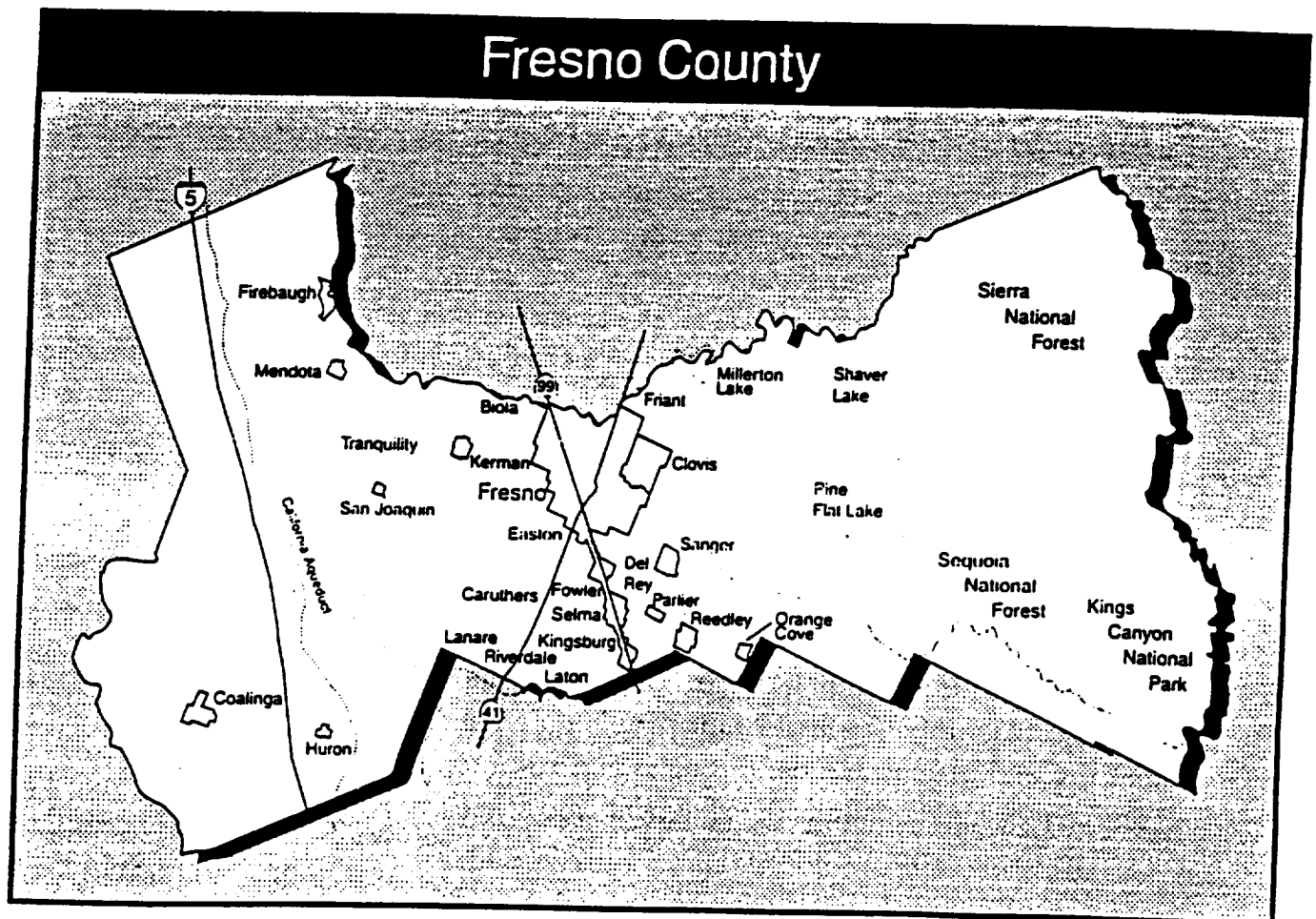
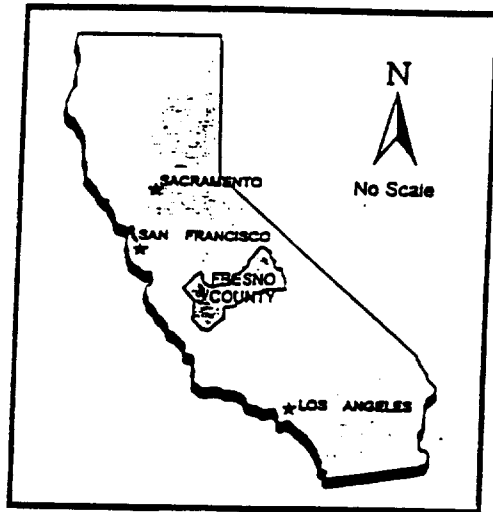
The General Plan consultant has begun to prepare an Economic Development Strategy based upon the three economic scenarios identified by the Board of Supervisors. This will be followed by Phase 2 in the General Plan Update Program. Upon completion of a Draft General Plan Policy Document, Draft EIR and draft documents detailing a financing strategy and fiscal analysis, in Phase 2, a second series of public open houses and hearings will be held. Preparation and adoption of the Final General Plan and EIR will conclude the Update Program.

INFORMATION

For additional information about the Fresno County General Plan Update Program and/or the reports referenced in this document (*Economic and Growth Scenarios: Perspectives on the Year 2020* and *A Landscape of Choice: Strategies for Improving Patterns of Community Growth*), please call (209) 262-4055 and ask for a member of the General Plan Update team.

ATTACHMENT "3"

Location Map and Map of Fresno County



GENERAL PLAN UPDATE
NOP - SCOPE OF DRAFT EIR
COMMENTS RECEIVED

July 7, 1999

NO.	DATE	AGENCY / ORGANIZATION
1.	6-7	Caltrans
2.	5-7	CA Office of Planning & Research
3.	5-18	CA Dept. of Water Resources
4.	6-7	City of Clovis
5.	6-7	City of Firebaugh
6.	6-7	City of Fresno
7.	5-14	City of Mendota
8.	6-8	City of Reedley
9.	6-3	City of San Joaquin
10.	5-11	Council of Fresno County Governments (COG)
11.	6-4	Fresno County Fire Protection District
12.	6-7	Malaga County Water District
13.	6-4	Pacific Gas and Electric Company
14.	6-4	San Joaquin River Parkway & Conservation Trust
15.	5-27	United States Dept. of Interior (Bureau of Reclamation)
16.	6-7	Construction Materials Association of California
17.	6-4	Copper River Ranch (Gary McDonald)
18.	6-7	Ferguson, Barbara
19.	6-2	League of Women Voters (Fresno)
20.	5-10	Mendota Chamber of Commerce

21.	5-10	Petry, Edward E.
22.	6-7	Shaver Lake Citizens Advisory Council
23.	6-2	Tokmakian, Harold

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TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
11th s of Manning	Reedley	5,000	2	B	6,700	2	C	6,900	2	C
12TH w of SR 33	Firebaugh	2,700	2	B	4,600	2	B	5,200	2	B
18TH Av. s of Kamm	Kingsburg	1,100	2	A	1,100	2	A	1,100	2	A
2ND St. w of McCall	Selma	9,200	2	D	14,100	2	E	15,200	2	E
7TH n of Belmont	Mendota	2,400	2	A	4,000	2	B	4,200	2	B
7TH w of SR 180	Mendota	3,700	2	B	6,400	2	C	7,000	2	C
9th e of Academy	Sanger	2,600	2	B	4,300	2	B	4,300	2	B
9th w of Academy	Sanger	4,000	4	A	5,900	4	A	5,800	4	A
9th e of Bethel	Sanger	6,400	2	C	9,400	2	D	9,300	2	D
Abby n of Belmont	Fresno	15,200	6	B	19,800	6	C	21,000	6	C
Abby s of Belmont	Fresno	13,000	6	B	16,500	6	B	17,400	6	B
Academy n of Adams	Unincorporated	6,600	2	C	11,600	4	A	12,300	4	A
Academy s of Adams	Unincorporated	5,000	2	B	8,600	4	A	9,200	4	A
Academy n of American	Unincorporated	7,000	2	C	11,500	4	A	12,400	4	A
Academy s of American	Unincorporated	5,800	2	C	10,800	4	A	11,500	4	A
Academy n of Ashlan	Unincorporated	3,000	2	B	3,700	4	A	4,100	4	A
Academy s of Ashlan	Unincorporated	3,400	2	B	4,600	4	A	4,900	4	A
Academy n of Belmont	Unincorporated	4,100	2	B	5,500	4	A	6,000	4	A
Academy s of Belmont	Unincorporated	4,600	2	B	8,000	4	A	8,400	4	A
Academy n of Herndon	Unincorporated	1,100	2	A	1,900	2	A	2,100	2	A
Academy s of Herndon	Unincorporated	1,000	2	A	1,900	2	A	2,100	2	A
Academy n of Kamm	Kingsburg	5,700	2	C	8,200	2	A	8,600	2	B
Academy s of Kamm	Kingsburg	4,100	2	B	5,900	4	A	6,100	4	A
Academy n of Manning	Parlier	2,400	2	A	6,100	4	A	6,600	4	A
Academy s of Manning	Unincorporated	1,900	2	A	4,500	2	A	4,700	2	A
Academy n of McKinley	Unincorporated	3,700	2	B	5,300	4	A	5,600	4	A
Academy n of Mtn. View	Unincorporated	4,000	2	B	6,100	2	A	6,300	2	A
Academy s of Mtn. View	Unincorporated	1,100	2	A	3,600	2	A	3,900	2	A
Academy n of North	Sanger	8,800	2	D	15,600	4	A	16,800	4	A
Academy s of North	Sanger	8,200	2	C	12,600	4	A	13,300	4	A
Academy n of Shaw	Unincorporated	3,900	2	B	4,800	2	A	5,000	2	A
Academy s of Shaw	Unincorporated	5,700	2	C	6,300	4	A	6,800	4	A
Academy n of SR 180	Unincorporated	5,500	2	C	9,100	4	A	9,400	4	A
Academy s of SR 180	Unincorporated	5,500	2	C	13,100	4	A	13,900	4	A
Adams e of Academy	Unincorporated	3,900	2	B	6,700	2	C	6,800	2	C
Adams w of Academy	Unincorporated	2,100	2	A	3,500	2	B	3,600	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Adams e of Alta	Unincorporated	1,800	2	A	2,800	2	B	2,800	2	B
Adams w of Alta	Unincorporated	1,500	2	A	2,100	2	A	2,300	2	A
Adams e of Bethel	Unincorporated	2,100	2	A	3,500	2	B	3,600	2	B
Adams w of Bethel	Unincorporated	2,300	2	A	3,200	2	B	3,200	2	B
Adams e of Del Rey	Unincorporated	2,200	2	A	3,100	2	B	3,100	2	B
Adams w of Del Rey	Unincorporated	1,900	2	A	2,700	2	B	2,700	2	B
Adams e of Fowler	Fowler	1,600	2	A	2,100	2	A	2,100	2	A
Adams w of Fowler	Fowler	1,800	2	A	2,300	2	A	2,300	2	A
Adams e of McCall	Unincorporated	2,000	2	A	2,800	2	B	2,700	2	B
Adams w of McCall	Unincorporated	2,600	2	B	3,500	2	B	3,500	2	B
Adams w of Newmark	Unincorporated	3,000	2	B	5,400	2	C	5,500	2	C
Adams e of Reed	Unincorporated	2,100	2	A	3,000	2	B	3,200	2	B
Adams e of Temperance	Fowler	2,700	2	B	3,600	2	B	3,600	2	B
Adams w of Temperance	Fowler	3,900	2	B	5,500	2	C	5,700	2	C
Alluvial w of Blackstone	Fresno	9,000	2	B	16,500	4	B	20,400	4	B
Alluvial e of Cedar	Fresno	2,000	4	B	13,800	4	B	20,100	4	B
Alluvial w of Cedar	Fresno	2,700	4	B	12,000	4	B	19,600	4	B
Alluvial e of Chestnut	Fresno	800	2	B	8,500	4	B	13,800	4	B
Alluvial w of Chestnut	Fresno	1,700	2	B	10,500	4	B	16,200	4	B
Alluvial e of Clovis	Clovis	1,400	4	B	1,600	4	B	2,600	4	B
Alluvial w of Clovis	Clovis	2,900	4	B	4,100	4	B	5,900	4	B
Alluvial e of Fowler	Clovis	1,500	2	B	4,800	4	B	5,400	4	B
Alluvial w of Fowler	Clovis	700	4	B	900	4	B	1,500	4	B
Alluvial e of Maple	Fresno	900	2	B	6,800	4	B	12,000	4	B
Alluvial w of Maple	Fresno	1,800	4	B	12,100	4	B	17,700	4	B
Alluvial e of Minnewawa	Clovis	3,400	4	B	6,400	4	B	8,600	4	B
Alluvial w of Minnewawa	Clovis	400	4	B	2,500	4	B	4,000	4	B
Alluvial e of Peach	Clovis	600	4	B	3,400	4	B	5,500	4	B
Alluvial w of Peach	Clovis	400	4	B	3,400	4	B	6,400	4	B
Alluvial w of Temperance	Clovis	200	2	B	1,500	4	B	2,100	4	B
Alluvial e of Willow	Clovis	400	2	B	3,400	4	B	6,400	4	B
Alluvial w of Willow	Fresno	1,000	2	B	9,000	4	B	14,300	4	B
Almond e of Bethel	Sanger	2,000	2	A	2,400	2	A	2,400	2	A
Alta n of Adams	Unincorporated	3,200	2	B	4,100	2	B	4,200	2	B
Alta s of Adams	Unincorporated	4,100	2	B	4,800	2	B	5,100	2	B
Alta n of American	Unincorporated	2,500	2	A	3,300	2	B	3,300	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Alta s of American	Unincorporated	2,800	2	B	3,600	2	B	3,700	2	B
Alta n of Manning	Unincorporated	4,800	2	B	5,300	2	B	5,700	2	C
Alta s of Manning	Unincorporated	5,600	2	C	7,800	4	B	8,900	4	B
Alta s of SR 180	Unincorporated	2,200	2	A	3,100	2	B	3,000	2	B
American e of Academy	Unincorporated	500	2	A	1,300	2	A	1,500	2	A
American w of Academy	Unincorporated	1,400	2	A	2,400	2	A	2,500	2	A
American e of Alta	Unincorporated	600	2	A	1,000	2	A	1,000	2	A
American e of Bethel	Unincorporated	3,600	2	B	4,600	2	B	4,600	2	B
American w of Bethel	Unincorporated	4,100	2	B	5,200	2	B	5,600	2	C
American e of Cedar	Fresno	700	2	B	700	2	B	700	2	B
American w of Cedar	Fresno	700	2	B	700	2	B	700	2	B
American e of Chestnut	Unincorporated	800	2	B	800	2	B	900	2	B
American w of Chestnut	Unincorporated	700	2	B	700	2	B	700	2	B
American e of Clovis	Unincorporated	3,700	2	B	5,800	2	B	6,100	2	B
American w of Clovis	Unincorporated	4,200	2	B	4,300	2	B	4,700	2	B
American e of Del Rey	Unincorporated	3,800	2	B	4,700	2	B	4,800	2	B
American w of Del Rey	Unincorporated	3,000	2	B	4,000	2	B	4,400	2	B
American w of Dickenson	Unincorporated	400	2	A	700	2	A	700	2	A
American e of Fowler	Unincorporated	4,400	2	B	6,100	2	B	6,400	2	B
American w of Fowler	Unincorporated	5,500	2	B	7,600	2	B	7,900	2	B
American e of Marks	Unincorporated	1,100	2	B	700	2	B	700	2	B
American w of Marks	Unincorporated	100	2	B	100	2	B	100	2	B
American e of McCall	Unincorporated	1,100	2	A	2,900	2	B	3,200	2	B
American w of McCall	Unincorporated	1,200	2	A	2,500	2	A	2,800	2	B
American e of Peach	Unincorporated	1,700	2	B	1,700	2	B	2,200	2	B
American w of Peach	Unincorporated	1,400	2	B	1,900	2	B	3,300	2	B
American e of SR 145	Unincorporated	100	2	A	200	2	A	300	2	A
American w of SR 145	Unincorporated	2,300	2	A	2,600	2	A	2,600	2	B
American w of SR 41	Unincorporated	1,200	2	B	3,100	2	B	3,300	2	B
American e of Temperance	Unincorporated	1,500	2	A	3,000	2	B	3,300	2	B
American w of Temperance	Unincorporated	1,500	2	B	3,200	2	B	3,400	2	B
Anchor n of Manning	Unincorporated	2,900	2	B	3,900	2	B	4,000	2	B
Annadale e of Academy	Sanger	7,600	2	C	8,800	2	D	8,600	2	C
Annadale w of Newmark	Sanger	3,800	2	B	4,400	2	B	4,600	2	B
Annadale w of Reed	Unincorporated	2,100	2	A	2,600	2	A	2,800	2	B
Armstrong n of Herndon	Clovis		0		10,800	4	B	13,400	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Armstrong s of SR 180	Fresno	800	2	B	2,200	4	B	2,500	4	B
Ashlan e of Academy	Unincorporated	3,900	2	B	4,900	2	B	5,000	2	B
Ashlan e of Blackstone	Fresno	28,200	4	C	33,600	4	D	34,100	4	E
Ashlan w of Blackstone	Fresno	22,900	4	B	27,500	4	C	27,500	4	C
Ashlan e of Blythe	Fresno	8,200	2	B	26,400	4	C	28,400	4	C
Ashlan w of Blythe	Fresno	6,200	2	B	21,200	4	B	23,000	4	B
Ashlan e of Brawley	Fresno	18,700	2	F	38,700	4	F	40,700	4	F
Ashlan e of Bryan	Fresno	2,500	2	B	7,900	4	B	9,200	4	B
Ashlan w of Bryan	Fresno	1,600	2	B	3,600	4	B	4,200	4	B
Ashlan e of Cedar	Fresno	33,800	4	D	54,300	4	F	54,100	4	F
Ashlan w of Cedar	Fresno	33,800	4	D	39,700	4	F	41,400	4	F
Ashlan e of Clovis	Clovis	17,400	2	F	18,500	2	F	19,300	2	F
Ashlan w of Clovis	Clovis	18,600	2	F	17,500	2	F	17,700	2	F
Ashlan e of Cornelia	Fresno	5,300	2	B	20,000	4	B	21,300	4	B
Ashlan w of Cornelia	Fresno	2,100	2	B	12,800	4	B	14,600	4	B
Ashlan e of De Wolf	Unincorporated	10,000	2	B	17,400	4	B	18,300	4	B
Ashlan w of De Wolf	Unincorporated	10,100	2	B	18,300	4	B	19,700	4	B
Ashlan e of First	Fresno	13,100	4	B	15,200	4	B	15,900	4	B
Ashlan w of First	Fresno	32,300	4	D	32,100	4	D	33,200	4	D
Ashlan e of Fowler	Fresno	13,300	2	C	16,600	4	B	18,300	4	B
Ashlan w of Fowler	Clovis	11,200	2	B	13,700	2	C	14,700	2	C
Ashlan e of Grantland	Fresno	1,600	2	B	3,600	4	B	4,200	4	B
Ashlan e of Hayes	Fresno	3,300	2	B	11,400	4	B	13,400	4	B
Ashlan w of Hayes	Fresno	2,500	2	B	7,900	4	B	9,200	4	B
Ashlan e of Highland	Unincorporated	6,200	2	B	11,200	4	B	12,000	4	B
Ashlan w of Highland	Unincorporated	9,200	2	B	14,400	4	B	15,100	4	B
Ashlan e of Leonard	Unincorporated	9,500	2	B	16,600	4	B	17,500	4	B
Ashlan w of Leonard	Unincorporated	9,800	2	B	17,100	4	B	17,900	4	B
Ashlan e of Marks	Fresno	18,800	4	B	26,100	4	C	27,000	4	C
Ashlan w of Marks	Fresno	24,000	4	B	32,200	4	D	33,600	4	D
Ashlan w of McCall	Unincorporated	5,500	2	B	8,900	4	B	9,300	4	B
Ashlan e of Palm	Fresno	19,200	2	F	23,500	2	F	23,200	2	F
Ashlan w of Palm	Fresno	18,900	2	F	23,300	2	F	21,900	2	F
Ashlan e of Peach	Clovis	9,900	4	B	2,000	4	B	2,200	4	B
Ashlan w of Peach	Fresno	10,300	4	B	1,400	4	B	1,600	4	B
Ashlan e of Polk	Fresno	4,100	2	B	15,800	4	B	17,500	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Ashlan w of Polk	Fresno	3,200	2	B	11,100	4	B	13,100	4	B
Ashlan w of SR 41	Fresno	40,400	4	F	45,800	4	F	45,600	4	F
Ashlan e of Temperance	Clovis	4,100	2	B	13,000	4	B	14,600	4	B
Ashlan w of Temperance	Clovis	1,900	4	B	2,200	4	B	3,200	4	B
Ashlan e of West	Fresno	22,600	4	B	28,100	4	C	26,300	4	C
Ashlan w of West	Fresno	21,900	4	B	27,100	4	C	28,200	4	C
Ashlan e of Willow	Fresno	48,300	4	F	40,100	4	F	41,300	4	F
Ashlan w of Willow	Fresno	32,900	4	D	23,600	4	B	25,300	4	B
Ashla /Weber s of Ashlan	Fresno	14,100	2	C	7,600	2	B	8,300	2	B
Auberry n of Copper	Unincorporated	2,300	2	A	11,000	2	D	11,500	2	D
Auberry n of Millerton	Unincorporated	4,900	2	B	5,800	2	C	5,900	2	C
Auberry s of Millerton	Unincorporated	3,800	2	B	6,200	2	C	6,500	2	C
Auberry w of SR 168	Unincorporated	2,000	2	A	2,500	2	A	2,600	2	A
Audubon e of Friant	Fresno	4,200	4	B	12,200	4	B	15,700	4	B
Audubon w of Friant	Fresno	1,300	4	B	9,800	4	B	13,800	4	B
Audubon n of Nees	Fresno	9,800	4	B	16,900	4	B	20,900	4	B
B St. n of California	Fresno	12,100	4	B	5,000	4	B	5,600	4	B
B St. n of Fresno	Fresno	800	2	B	1,200	4	B	1,500	4	B
B St. s of Fresno	Fresno	5,200	2	B	3,100	4	B	3,600	4	B
Barst/Polk w of Shaw	Fresno	1,900	2	B	12,500	4	B	14,400	4	B
Barstow w of Blackstone	Fresno	13,700	4	B	28,600	4	C	31,800	4	D
Barstow e of Chestnut	Fresno	9,000	2	B	13,800	4	B	14,200	4	B
Barstow e of Grantland	Fresno	2,600	2	B	20,500	4	B	25,400	4	B
Barstow w of Willow	Fresno	9,000	2	B	13,800	4	B	14,200	4	B
Behymer e of Cedar	Fresno	500	4	B	6,400	4	B	7,500	4	B
Behymer e of Chestnut	Fresno		0		6,100	4	B	8,400	4	B
Behymer w of Chestnut	Fresno		0		3,100	4	B	5,200	4	B
Behymer e of Maple	Fresno		0		4,600	4	B	6,600	4	B
Behymer w of Maple	Fresno	400	4	B	6,200	4	B	7,700	4	B
Behymer w of Minnewawa	Unincorporated		0		6,600	4	B	9,200	4	B
Behymer e of Peach	Unincorporated		0		8,100	4	B	12,000	4	B
Behymer e of Willow	Unincorporated		0		7,800	4	B	11,600	4	B
Belmont w of Academy	Unincorporated	1,400	2	A	3,600	2	B	3,400	2	B
Belmont e of Blackstone	Fresno	23,000	4	B	24,200	4	B	26,800	4	C
Belmont w of Blackstone	Fresno	15,600	4	B	21,300	4	B	23,700	4	B
Belmont e of Cedar	Fresno	24,700	4	B	8,800	4	B	10,400	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Belmont w of Cedar	Fresno	33,200	4	D	22,400	4	B	24,500	4	B
Belmont e of Chestnut	Fresno	16,000	4	B	13,900	4	B	16,200	4	B
Belmont w of Chestnut	Fresno	21,500	4	B	9,500	4	B	10,800	4	B
Belmont e of Clovis	Fresno	10,600	2	B	18,600	4	B	22,800	4	B
Belmont w of Clovis	Fresno	17,800	4	B	18,600	4	B	22,100	4	B
Belmont e of Dickenson	Unincorporated	1,100	2	A	2,800	2	B	2,900	2	B
Belmont w of Dickenson	Unincorporated	1,300	2	A	2,000	2	A	2,200	2	A
Belmont e of Fairfax	Unincorporated	600	2	A	2,900	2	B	2,600	2	B
Belmont e of First	Fresno	32,800	4	D	20,200	4	B	22,400	4	B
Belmont w of First	Fresno	31,500	4	C	23,700	4	B	26,300	4	C
Belmont e of Fowler	Fresno	16,200	2	D	21,100	4	B	24,100	4	B
Belmont w of Fowler	Fresno	13,000	2	C	18,400	4	B	21,300	4	B
Belmont e of Grantland	Unincorporated	2,100	2	B	3,000	2	B	3,500	2	B
Belmont w of Grantland	Unincorporated	2,000	2	B	3,900	2	B	4,100	2	B
Belmont e of H St	Fresno	11,600	4	B	18,200	4	B	21,200	4	B
Belmont w of H St	Fresno	21,300	4	B	31,100	4	C	33,300	4	D
Belmont e of Howard	Unincorporated	1,000	2	A	1,800	2	A	2,000	2	A
Belmont e of Marks	Fresno	7,700	4	B	11,700	4	B	13,300	4	B
Belmont w of Marks	Fresno	4,000	2	B	7,600	4	B	8,400	4	B
Belmont e of McCall	Unincorporated	2,300	2	A	4,700	2	B	4,500	2	B
Belmont w of McCall	Unincorporated	3,300	2	B	3,800	2	B	3,900	2	B
Belmont e of Palm	Fresno	15,500	4	B	22,800	4	B	26,000	4	C
Belmont w of Palm	Fresno	14,900	4	B	20,900	4	B	24,400	4	B
Belmont e of Peach	Fresno	18,800	4	B	21,400	4	B	25,000	4	B
Belmont w of Peach	Fresno	16,700	4	B	12,500	4	B	14,600	4	B
Belmont e of San Diego	Unincorporated	1,200	2	A	3,500	2	B	3,300	2	B
Belmont w of San Diego	Unincorporated	1,100	2	A	3,600	2	B	3,400	2	B
Belmont w of SR 180	Mendota	900	2	A	4,100	2	B	3,800	2	B
Belmont e of SR 33	Mendota	600	2	A	2,900	2	B	2,600	2	B
Belmont w of SR 33	Mendota	2,000	2	A	5,400	2	C	5,200	2	B
Belmont e of Temperance	Unincorporated	5,800	2	B	14,800	2	C	15,200	2	C
Belmont w of Temperance	Fresno	5,600	2	B	16,800	4	B	18,000	4	B
Bethel n of Adams	Unincorporated	3,900	2	B	4,100	2	B	4,200	2	B
Bethel s of Adams	Unincorporated	4,000	2	B	3,500	2	B	3,700	2	B
Bethel n of American	Unincorporated	5,300	2	B	7,200	2	C	7,300	2	C
Bethel s of American	Unincorporated	4,100	2	B	4,300	2	B	4,400	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Bethel n of Central	Sanger	4,100	2	B	4,900	2	B	5,200	2	B
Bethel s of Central	Unincorporated	5,300	2	B	7,200	2	C	7,400	2	C
Bethel n of Elkhorn	Unincorporated	3,600	2	B	5,900	2	C	6,200	2	C
Bethel n of Jensen	Sanger	6,300	2	C	10,300	2	D	10,900	2	D
Bethel s of Jensen	Sanger	11,400	2	D	15,300	2	E	15,600	2	E
Bethel n of Kamm	Kingsburg	4,000	2	B	5,600	2	C	6,300	2	C
Bethel n of Manning	Unincorporated	4,000	2	B	3,500	2	B	3,600	2	B
Bethel s of Manning	Unincorporated	3,900	2	B	4,400	2	B	4,700	2	B
Bethel n of Mtn. View	Unincorporated	4,500	2	B	5,500	2	C	5,900	2	C
Bethel s of Mtn. View	Kingsburg	3,900	2	B	4,800	2	B	5,200	2	B
Bethel n of North	Sanger	5,900	2	C	7,500	2	C	7,900	2	C
Bethel s of North	Sanger	5,000	2	B	6,000	2	C	6,100	2	C
Bethel s of SR 180	Unincorporated	5,500	2	C	9,500	2	D	10,100	2	D
Blackstone n of Ashlan	Fresno	36,600	6	B	45,500	6	C	50,400	6	D
Blackstone s of Ashlan	Fresno	36,200	6	B	43,300	6	C	46,700	6	C
Blackstone n of Belmont	Fresno	15,500	6	B	15,400	6	B	16,400	6	B
Blackstone s of Belmont	Fresno	10,800	6	B	11,800	6	B	12,700	6	B
Blackstone n of Bullard	Fresno	31,800	6	B	43,800	6	C	49,400	6	D
Blackstone s of Bullard	Fresno	26,500	6	B	40,100	6	C	46,200	6	C
Blackstone n of Herndon	Fresno	39,000	6	C	63,500	6	F	70,100	6	F
Blackstone s of Herndon	Fresno	28,600	6	B	48,100	6	D	56,100	6	F
Blackstone n of McKinley	Fresno	25,500	6	B	30,800	6	B	34,900	6	B
Blackstone s of McKinley	Fresno	12,200	6	B	15,100	6	B	17,700	6	B
Blackstone n of Nees	Fresno	18,500	6	B	54,400	6	F	73,200	6	F
Blackstone s of Nees	Fresno	14,700	6	B	29,300	6	B	37,100	6	B
Blackstone n of Shaw	Fresno	39,400	6	C	49,100	6	D	54,700	6	F
Blackstone s of Shaw	Fresno	35,200	6	B	45,300	6	C	50,800	6	D
Blackstone n of Shields	Fresno	39,700	6	C	45,400	6	C	49,900	6	D
Blackstone s of Shields	Fresno	36,900	6	B	42,100	6	C	46,300	6	C
Blythe s of Ashlan	Fresno	4,700	2	B	8,100	4	B	8,500	4	B
Blythe n of Clinton	Fresno	2,800	2	B	5,300	4	B	6,300	4	B
Blythe s of Clinton	Fresno	2,800	2	B	7,000	4	B	7,800	4	B
Blythe n of McKinley	Fresno	5,800	2	B	7,100	4	B	7,900	4	B
Blythe n of Shields	Fresno	3,200	2	B	5,300	4	B	6,100	4	B
Blythe s of Shields	Fresno	2,800	2	B	5,200	4	B	6,100	4	B
Brawley s of Ashlan	Fresno	4,400	2	B	5,600	4	B	7,200	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Brawley n of Clinton	Fresno	5,100	2	B	11,200	4	B	12,200	4	B
Brawley s of Clinton	Fresno	5,400	2	B	11,200	4	B	12,700	4	B
Brawley s of Herndon	Fresno	12,100	2	B	25,700	4	C	29,200	4	C
Brawley n of McKinley	Fresno	4,900	2	B	9,000	4	B	10,500	4	B
Brawley n of Shaw	Fresno	14,700	2	C	18,000	2	F	19,300	2	F
Brawley s of Shaw	Fresno	15,700	4	B	18,900	4	B	20,600	4	B
Brawley n of Shields	Fresno	3,400	2	B	5,600	4	B	6,800	4	B
Brawley s of Shields	Fresno	3,100	2	B	10,400	4	B	11,200	4	B
Broadway e of H St	Fresno	5,200	2	B	5,800	2	B	5,900	2	B
Broadway n of SR 180	Fresno	11,300	2	B	12,300	2	B	12,700	2	B
Broadway s of SR 180	Fresno	14,600	4	B	15,500	4	B	17,200	4	B
Bryan n of Ashlan	Fresno	800	2	B	6,500	4	B	7,500	4	B
Bryan s of Ashlan	Fresno	600	2	B	3,500	4	B	3,800	4	B
Bryan n of McKinley	Fresno	300	2	B	1,600	4	B	1,700	4	B
Bryan s of Shaw	Fresno	1,200	2	B	4,400	4	B	5,600	4	B
Bryan n of Shields	Fresno	500	2	B	2,900	4	B	3,000	4	B
Bryan s of Shields	Fresno	600	2	B	3,300	4	B	3,300	4	B
Bullard e of Blackstone	Fresno	38,400	4	F	45,500	4	F	48,600	4	F
Bullard w of Blackstone	Fresno	30,200	4	C	34,800	4	F	36,700	4	F
Bullard e of Cedar	Fresno	25,900	4	C	29,700	4	C	34,400	4	F
Bullard w of Cedar	Fresno	29,600	4	C	33,900	4	D	37,600	4	F
Bullard e of Chestnut	Fresno	21,900	4	B	23,500	4	B	28,100	4	C
Bullard w of Chestnut	Fresno	18,300	4	B	22,200	4	B	26,800	4	C
Bullard e of De Wolf	Unincorporated	5,500	2	B	8,400	4	B	9,400	4	B
Bullard w of De Wolf	Unincorporated	4,100	2	B	6,800	4	B	8,400	4	B
Bullard e of First	Fresno	30,800	4	C	36,400	4	F	40,500	4	F
Bullard w of First	Fresno	34,600	4	F	39,800	4	F	43,200	4	F
Bullard e of Fowler	Clovis	6,600	4	B	8,000	4	B	8,800	4	B
Bullard w of Fowler	Clovis	6,900	4	B	11,900	4	B	12,200	4	B
Bullard e of Fresno	Fresno	32,800	4	D	37,800	4	F	40,900	4	F
Bullard w of Fresno	Fresno	37,900	4	F	44,500	4	F	48,200	4	F
Bullard e of Leonard	Unincorporated	5,200	2	B	5,000	2	B	5,600	2	B
Bullard w of Leonard	Unincorporated	5,500	2	B	8,400	4	B	9,400	4	B
Bullard e of Marks	Fresno	12,700	4	B	24,500	4	B	28,400	4	C
Bullard w of Marks	Fresno	16,400	4	B	31,300	4	C	35,300	4	F
Bullard w of McCall	Unincorporated	1,500	2	B	1,700	2	B	2,000	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Bullard e of Palm	Fresno	25,800	4	C	34,600	4	F	37,500	4	F
Bullard w of Palm	Fresno	24,500	4	B	36,000	4	F	40,100	4	F
Bullard w of SR 41	Fresno	38,900	4	F	46,800	4	F	50,200	4	F
Bullard e of Temperance	Clovis	5,100	4	B	7,700	4	B	9,200	4	B
Bullard w of Temperance	Clovis	3,800	2	B	5,700	4	B	6,300	4	B
Bullard e of West	Fresno	24,400	4	B	36,400	4	F	40,500	4	F
Bullard w of West	Fresno	12,100	4	B	23,000	4	B	26,300	4	C
Bullard e of Willow	Clovis	12,500	4	B	14,200	4	B	17,300	4	B
Bullard w of Willow	Fresno	10,900	4	B	12,600	4	B	17,200	4	B
BullardDia n of Bullard	Fresno		0		10,100	4	B	15,200	4	B
BullardDia s of Herndon	Fresno		0		6,300	4	B	8,200	4	B
BurroughVa e of Tollhouse	Unincorporated	900	2	A	1,000	2	A	1,100	2	A
Butler e of Cedar	Fresno	13,700	2	C	13,500	4	B	15,200	4	B
Butler w of Cedar	Fresno	13,000	2	C	13,200	4	B	14,500	4	B
Butler e of Chestnut	Fresno	15,200	2	C	18,900	4	B	20,600	4	B
Butler w of Chestnut	Fresno	12,300	2	B	12,100	4	B	14,400	4	B
Butler w of Peach	Fresno	8,700	2	B	14,900	4	B	16,400	4	B
Buttonwill n of Manning	Reedley	1,500	2	A	2,300	4	A	2,400	4	A
Buttonwill s of Manning	Reedley	1,200	2	A	1,900	4	A	1,900	4	A
Calav/Flor n of Manning	Unincorporated	400	2	A	400	2	A	400	2	A
Calav/Flor s of Manning	Unincorporated	300	2	A	800	2	A	800	2	A
California e of Dickenson	Unincorporated	400	2	A	1,200	2	A	1,500	2	A
California w of Dickenson	Unincorporated	900	2	A	1,500	2	A	1,700	2	A
California e of Howard	Unincorporated	400	2	A	1,000	2	A	1,100	2	A
California e of Marks	Fresno	2,800	2	B	3,500	2	B	4,200	2	B
California w of Marks	Fresno	1,500	2	B	3,500	2	B	4,300	2	B
California e of San Diego	Unincorporated	300	2	A	2,500	2	A	2,500	2	A
California e of Walnut	Fresno	2,800	2	B	5,200	4	B	5,900	4	B
California w of Walnut	Fresno	6,700	2	B	11,800	4	B	12,400	4	B
California e of West	Fresno	2,700	2	B	4,000	4	B	4,500	4	B
California w of West	Fresno	3,100	2	B	4,700	2	B	5,500	2	B
Cecelia n of Bullard	Fresno		0		700	4	B	1,400	4	B
Cedar n of Alluvial	Fresno	10,500	2	B	14,900	2	C	16,700	2	D
Cedar s of Alluvial	Fresno	10,000	2	B	15,700	2	C	17,700	2	F
Cedar n of American	Fresno	3,500	2	B	2,500	2	B	2,900	2	B
Cedar s of American	Unincorporated	3,500	2	B	2,100	2	A	2,500	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Cedar n of Ashlan	Fresno	34,000	4	E	40,100	4	F	43,200	4	F
Cedar s of Ashlan	Fresno	35,200	4	F	29,900	4	C	33,900	4	D
Cedar n of Belmont	Fresno	23,700	4	B	35,000	4	F	36,500	4	F
Cedar s of Belmont	Fresno	19,600	4	B	26,000	4	C	27,100	4	C
Cedar n of Bullard	Fresno	30,600	4	C	36,800	4	F	39,400	4	F
Cedar s of Bullard	Fresno	28,800	4	C	35,200	4	F	36,500	4	F
Cedar n of Butler	Fresno	9,500	4	B	10,100	4	B	11,300	4	B
Cedar s of Butler	Fresno	10,500	4	B	8,800	4	B	10,000	4	B
Cedar n of Central	Fresno	7,100	2	B	12,400	4	B	15,900	4	B
Cedar s of Central	Fresno	9,000	2	B	14,600	2	C	18,200	2	F
Cedar n of Elkhorn	Unincorporated	1,600	2	A	700	2	A	900	2	A
Cedar s of Elkhorn	Unincorporated	1,300	2	A	1,600	2	A	1,800	2	A
Cedar n of Herndon	Fresno	16,300	4	B	25,200	4	B	29,300	4	C
Cedar s of Herndon	Fresno	27,600	4	C	35,400	4	F	39,100	4	F
Cedar n of Jensen	Fresno	4,700	4	B	5,300	4	B	5,900	4	B
Cedar n of Manning	Unincorporated	2,600	2	A	500	2	A	700	2	A
Cedar n of McKinley	Fresno	26,900	4	C	25,100	4	B	27,300	4	C
Cedar s of McKinley	Fresno	21,900	4	B	25,800	4	C	27,600	4	C
Cedar n of Mt. Whitney	Unincorporated	900	2	A	1,300	2	A	1,500	2	A
Cedar n of Mtn. View	Unincorporated	1,400	2	A	1,400	2	A	1,400	2	A
Cedar s of Mtn. View	Unincorporated	1,200	2	A	1,200	2	A	1,200	2	A
Cedar n of Nees	Fresno	10,900	2	B	13,400	2	C	14,200	2	C
Cedar s of Nees	Fresno	7,800	2	B	12,800	2	C	14,600	2	C
Cedar n of North	Fresno	2,600	2	B	4,200	4	B	6,400	4	B
Cedar s of North	Fresno	6,100	2	B	11,800	4	B	16,300	4	B
Cedar n of Shaw	Fresno	33,000	4	D	34,900	4	F	38,500	4	F
Cedar s of Shaw	Fresno	34,100	4	E	36,500	4	F	39,400	4	F
Cedar s of Shepherd	Fresno	5,800	2	B	8,500	2	B	9,500	2	B
Cedar n of Shields	Fresno	10,000	4	B	5,200	4	B	8,900	4	B
Cedar s of Shields	Fresno	22,900	4	B	21,000	4	B	23,500	4	B
Cedar n of SR 180	Fresno	22,200	4	B	22,700	4	B	23,800	4	B
Cedar s of SR 180	Fresno	12,100	4	B	12,800	4	B	14,000	4	B
Center s of Adams	Unincorporated	1,500	2	A	2,600	2	A	2,500	2	A
Central w of Bethel	Sanger	1,600	2	A	3,200	2	B	3,200	2	B
Central e of Cedar	Fresno	1,500	2	B	5,700	2	B	7,500	2	B
Central w of Cedar	Fresno	1,500	2	B	5,000	2	B	6,200	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Central e of Chestnut	Unincorporated	5,100	2	B	9,200	4	B	10,300	4	B
Central w of Chestnut	Unincorporated	13,000	2	C	21,700	4	B	24,700	4	B
Central w of Clovis	Unincorporated	3,100	2	B	5,800	2	B	6,300	2	B
Central e of McCall	Unincorporated	1,400	2	A	2,700	2	B	2,700	2	B
Central e of Peach	Unincorporated	2,500	2	B	5,300	2	B	5,800	2	B
Central w of Peach	Unincorporated	3,000	2	B	5,800	2	B	6,400	2	B
Champlain e of Friant	Fresno	100	4	B	300	4	B	200	4	B
Champlain n of Shepherd	Fresno	6,500	4	B	14,000	4	B	15,200	4	B
Cherry s of Church	Fresno	4,900	2	B	3,200	4	B	3,800	4	B
Cherry n of Jensen	Fresno	4,200	2	B	3,700	4	B	4,500	4	B
Cherry s of Jensen	Fresno	8,200	2	B	6,600	4	B	7,900	4	B
Cherry n of North	Fresno	4,700	2	B	1,300	4	B	1,800	4	B
Chest_Will s of Ashlan	Fresno	40,400	4	F	29,700	4	C	31,700	4	D
Chestnut n of Alluvial	Fresno	9,200	2	B	16,400	2	D	16,900	2	D
Chestnut s of Alluvial	Fresno	10,300	2	B	19,100	2	F	19,500	2	F
Chestnut n of American	Unincorporated	3,700	2	B	3,200	2	B	3,600	2	B
Chestnut n of Behymer	Fresno		0		7,000	4	B	7,400	4	B
Chestnut s of Behymer	Fresno		0		2,300	4	B	2,300	4	B
Chestnut n of Belmont	Fresno	25,200	4	B	42,300	4	F	45,600	4	F
Chestnut s of Belmont	Fresno	22,900	4	B	33,000	4	D	35,200	4	F
Chestnut n of Bullard	Fresno	13,200	4	B	28,200	4	C	31,300	4	C
Chestnut s of Bullard	Fresno	16,500	2	D	29,500	4	C	31,100	4	C
Chestnut n of Butler	Fresno	23,200	4	B	28,000	4	C	31,400	4	C
Chestnut s of Butler	Fresno	20,700	4	B	25,600	4	C	28,900	4	C
Chestnut n of Central	Unincorporated	10,400	4	B	15,900	4	B	18,400	4	B
Chestnut s of Central	Unincorporated	12,300	4	B	18,800	4	B	21,600	4	B
Chestnut s of Copper	Fresno		0		2,000	4	B	1,900	4	B
Chestnut n of Herndon	Fresno	11,800	4	B	24,300	4	B	25,600	4	C
Chestnut s of Herndon	Fresno	9,400	4	B	18,800	4	B	20,500	4	B
Chestnut n of Jensen	Fresno	18,600	4	B	22,900	4	B	25,300	4	B
Chestnut s of Jensen	Fresno	20,200	4	B	27,600	4	C	30,700	4	C
Chestnut n of McKinley	Fresno	27,800	4	C	20,500	4	B	22,700	4	B
Chestnut s of McKinley	Fresno	32,500	4	D	30,000	4	C	32,500	4	D
Chestnut n of Nees	Fresno	3,300	2	B	11,000	2	B	11,800	2	B
Chestnut s of Nees	Fresno	8,900	2	B	16,900	2	D	17,300	2	F
Chestnut n of North	Fresno	18,700	4	B	25,500	4	B	28,300	4	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Chestnut s of North	Unincorporated	19,100	4	B	27,800	4	C	31,100	4	C
Chestnut n of Shaw	Fresno	6,900	2	B	21,300	4	B	24,700	4	B
Chestnut n of Shepherd	Fresno		0		10,400	4	B	11,000	4	B
Chestnut s of Shepherd	Fresno	1,000	2	B	7,400	2	B	8,100	2	B
Chestnut n of Shields	Fresno	30,700	4	C	24,200	4	B	27,200	4	C
Chestnut s of Shields	Fresno	30,300	4	C	25,500	4	B	28,400	4	C
Chestnut n of SR 180	Fresno	36,000	4	F	37,300	4	F	39,000	4	F
Chestnut s of SR 180	Fresno	26,800	4	C	31,000	4	C	34,500	4	F
Church w of Academy	Sanger	4,800	2	B	5,700	2	C	5,800	2	C
Church w of Cherry	Fresno	5,900	2	B	10,000	4	B	11,000	4	B
Church e of Clovis	Fresno		0		1,900	4	B	2,100	4	B
Church w of Clovis	Fresno		0		8,600	4	B	10,000	4	B
Church w of Cedar	Fresno	10,100	2	B	12,000	4	B	13,100	4	B
Church e of Elm	Fresno	5,900	2	B	9,900	4	B	10,800	4	B
Church w of Elm	Fresno	5,600	2	B	8,200	4	B	8,900	4	B
Church e of Peach	Fresno		0		11,700	4	B	13,600	4	B
Church e of Walnut	Fresno	2,800	2	B	6,100	4	B	6,800	4	B
Church w of Walnut	Fresno	2,600	2	B	6,000	4	B	6,700	4	B
Church e of West	Fresno	1,600	2	B	4,500	4	B	5,100	4	B
Clarkson e of SR 33	Unincorporated	400	2	A	700	2	A	800	2	A
Clinton e of Blythe	Fresno		0		5,500	4	B	5,600	4	B
Clinton e of Brawley	Fresno	4,700	2	B	8,500	4	B	9,000	4	B
Clinton e of Cornelia	Fresno		0		2,700	4	B	2,600	4	B
Clinton w of Marks	Fresno	8,600	2	B	8,800	4	B	9,000	4	B
Clinton e of Valentine	Fresno	8,600	2	B	9,300	4	B	9,400	4	B
Clinton w of Valentine	Fresno	8,400	2	B	11,700	4	B	12,200	4	B
Clovis n of Adams	Unincorporated	1,600	2	A	2,200	2	A	2,300	2	A
Clovis n of Alluvial	Clovis	200	4	A	8,900	4	B	9,700	4	B
Clovis s of Alluvial	Clovis	2,300	4	B	12,000	4	B	13,700	4	B
Clovis n of American	Unincorporated	15,300	4	B	25,000	4	B	27,600	4	C
Clovis s of American	Unincorporated	23,200	4	B	34,500	4	C	36,800	4	C
Clovis n of Ashlan	Clovis	38,100	6	B	44,600	6	C	48,400	6	D
Clovis s of Ashlan	Clovis	50,300	6	D	56,000	6	F	60,500	6	F
Clovis n of Belmont	Fresno	46,100	4	F	67,100	6	F	70,500	6	F
Clovis s of Belmont	Fresno	39,500	4	F	56,900	6	F	60,000	6	F
Clovis n of Bullard	Clovis	19,700	4	B	32,100	4	D	36,800	4	F

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Clovis s of Bullard	Clovis		0		26,000	6	B	30,800	6	B
Clovis n of Central	Unincorporated	17,000	4	B	29,500	4	C	32,500	4	D
Clovis s of Central	Unincorporated	13,200	4	B	23,000	4	B	25,600	4	C
Clovis n of Church	Fresno	28,200	4	C	44,700	4	F	47,700	4	F
Clovis s of Church	Fresno	28,200	4	C	39,300	4	F	42,400	4	F
Clovis n of Geary	Fresno	28,200	4	C	44,900	4	F	47,800	4	F
Clovis n of Herndon	Clovis	3,100	4	B	17,500	4	B	20,100	4	B
Clovis s of Herndon	Clovis	7,700	4	B	29,000	6	B	34,800	6	B
Clovis n of Jensen	Fresno	24,800	4	B	29,600	4	C	32,100	4	D
Clovis s of Jensen	Unincorporated	23,600	4	B	39,800	4	F	44,300	4	F
Clovis n of McKinley	Fresno	43,700	6	C	52,200	6	F	58,800	6	F
Clovis s of McKinley	Fresno	46,500	4	F	67,600	6	F	72,800	6	F
Clovis s of Nees	Clovis		0		7,700	4	B	8,500	4	B
Clovis n of North	Unincorporated	23,600	4	B	36,800	4	F	39,800	4	F
Clovis s of North	Unincorporated	17,000	4	B	29,500	4	C	32,400	4	D
Clovis n of Olive	Fresno	43,800	4	F	63,100	6	F	67,600	6	F
Clovis s of Olive	Fresno	47,200	4	F	65,100	6	F	71,300	6	F
Clovis n of Shaw	Clovis	30,700	4	C	42,400	6	C	47,000	6	C
Clovis s of Shaw	Clovis	40,100	6	C	45,100	6	C	48,900	6	D
Clovis n of Shields	Fresno	50,800	6	D	58,100	6	F	62,200	6	F
Clovis s of Shields	Fresno	55,500	6	F	59,100	6	F	62,400	6	F
Clovis n of SR 180	Fresno	32,000	4	D	48,100	6	D	51,800	6	F
Clovis s of SR 180	Fresno	34,800	4	F	50,000	4	F	52,600	4	F
Clovis n of Tulare	Fresno	39,900	4	F	55,500	6	F	58,600	6	F
Clovis s of Tulare	Fresno	37,700	4	F	48,100	6	D	51,800	6	F
Colorado e of James	Unincorporated	500	2	A	1,300	2	A	1,300	2	A
Colorado n of Manning	San Joaquin	1,200	2	A	4,100	2	B	4,200	2	B
Colorado s of Manning	Unincorporated	1,400	2	A	2,000	4	A	2,200	4	A
Colorado w of SR 145	Unincorporated	800	2	A	1,500	2	A	1,600	2	A
Columbia n of Manning	Reedley	1,100	2	A	2,000	4	A	2,100	4	A
Conejo e of Bethel	Unincorporated	4,700	2	B	7,400	2	C	7,800	2	C
Copper e of Chestnut	Fresno	12,700	2	B	22,500	4	B	22,600	4	B
Copper w of Chestnut	Fresno	12,700	2	B	22,500	4	B	22,600	4	B
Copper w of Minnewawa	Unincorporated	7,900	2	B	16,900	4	B	17,400	4	B
Copper e of Peach	Unincorporated	5,000	2	B	9,400	2	B	9,900	2	B
Copper e of Willow	Unincorporated	5,000	2	B	9,500	2	B	10,000	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Copper w of Willow	Fresno	12,500	2	B	22,500	4	B	22,600	4	B
Cornelia n of Ashlan	Fresno	6,200	2	B	12,700	4	B	13,500	4	B
Cornelia s of Ashlan	Fresno	4,800	2	B	16,300	4	B	17,300	4	B
Cornelia n of Clinton	Fresno	3,000	2	B	10,500	4	B	10,900	4	B
Cornelia s of Clinton	Fresno	3,000	2	B	10,600	4	B	11,000	4	B
Cornelia n of McKinley	Fresno	2,300	2	B	8,400	4	B	8,400	4	B
Cornelia n of Shields	Fresno	3,100	2	B	10,700	4	B	11,100	4	B
Cornelia s of Shields	Fresno	3,000	2	B	10,600	4	B	10,800	4	B
Cove n of American	Unincorporated	200	2	A	200	2	A	200	2	A
Cove s of SR 180	Unincorporated	100	2	A	200	2	A	200	2	A
Curtis e of Reed	Reedley	1,000	2	A	4,100	2	B	3,700	2	B
Dakota e of Chestnut	Fresno	13,900	4	B	19,200	4	B	23,000	4	B
Dakota e of Highland	Unincorporated	200	2	B	600	4	B	700	4	B
Dakota w of Highland	Unincorporated	100	2	B	100	4	B	100	4	B
Dakota e of Leonard	Unincorporated	100	2	B	100	4	B	100	4	B
Dakota w of McCall	Unincorporated	100	2	B	200	4	B	300	4	B
Dakota w of Peach	Fresno	9,400	4	B	14,800	4	B	17,800	4	B
Dante n of Bullard	Fresno		0		500	4	B	3,000	4	B
De Wolf n of Ashlan	Unincorporated	3,500	2	B	11,900	4	B	13,300	4	B
De Wolf s of Ashlan	Unincorporated	300	2	B	1,000	4	B	1,000	4	B
De Wolf n of Bullard	Unincorporated	4,800	2	B	8,800	4	B	8,900	4	B
De Wolf s of Bullard	Unincorporated	3,600	2	B	8,700	4	B	9,900	4	B
De Wolf n of Herndon	Unincorporated	1,200	2	B	1,200	4	B	1,600	4	B
De Wolf s of Herndon	Unincorporated	4,500	2	B	9,000	4	B	9,100	4	B
De Wolf s of Nees	Unincorporated	500	2	B	1,400	4	B	1,700	4	B
De Wolf n of Shaw	Unincorporated	3,600	2	B	8,500	4	B	9,700	4	B
De Wolf s of Shaw	Unincorporated	3,600	2	B	9,700	4	B	10,900	4	B
Del Rey n of Adams	Unincorporated	1,200	2	A	1,700	2	A	1,800	2	A
Del Rey s of American	Unincorporated	1,600	2	A	2,400	2	A	2,400	2	A
Dewoody e of Fowler	Unincorporated	4,200	2	B	6,600	2	C	7,100	2	C
Dickenson n of American	Unincorporated	2,600	2	A	6,200	2	C	5,900	2	C
Dickenson n of Belmont	Unincorporated	2,900	2	B	5,500	2	C	5,700	2	C
Dickenson s of Belmont	Unincorporated	2,500	2	A	6,100	2	C	6,200	2	C
Dickenson n of California	Unincorporated	3,000	2	B	5,900	2	C	5,900	2	C
Dickenson s of California	Unincorporated	2,500	2	A	5,200	2	B	5,200	2	B
Dickenson n of Jensen	Unincorporated	3,800	2	B	6,500	2	C	6,400	2	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Dickenson s of Jensen	Unincorporated	4,200	2	B	8,300	2	C	8,100	2	C
Dickenson n of McKinley	Unincorporated	3,300	2	B	7,100	2	C	6,900	2	C
Dickenson s of McKinley	Unincorporated	2,900	2	B	5,500	2	C	5,700	2	C
Dickenson s of Mt. Whitney	Unincorporated	300	2	A	600	2	A	600	2	A
Dickenson s of Shaw	Unincorporated	1,600	2	A	4,600	2	B	4,600	2	B
Dickenson n of Shields	Unincorporated	3,200	2	B	6,200	2	C	6,200	2	C
Dickenson s of Shields	Unincorporated	3,300	2	B	7,100	2	C	6,900	2	C
Dickenson n of SR 180	Unincorporated	2,500	2	A	6,100	2	C	6,200	2	C
Dickenson s of SR 180	Unincorporated	3,000	2	B	6,000	2	C	5,900	2	C
Dinuba w of Alta	Unincorporated	7,200	2	C	10,500	2	D	11,900	2	D
Dinuba e of Buttonwillow	Unincorporated	8,400	2	C	13,400	4	A	14,900	4	A
Dinuba w of Buttonwillow	Reedley	5,700	2	C	9,200	4	A	10,400	4	A
Dinuba e of Reed	Reedley	2,100	2	A	3,000	2	B	3,200	2	B
Duff w of Buttonwillow	Reedley	1,600	2	A	2,300	2	A	2,500	2	A
El Dorado s of Oakland	Unincorporated	100	2	A	100	2	A	100	2	A
El Dorado n of SR 198	Unincorporated	3,700	2	B	100	2	A	100	2	A
Elkhorn w of Bethel	Unincorporated	3,600	2	B	5,900	2	C	6,200	2	C
Elkhorn e of Cedar	Unincorporated	3,200	2	B	3,600	2	B	3,600	2	B
Elkhorn w of Cedar	Unincorporated	3,400	2	B	4,000	2	B	4,200	2	B
Elkhorn e of Fowler	Unincorporated	1,300	2	A	1,900	2	A	2,200	2	A
Elkhorn w of Fowler	Unincorporated	1,400	2	A	1,900	2	A	1,900	2	A
Elkhorn e of Marks	Unincorporated	1,000	2	A	1,200	2	A	1,400	2	A
Elkhorn w of SR 41	Unincorporated	900	2	A	1,100	2	A	1,200	2	A
Elkhorn e of SR 43	Unincorporated	700	2	A	3,100	2	B	3,500	2	B
Elkhorn w of SR 43	Unincorporated	1,100	2	A	1,700	2	A	2,000	2	A
Elm n of American	Unincorporated	(See SR 41)			6,500	2	B	7,300	2	B
Elm s of American	Unincorporated	(See SR 41)			17,400	2	E	17,900	2	E
Elm s of California	Fresno	17,600	4	B	6,600	4	B	7,200	4	B
Elm n of Central	Fresno	(See SR 41)			6,500	4	B	7,200	4	B
Elm s of Central	Unincorporated	(See SR 41)			6,600	2	B	7,400	2	B
Elm n of Church	Fresno	15,500	4	B	5,000	4	B	5,500	4	B
Elm s of Church	Fresno	12,300	4	B	2,400	4	B	2,900	4	B
Elm n of Elkhorn	Unincorporated	(See SR 41)			1,100	2	A	1,400	2	A
Elm n of Jensen	Fresno	10,000	4	B	1,900	4	B	2,400	4	B
Elm s of Jensen	Fresno	(See SR 41)			18,500	4	B	20,600	4	B
Elm n of Manning	Unincorporated	(See SR 41)			6,200	2	C	6,400	2	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Elm s of Manning	Unincorporated	(See SR 41)			8,800	2	D	9,200	2	D
Elm n of Mt. Whitney	Unincorporated	(See SR 41)			17,000	4	C	18,900	4	D
Elm s of Mt. Whitney	Unincorporated	(See SR 41)			13,900	4	C	15,900	4	C
Elm n of Mtn. View	Unincorporated	(See SR 41)			5,300	2	B	5,700	2	C
Elm s of Mtn. View	Unincorporated	(See SR 41)			5,300	2	C	5,700	2	C
Elm n of North	Fresno	(See SR 41)			3,300	4	B	4,600	4	B
Elm s of North	Fresno	(See SR 41)			12,000	4	B	13,900	4	B
Elwood n of SR 180	Unincorporated	300	2	A	300	2	A	300	2	A
Fairfax n of Belmont	Unincorporated	800	2	A	3,100	2	B	2,900	2	B
Fairfax s of Belmont	Unincorporated	100	2	A	300	2	A	300	2	A
Fairfax n of Nees	Unincorporated	700	2	A	1,000	2	A	1,100	2	A
Fairfax s of Nees	Unincorporated	600	2	A	1,500	2	A	1,700	2	A
Fairfax n of Panoche	Unincorporated	1,100	2	A	1,700	2	A	1,800	2	A
Fairfax n of Shields	Unincorporated	800	2	A	1,900	2	A	2,000	2	A
Fairfax s of Shields	Unincorporated	800	2	A	2,600	2	A	2,600	2	B
Fairfax s of SR 33	Unincorporated	400	2	A	600	2	A	700	2	A
Feland n of Shaw	Fresno	100	4	B	900	4	B	2,800	4	B
Fifth e of Clovis	Clovis	11,200	2	B	18,200	2	F	18,200	2	F
Fifth w of Clovis	Clovis	13,100	2	C	18,600	2	F	19,000	2	F
Figarden s of Bullard	Fresno	18,600	4	B	27,800	4	C	31,300	4	C
Figarden E n of Bullard	Fresno	11,000	4	B	25,100	4	B	27,700	4	C
Figarden W n of Bullard	Fresno	13,500	4	B	26,800	4	C	31,000	4	C
First n of Ashlan	Fresno	29,800	4	C	32,600	4	D	35,800	4	F
First s of Ashlan	Fresno	19,700	4	B	20,600	4	B	23,100	4	B
First n of Belmont	Fresno	22,700	4	B	20,700	4	B	22,400	4	B
First s of Belmont	Fresno	18,300	4	B	21,600	4	B	23,700	4	B
First n of Bullard	Fresno	30,500	4	C	34,900	4	F	38,600	4	F
First s of Bullard	Fresno	19,900	4	B	26,500	4	C	31,500	4	C
First n of Herndon	Fresno	19,800	4	B	31,500	4	C	38,500	4	F
First s of Herndon	Fresno	17,400	4	B	29,300	4	C	35,000	4	F
First n of McKinley	Fresno	21,200	4	B	24,100	4	B	27,200	4	C
First s of McKinley	Fresno	33,600	4	D	28,900	4	C	31,300	4	C
First s of Nees	Fresno	4,500	4	B	15,500	4	B	22,300	4	B
First n of Shaw	Fresno	23,600	4	B	29,700	4	C	33,700	4	D
First s of Shaw	Fresno	26,600	4	C	32,000	4	D	35,800	4	F
First n of Shields	Fresno	26,900	4	C	26,100	4	C	29,700	4	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
First s of Shields	Fresno	31,900	4	D	36,000	4	F	38,600	4	F
First n of SR 180	Fresno	7,900	4	B	8,400	4	B	9,600	4	B
Floral w of Buttonwillow	Reedley	400	2	A	1,100	2	A	1,200	2	A
Floral e of McCall	Selma	4,700	2	B	5,700	2	C	5,600	2	C
Floral w of McCall	Selma	8,600	2	C	10,100	2	D	10,000	2	D
Floral e of Reed	Reedley	2,000	2	A	3,300	2	B	3,700	2	B
Fowler n of Adams	Fowler	200	2	A	300	2	A	300	2	A
Fowler n of Alluvial	Clovis	5,600	4	B	23,100	4	B	25,400	4	B
Fowler s of Alluvial	Clovis	6,400	4	B	27,100	4	C	29,700	4	C
Fowler s of American	Unincorporated	1,400	2	A	2,000	2	A	1,900	2	A
Fowler n of Ashlan	Clovis	22,400	4	B	26,900	4	C	28,800	4	C
Fowler s of Ashlan	Clovis	15,600	2	C	22,000	2	F	22,400	2	F
Fowler n of Belmont	Fresno	16,800	2	D	22,400	4	B	23,700	4	B
Fowler s of Belmont	Fresno	15,800	2	C	31,000	4	C	33,300	4	D
Fowler n of Bullard	Clovis	10,400	4	B	21,500	4	B	23,100	4	B
Fowler s of Bullard	Clovis	13,700	4	B	25,400	4	B	27,000	4	C
Fowler n of Church	Fresno	5,500	2	B	14,400	2	C	14,800	2	C
Fowler s of Church	Fresno	4,900	2	B	11,500	2	B	11,800	2	B
Fowler n of Elkhorn	Unincorporated	3,400	2	B	5,500	2	C	6,600	2	C
Fowler s of Elkhorn	Unincorporated	3,400	2	B	6,200	2	C	7,600	2	C
Fowler n of Geary	Fresno	5,900	2	B	15,600	2	C	16,000	2	D
Fowler n of Herndon	Clovis	6,400	4	B	13,400	4	B	16,800	4	B
Fowler s of Herndon	Clovis	8,300	2	B	18,600	4	B	20,000	4	B
Fowler n of Jensen	Fresno	4,300	2	B	6,300	2	B	6,500	2	B
Fowler n of Manning	Unincorporated	3,600	2	B	7,000	2	C	8,000	2	C
Fowler s of Manning	Unincorporated	3,500	2	B	5,800	2	C	6,700	2	C
Fowler n of McKinley	Fresno		0		47,900	4	F	51,200	4	F
Fowler s of McKinley	Fresno		0		44,400	4	F	46,600	4	F
Fowler n of Mt. Whitney	Unincorporated	2,900	2	B	5,700	2	C	7,200	2	C
Fowler n of Mtn. View	Unincorporated	3,200	2	B	5,200	2	B	6,200	2	C
Fowler s of Mtn. View	Unincorporated	3,100	2	B	5,200	2	B	6,300	2	C
Fowler n of Nees	Clovis	4,900	2	B	21,000	4	B	22,400	4	B
Fowler s of Nees	Clovis	5,500	2	B	21,800	4	B	24,100	4	B
Fowler n of Shaw	Clovis	14,100	4	B	19,300	4	B	20,700	4	B
Fowler s of Shaw	Clovis	23,000	4	B	30,200	4	C	32,000	4	D
Fowler n of Shepherd	Unincorporated	2,100	2	B	13,500	2	C	14,500	2	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Fowler s of Shepherd	Clovis	2,600	2	B	17,700	4	B	19,500	4	B
Fowler n of Shields	Fresno	13,600	2	C	25,500	4	C	27,500	4	C
Fowler s of Shields	Fresno	15,000	2	C	40,200	4	F	42,800	4	F
Fowler n of SR 180	Fresno	14,700	2	C	26,100	4	C	28,100	4	C
Fowler s of SR 180	Fresno	8,800	2	B	15,900	2	D	16,800	2	D
Fowler n of Tulare	Fresno	17,100	2	F	31,700	4	D	34,000	4	E
Fowler s of Tulare	Fresno	17,100	2	F	26,100	4	C	28,100	4	C
Frankwood n of Manning	Reedley	1,700	2	A	2,200	2	A	2,300	2	A
Frankwood s of Manning	Reedley	3,800	2	B	4,700	4	A	4,700	4	A
Fresno n of Bullard	Fresno	22,100	4	B	29,700	4	C	34,400	4	F
Fresno n of California	Fresno	8,500	4	B	12,100	4	B	12,800	4	B
Fresno e of H St	Fresno	12,300	4	B	14,300	4	B	15,000	4	B
Fresno w of H St	Fresno	15,900	4	B	18,700	4	B	19,200	4	B
Fresno n of Herndon	Fresno	22,700	4	B	39,100	4	F	44,100	4	F
Fresno s of Herndon	Fresno	15,400	4	B	27,000	4	C	32,500	4	D
Fresno n of Nees	Fresno	7,200	4	B	24,000	4	B	30,700	4	C
Fresno s of Nees	Fresno	18,600	4	B	31,300	4	C	36,600	4	F
Fresno e of O St	Fresno	14,100	4	B	16,900	4	B	17,600	4	B
Fresno w of O St	Fresno	14,600	4	B	17,100	4	B	17,600	4	B
Fresno e of P St	Fresno	13,600	4	B	16,100	6	B	16,700	6	B
Fresno w of P St	Fresno	14,400	4	B	17,200	4	B	17,900	4	B
Fresno e of Van Ness	Fresno	14,000	4	B	16,900	4	B	17,500	4	B
Fresno w of Van Ness	Fresno	9,900	4	B	11,700	4	B	12,300	4	B
Friant n of Audubon	Fresno	36,200	4	F	68,800	6	F	72,400	6	F
Friant s of Audubon	Fresno	37,500	6	B	66,700	6	F	69,500	6	F
Friant n of Shepherd	Fresno	11,900	4	B	29,800	6	B	29,900	6	B
Friant s of Shepherd	Fresno	15,700	4	B	48,300	6	D	51,900	6	F
FtWashingt e of Friant	Fresno	3,700	2	B	5,800	4	B	5,700	4	B
Geary e of Clovis	Fresno		0		600	4	B	700	4	B
Geary w of Fowler	Fresno		0		500	4	B	500	4	B
Golden Sta n of Adams	Fowler	11,100	4	A	17,200	4	B	20,200	4	B
Golden Sta s of Adams	Fowler	12,400	4	A	18,900	4	B	22,100	4	B
Golden Sta n of American	Unincorporated	7,800	4	B	11,200	4	B	12,700	4	B
Golden Sta s of American	Fowler	6,000	4	A	11,700	4	A	14,300	4	A
Golden Sta w of Bethel	Kingsburg	7,000	4	A	10,000	4	A	12,600	4	A
Golden Sta e of Cedar	Fresno	4,400	4	B	6,900	4	B	7,600	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Golden Sta w of Cedar	Fresno	5,700	4	B	9,600	4	B	12,000	4	B
Golden Sta n of Central	Unincorporated	10,300	4	B	6,900	4	B	8,000	4	B
Golden Sta s of Central	Unincorporated	9,900	4	B	14,800	4	B	16,400	4	B
Golden Sta w of Chestnut	Unincorporated	6,000	4	B	8,400	4	B	9,200	4	B
Golden Sta w of Clovis	Fowler	8,600	4	A	14,300	4	A	16,800	4	A
Golden Sta s of Jensen	Fresno	10,200	4	B	16,600	4	B	20,300	4	B
Golden Sta s of Kamm	Kingsburg	6,400	4	A	8,200	4	A	9,200	4	A
Golden Sta s of Manning	Fowler	12,200	4	A	20,900	4	B	24,500	4	B
Golden Sta n of Mtn. View	Selma	9,300	4	A	14,500	4	A	17,900	4	B
Golden Sta s of Mtn. View	Kingsburg	7,100	4	A	10,000	4	A	12,700	4	A
Golden Sta e of Temperance	Fowler	13,100	4	A	22,900	4	B	26,200	4	B
Golden Sta w of Temperance	Fowler	8,800	4	A	13,000	4	A	15,400	4	A
Goodfellow w of Reed	Unincorporated	2,700	2	B	3,100	2	B	3,200	2	B
Grantland n of Ashlan	Fresno	2,900	4	B	11,500	6	B	12,800	6	B
Grantland s of Ashlan	Fresno	3,800	2	B	11,000	6	B	12,000	6	B
Grantland n of Belmont	Unincorporated	600	2	B	2,800	2	B	3,400	2	B
Grantland s of Belmont	Unincorporated	600	2	B	1,600	2	B	2,200	2	B
Grantland n of McKinley	Unincorporated	1,200	2	B	4,700	2	B	5,200	2	B
Grantland s of McKinley	Unincorporated	1,200	2	B	3,000	2	B	3,600	2	B
Grantland n of Shaw	Fresno	2,500	2	B	22,300	4	B	25,100	4	B
Grantland s of Shaw	Fresno	1,800	4	B	14,500	6	B	16,500	6	B
Grantland n of Shields	Fresno	3,600	2	B	10,200	6	B	11,200	6	B
Grantland s of Shields	Unincorporated	1,500	2	B	6,000	2	B	6,500	2	B
Grantland n of SR 180	Unincorporated	600	2	B	1,600	2	B	2,100	2	B
GrantlndDi s of Herndon	Fresno		0		27,300	6	B	28,800	6	B
Greenwood n of Jensen	Sanger	3,800	2	B	4,500	2	B	4,500	2	B
Greenwood s of Jensen	Sanger	4,700	4	A	6,000	4	A	5,900	4	A
H St. s of Belmont	Fresno	15,100	4	B	19,500	4	B	21,000	4	B
H St. n of Fresno	Fresno	17,800	2	F	20,300	2	F	20,700	2	F
H St. s of Fresno	Fresno	16,000	4	B	16,800	4	B	17,500	4	B
Harlan e of SR 33	Unincorporated	100	2	A	200	2	A	200	2	A
Hayes n of Ashlan	Fresno	1,000	2	B	6,000	4	B	6,700	4	B
Hayes s of Ashlan	Fresno	600	2	B	3,600	4	B	4,000	4	B
Hayes s of Herndon	Fresno		0		9,300	4	B	10,600	4	B
Hayes n of McKinley	Fresno	100	2	B	1,000	4	B	1,400	4	B
Hayes n of Shaw	Fresno	100	4	B	2,400	4	B	3,200	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Hayes s of Shaw	Fresno	1,300	2	B	5,200	4	B	6,100	4	B
Hayes n of Shields	Fresno	200	2	B	2,100	4	B	2,700	4	B
Hayes s of Shields	Fresno	600	2	B	3,100	4	B	3,400	4	B
Henderson n of Kamm	Unincorporated	500	2	A	500	2	A	500	2	A
Henderson n of Manning	Unincorporated	600	2	A	1,000	2	A	1,000	2	A
Henderson s of Manning	Unincorporated	600	2	A	900	2	A	900	2	A
Henderson e of Marks	Unincorporated	2,500	2	A	2,900	2	B	2,900	2	B
Henderson w of Marks	Unincorporated	2,400	2	A	3,200	2	B	3,200	2	B
Henderson s of Mtn. View	Unincorporated	2,200	2	A	2,600	2	B	2,700	2	B
Herndon w of Academy	Unincorporated	200	2	A	100	2	A	100	2	A
Herndon e of Blackstone	Fresno	50,200	6	D	75,400	6	F	79,100	6	F
Herndon w of Blackstone	Fresno	41,800	6	C	58,300	6	F	61,400	6	F
Herndon e of Cedar	Fresno	45,300	4	F	56,000	4	F	59,300	4	F
Herndon w of Cedar	Fresno	60,300	6	F	72,300	6	F	75,500	6	F
Herndon e of Chestnut	Fresno	53,600	4	F	63,700	4	F	64,900	4	F
Herndon w of Chestnut	Fresno	45,200	4	F	57,300	4	F	58,900	4	F
Herndon e of Clovis	Clovis	22,400	4	B	44,500	4	F	47,500	4	F
Herndon w of Clovis	Clovis	25,700	4	C	65,100	6	F	71,900	6	F
Herndon e of De Wolf	Unincorporated	3,300	2	B	5,400	4	B	7,400	4	B
Herndon w of De Wolf	Unincorporated	6,200	2	B	12,200	2	B	13,100	2	C
Herndon e of First	Fresno	47,800	6	D	61,600	6	F	67,400	6	F
Herndon w of First	Fresno	53,000	6	F	68,500	6	F	74,400	6	F
Herndon e of Fowler	Clovis	14,400	4	B	24,700	4	B	28,100	4	C
Herndon w of Fowler	Clovis	16,700	4	B	29,000	4	C	30,100	4	C
Herndon e of Fresno	Fresno	53,000	6	F	68,500	6	F	74,400	6	F
Herndon w of Fresno	Fresno	57,800	6	F	77,000	6	F	85,300	6	F
Herndon e of Leonard	Unincorporated	3,300	2	B	800	4	B	1,500	4	B
Herndon w of Leonard	Unincorporated	3,300	2	B	5,400	4	B	7,400	4	B
Herndon e of Maple	Fresno	45,200	4	F	57,300	4	F	58,900	4	F
Herndon w of Maple	Fresno	46,000	4	F	56,700	4	F	60,000	4	F
Herndon e of Marks	Fresno	36,100	4	F	72,700	6	F	75,500	6	F
Herndon w of Marks	Fresno	34,500	4	F	74,200	6	F	78,400	6	F
Herndon e of McCall	Unincorporated	300	2	A	-	2	A	-	2	A
Herndon w of McCall	Unincorporated	500	2	B	1,500	4	B	2,100	4	B
Herndon e of Minnewawa	Clovis	25,700	4	C	49,300	6	D	55,500	6	F
Herndon w of Minnewawa	Clovis	34,700	4	F	50,300	6	D	55,800	6	F

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Herndon e of Palm	Fresno	66,600	6	F	81,500	6	F	85,200	6	F
Herndon w of Palm	Fresno	43,700	4	F	81,600	6	F	85,300	6	F
Herndon e of Peach	Clovis	35,500	4	F	51,500	6	F	57,300	6	F
Herndon w of Peach	Clovis	36,500	4	F	49,300	6	D	54,400	6	F
Herndon e of Temperance	Clovis	5,000	2	B	15,500	2	C	17,100	2	F
Herndon w of Temperance	Clovis	4,600	4	B	11,000	2	B	12,600	2	B
Herndon e of West	Fresno	40,800	4	F	79,100	6	F	81,700	6	F
Herndon w of West	Fresno	43,500	4	F	80,900	6	F	83,700	6	F
Herndon e of Willow	Clovis	15,200	4	B	28,000	6	B	33,200	6	B
Herndon w of Willow	Fresno	40,000	4	F	50,100	4	F	51,300	4	F
Highland n of Ashlan	Unincorporated		0		7,100	4	B	7,900	4	B
Highland s of Ashlan	Unincorporated	3,300	2	B	5,400	4	B	6,400	4	B
Highland n of Dakota	Unincorporated	3,400	2	B	5,800	4	B	6,800	4	B
Highland s of Dakota	Unincorporated	3,500	2	B	6,300	4	B	7,400	4	B
Highland s of Shaw	Unincorporated		0		5,000	4	B	5,000	4	B
Howard n of Belmont	Unincorporated	300	2	A	500	2	A	600	2	A
Howard s of Belmont	Unincorporated	1,200	2	A	1,900	2	A	2,100	2	A
Howard n of California	Unincorporated	500	2	A	900	2	A	1,000	2	A
Howard s of California	Unincorporated	300	2	A	600	2	A	700	2	A
Howard n of Jensen	Unincorporated	200	2	A	400	2	A	500	2	A
Howard s of McKinley	Unincorporated	200	2	A	400	2	A	400	2	A
Howard n of SR 180	Unincorporated	200	2	A	700	2	A	900	2	A
Howard s of SR 180	Unincorporated	200	2	A	600	2	A	700	2	A
Hughs/West n of SR 180	Fresno		0		9,300	2	B	10,700	2	B
I-5 From SR-269 To Jayne	Unincorporated	18,700	4	B	36,500	4	C	37,600	4	C
I-5 From Jayne To SR-198	Unincorporated	19,500	4	B	36,800	4	C	37,700	4	C
I-5 From SR-198 To SR-145	Unincorporated	20,300	4	B	38,600	4	C	39,600	4	C
I-5 From SR-145 To SR-33	Unincorporated	21,400	4	B	39,300	4	C	40,300	4	C
I-5 From SR-33 To Kamm	Unincorporated	21,000	4	B	38,500	4	C	39,200	4	C
I-5 From Kamm To Manning	Unincorporated	21,100	4	B	38,700	4	C	39,300	4	C
I-5 From Manning To Panoche	Unincorporated	21,400	4	B	39,100	4	C	39,700	4	C
I-5 From Panoche To Russell	Unincorporated	21,000	4	B	38,500	4	C	38,900	4	C
I-5 From Russell To Shields	Unincorporated	22,000	4	B	38,600	4	C	38,600	4	C
I-5 From Shields To Nees	Unincorporated	22,200	4	B	39,300	4	C	39,400	4	C
James n of Colorado	Unincorporated	1,100	2	A	1,400	2	A	1,500	2	A
James s of Colorado	Unincorporated	1,300	2	A	1,700	2	A	1,800	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
James s of SR 180	Unincorporated	1,200	2	A	1,500	2	A	1,500	2	A
Jameson n of Kamm	Unincorporated	800	2	A	1,000	2	A	1,000	2	A
Jameson s of Kamm	Unincorporated	800	2	A	1,100	2	A	1,100	2	A
Jameson n of Manning	Unincorporated	700	2	A	900	2	A	900	2	A
Jameson s of Manning	Unincorporated	800	2	A	1,200	2	A	1,200	2	A
Jameson n of Mt. Whitney	Unincorporated	400	2	A	600	2	A	600	2	A
Jameson n of Oakland	Unincorporated	400	2	A	600	2	A	700	2	A
Jayne e of El Dorado	Unincorporated	1,100	2	A	1,800	2	A	1,900	2	A
Jayne w of El Dorado	Unincorporated	1,100	2	A	1,900	2	A	2,000	2	A
Jayne e of i-5	Unincorporated	3,500	2	B	3,900	2	B	3,800	2	B
Jayne w of I-5	Unincorporated	3,300	2	B	4,100	2	A	4,200	2	A
Jayne w of SR 269	Unincorporated	200	2	A	500	2	A	500	2	A
Jayne e of SR 33	Unincorporated	3,000	2	B	3,800	2	A	3,900	2	A
Jefferson w of Del Rey	Unincorporated	200	2	A	200	2	A	200	2	A
Jefferson w of James	Unincorporated	700	2	A	1,900	2	A	2,000	2	A
Jefferson e of McCall	Unincorporated	200	2	A	400	2	A	400	2	A
Jensen e of Bethel	Sanger	9,400	4	A	12,400	4	A	12,700	4	A
Jensen w of Bethel	Sanger	13,100	4	A	15,500	4	A	15,600	4	A
Jensen e of Cedar	Fresno	38,600	4	F	54,800	6	F	58,400	6	F
Jensen w of Cedar	Fresno	41,000	4	F	57,200	6	F	61,000	6	F
Jensen e of Chestnut	Fresno	20,700	4	B	40,000	6	C	45,100	6	C
Jensen w of Chestnut	Fresno	23,400	4	B	40,200	6	C	44,400	6	C
Jensen e of Clovis	Fresno	37,500	4	F	54,300	4	F	56,700	4	F
Jensen w of Clovis	Fresno	32,300	4	D	50,200	6	D	53,200	6	F
Jensen e of Dickenson	Unincorporated	4,200	2	B	7,300	2	C	7,300	2	C
Jensen w of Dickenson	Unincorporated	1,300	2	A	2,600	2	B	2,800	2	B
Jensen e of Fowler	Fresno	32,200	4	D	41,600	4	F	43,400	4	F
Jensen w of Fowler	Fresno	33,600	4	D	41,200	4	F	43,400	4	F
Jensen e of Howard	Unincorporated	1,900	2	A	3,200	2	B	3,300	2	B
Jensen w of Howard	Unincorporated	1,800	2	A	3,300	2	B	3,500	2	B
Jensen e of Marks	Fresno	5,900	2	B	11,900	4	B	13,500	4	B
Jensen w of Marks	Unincorporated	5,500	2	B	9,300	4	B	10,200	4	B
Jensen e of McCall	Unincorporated	14,100	4	A	19,600	4	B	19,900	4	B
Jensen w of McCall	Unincorporated	16,000	4	B	22,800	4	B	23,000	4	B
Jensen e of Peach	Fresno	18,500	4	B	38,900	6	C	44,700	6	C
Jensen w of Peach	Fresno	19,000	4	B	36,700	6	B	40,800	6	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Jensen e of SR 145	Kerman	2,100	2	A	3,700	2	B	3,800	2	B
Jensen w of SR 41	Fresno	6,700	4	B	32,300	4	D	34,000	4	E
Jensen e of Temperance	Unincorporated	12,800	4	B	31,000	4	C	31,800	4	D
Jensen w of Temperance	Fresno	15,600	4	B	22,500	4	B	24,300	4	B
Jensen e of Walnut	Fresno	8,300	2	B	26,700	4	C	28,800	4	C
Jensen w of Walnut	Fresno	8,800	2	B	24,600	4	B	26,500	4	C
Jensen e of West	Fresno	7,100	2	B	18,900	4	B	20,600	4	B
Jensen w of West	Fresno	5,700	2	B	12,000	4	B	13,500	4	B
Kamm e of Academy	Kingsburg	2,200	2	A	2,700	2	B	2,700	2	B
Kamm w of Academy	Kingsburg	1,500	2	A	2,300	2	A	2,200	2	A
Kamm e of Bethel	Kingsburg	1,100	2	A	1,400	2	A	1,300	2	A
Kamm w of Henderson	Unincorporated	200	2	A	200	2	A	200	2	A
Kamm e of i-5	Unincorporated	300	2	A	300	2	A	300	2	A
Kamm e of Jameson	Unincorporated	700	2	A	700	2	A	700	2	A
Kamm w of Jameson	Unincorporated	700	2	A	700	2	A	700	2	A
Kamm w of Marks	Unincorporated	1,400	2	A	1,900	2	A	1,900	2	A
Kamm e of SR 145	Unincorporated	200	2	A	200	2	A	200	2	A
Kamm w of SR 33	Unincorporated	100	2	A	100	2	A	100	2	A
Lake s of Shields	Unincorporated	300	2	A	3,400	2	B	3,300	2	B
Lake n of SR 180	Unincorporated	200	2	A	3,100	2	B	3,100	2	B
Leonard n of Ashlan	Unincorporated		0		-	4	A	-	4	A
Leonard s of Ashlan	Unincorporated	500	2	B	400	4	B	400	4	B
Leonard n of Bullard	Unincorporated	100	2	B	2,900	4	B	3,600	4	B
Leonard s of Bullard	Unincorporated	2,100	2	B	5,400	4	B	5,900	4	B
Leonard n of Dakota	Unincorporated	500	2	B	500	4	B	500	4	B
Leonard s of Dakota	Unincorporated	500	2	B	400	4	B	400	4	B
Leonard n of Herndon	Unincorporated		0		4,000	4	B	5,200	4	B
Leonard s of Herndon	Unincorporated		0		4,100	4	B	4,900	4	B
Leonard n of Nees	Unincorporated		0		400	4	B	400	4	B
Leonard s of Nees	Unincorporated		0		5,500	4	B	6,700	4	B
Leonard n of Shaw	Unincorporated	2,200	2	B	5,500	4	B	6,000	4	B
Leonard s of Shaw	Unincorporated	7,300	2	B	2,200	4	B	2,300	4	B
Locan n of Nees	Clovis	1,600	2	B	4,400	4	B	4,600	4	B
Locan s of Nees	Clovis	1,700	2	A	3,800	4	B	3,700	4	B
Locan s of Shepherd	Clovis	100	2	B	5,100	4	B	5,300	4	B
Lodge e of SR 168	Unincorporated	2,400	2	A	3,000	2	B	3,100	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Manning e of Academy	Parlier	15,000	4	A	22,000	4	B	21,900	4	B
Manning w of Academy	Unincorporated	12,800	4	A	18,800	4	B	18,500	4	B
Manning e of Alta	Unincorporated	3,700	2	B	6,600	4	B	7,300	4	B
Manning w of Alta	Unincorporated	5,600	2	C	8,400	4	A	8,800	4	A
Manning e of Bethel	Unincorporated	17,300	4	B	23,300	4	B	23,000	4	B
Manning w of Bethel	Unincorporated	12,600	4	A	18,500	4	B	17,900	4	B
Manning e of Buttonwillow	Unincorporated	6,700	2	C	9,800	4	A	10,200	4	A
Manning w of Buttonwillow	Reedley	4,600	2	B	6,800	2	C	7,300	2	C
Manning e of Cedar	Unincorporated	3,500	2	B	5,000	2	A	5,300	2	A
Manning w of Cedar	Unincorporated	3,100	2	B	4,100	2	A	4,300	2	A
Manning w of Colorado	San Joaquin	700	4	A	3,200	4	A	3,500	4	A
Manning e of Fowler	Unincorporated	3,700	2	B	5,700	2	A	6,200	2	A
Manning w of Fowler	Unincorporated	2,300	2	A	4,500	2	A	4,900	2	A
Manning e of Henderson	Unincorporated	2,000	2	A	2,700	2	B	2,700	2	B
Manning w of Henderson	Unincorporated	2,200	2	A	2,900	2	B	3,000	2	B
Manning e of I-5	Unincorporated	400	2	A	900	2	A	1,000	2	A
Manning e of Jameson	Unincorporated	1,000	2	A	1,300	2	A	1,300	2	A
Manning w of Jameson	Unincorporated	800	2	A	900	2	A	900	2	A
Manning w of Manning	Unincorporated	100	2	A	700	2	A	700	2	A
Manning e of Marks	Unincorporated	3,000	2	B	4,600	2	B	4,800	2	B
Manning w of Marks	Unincorporated	2,800	2	B	3,600	2	B	3,700	2	B
Manning e of McCall	Unincorporated	14,100	4	A	20,000	4	B	19,400	4	B
Manning w of McCall	Unincorporated	13,600	4	A	19,500	4	B	18,900	4	B
Manning e of McMullin Grade	Unincorporated	1,100	2	A	1,300	2	A	1,300	2	A
Manning e of Newmark	Parlier	17,400	4	B	25,600	4	B	25,700	4	B
Manning w of Newmark	Parlier	16,700	4	A	24,700	4	B	24,700	4	B
Manning e of Reed	Reedley	4,800	2	B	8,000	4	A	7,900	4	A
Manning w of Reed	Reedley	5,600	2	C	8,600	4	A	8,500	4	A
Manning e of SR 145	Unincorporated	1,600	2	A	3,700	2	B	3,700	2	B
Manning w of SR 145	Unincorporated	1,700	2	A	3,800	2	B	3,800	2	B
Manning e of SR 33	Unincorporated		0		1,000	2	A	1,100	2	A
Manning w of SR 33	Unincorporated	500	2	A	1,200	2	A	1,300	2	A
Manning w of SR 41	Unincorporated	3,400	2	B	5,100	2	B	5,200	2	B
Maple n of Alluvial	Fresno	4,700	2	B	16,500	4	B	17,900	4	B
Maple s of Alluvial	Fresno	4,200	2	B	12,800	4	B	14,700	4	B
Maple n of Behymer	Fresno	2,500	2	B	13,300	4	B	14,400	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Maple n of Herndon	Fresno	6,900	2	B	13,900	4	B	14,500	4	B
Maple n of Nees	Fresno	4,800	2	B	19,200	4	B	21,500	4	B
Maple s of Nees	Fresno	3,100	2	B	14,100	4	B	15,600	4	B
Maple n of Shepherd	Fresno	3,700	2	B	15,600	4	B	17,500	4	B
Maple s of Shepherd	Fresno	3,000	2	B	12,300	4	B	14,200	4	B
Marks n of American	Unincorporated	4,700	2	B	3,900	2	B	4,100	2	B
Marks s of American	Unincorporated	4,700	2	B	3,900	2	B	4,000	2	B
Marks n of Ashlan	Fresno	15,700	4	B	22,300	4	B	23,700	4	B
Marks s of Ashlan	Fresno	15,600	4	B	22,800	4	B	22,800	4	B
Marks n of Belmont	Fresno	4,200	2	B	10,500	4	B	12,200	4	B
Marks s of Belmont	Fresno	5,600	2	B	11,600	2	B	12,900	2	C
Marks n of Bullard	Fresno	5,300	4	B	7,200	4	B	8,100	4	B
Marks s of Bullard	Fresno	12,100	4	B	18,200	4	B	20,100	4	B
Marks n of California	Fresno	2,600	2	B	7,300	2	B	7,700	2	B
Marks s of California	Unincorporated	2,500	2	B	7,800	2	B	8,400	2	B
Marks n of Clinton	Fresno	10,300	2	B	12,900	4	B	14,500	4	B
Marks s of Clinton	Fresno	12,100	2	B	19,800	4	B	21,400	4	B
Marks n of Elkhorn	Unincorporated	2,700	2	B	3,200	2	B	3,300	2	B
Marks s of Elkhorn	Unincorporated	2,600	2	A	3,700	2	B	3,800	2	B
Marks s of Herndon	Fresno	4,500	4	B	8,000	4	B	9,600	4	B
Marks n of Jensen	Unincorporated	3,800	2	B	7,200	2	B	7,700	2	B
Marks s of Jensen	Unincorporated	4,400	2	B	5,000	2	B	5,000	2	B
Marks n of Kamm	Unincorporated	3,400	2	B	4,200	2	B	4,300	2	B
Marks s of Kamm	Unincorporated	2,300	2	A	2,700	2	B	2,800	2	B
Marks n of Manning	Unincorporated	1,700	2	A	1,700	2	A	1,700	2	A
Marks s of Manning	Unincorporated	1,700	2	A	1,700	2	A	1,800	2	A
Marks n of McKinley	Fresno	9,300	2	B	15,500	4	B	17,000	4	B
Marks s of McKinley	Fresno	8,100	2	B	14,300	4	B	16,000	4	B
Marks n of Mt. Whitney	Unincorporated	2,100	2	A	2,700	2	B	2,900	2	B
Marks s of Mt. Whitney	Unincorporated	3,200	2	B	6,100	2	C	6,600	2	C
Marks n of Mtn. View	Unincorporated	1,300	2	A	1,400	2	A	1,500	2	A
Marks s of Mtn. View	Unincorporated	1,500	2	A	3,000	2	B	3,100	2	B
Marks n of North	Unincorporated	1,500	2	B	1,800	2	B	2,000	2	B
Marks s of North	Unincorporated	1,800	2	B	1,800	2	B	1,800	2	B
Marks n of Olive	Fresno	7,100	2	B	13,100	4	B	14,900	4	B
Marks s of Olive	Fresno	4,700	2	B	11,300	4	B	13,000	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Marks n of Shaw	Fresno	10,700	2	B	15,400	2	C	16,900	2	D
Marks s of Shaw	Fresno	10,700	4	B	15,800	4	B	17,600	4	B
Marks s of Shields	Fresno	6,900	2	B	14,900	4	B	17,000	4	B
Marks n of SR 180	Fresno	6,700	2	B	15,200	2	C	15,100	2	C
Marks s of SR 180	Fresno	5,000	2	B	11,400	2	B	11,700	2	B
Marty n of Shaw	Fresno	1,200	4	B	5,800	4	B	8,100	4	B
Marty s of Shaw	Fresno	3,700	4	B	10,500	4	B	13,600	4	B
McCall n of Adams	Unincorporated	3,500	2	B	6,500	2	A	7,400	2	A
McCall s of Adams	Unincorporated	3,800	2	B	6,800	2	A	7,700	2	A
McCall n of American	Unincorporated	3,100	2	B	7,500	2	A	8,500	2	B
McCall s of American	Unincorporated	3,100	2	B	6,300	2	A	7,200	2	A
McCall n of Ashlan	Unincorporated		0		4,400	4	B	5,400	4	B
McCall s of Ashlan	Unincorporated		0		7,500	4	B	8,400	4	B
McCall n of Belmont	Unincorporated	4,800	2	B	9,900	2	B	10,900	2	B
McCall s of Belmont	Unincorporated	4,700	2	B	7,400	2	B	8,500	2	B
McCall n of Bullard	Unincorporated	1,800	2	B	4,500	4	B	5,400	4	B
McCall s of Bullard	Unincorporated	2,800	2	B	3,900	4	B	5,200	4	B
McCall n of Central	Unincorporated	4,000	2	B	9,000	2	B	9,800	2	B
McCall s of Central	Unincorporated	3,200	2	B	7,600	2	A	8,600	2	B
McCall n of Dakota	Unincorporated		0		7,500	4	B	8,400	4	B
McCall s of Dakota	Unincorporated		0		7,900	4	B	8,900	4	B
McCall n of Herndon	Unincorporated		0		1,900	4	A	2,200	4	A
McCall s of Herndon	Unincorporated	600	2	B	3,300	4	B	4,200	4	B
McCall n of Jensen	Unincorporated	3,600	2	B	8,800	2	B	9,400	2	B
McCall s of Jensen	Unincorporated	4,000	2	B	8,500	2	B	9,300	2	B
McCall n of Manning	Unincorporated	4,200	2	B	7,300	2	A	8,100	2	A
McCall s of Manning	Selma	10,800	2	D	15,400	2	E	16,300	2	E
McCall n of McKinley	Unincorporated	1,200	2	B	7,600	2	B	8,600	2	B
McCall s of McKinley	Unincorporated	4,800	2	B	9,900	2	B	10,900	2	B
McCall n of Nees	Unincorporated		0		1,700	4	A	2,100	4	A
McCall s of Nees	Unincorporated		0		1,900	4	A	2,200	4	A
McCall n of Shaw	Unincorporated	2,600	2	B	3,700	4	B	5,000	4	B
McCall s of Shaw	Unincorporated		0		8,500	4	B	9,200	4	B
McCall n of SR 180	Unincorporated	1,800	2	B	4,600	2	B	5,700	2	B
McCall s of SR 180	Unincorporated	2,900	2	B	7,700	2	A	8,500	2	B
McKinley e of Blackstone	Fresno	30,500	4	C	36,700	4	F	38,900	4	F

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
McKinley w of Blackstone	Fresno	29,300	4	C	34,500	4	F	35,500	4	F
McKinley e of Blythe	Fresno	6,300	2	B	15,700	4	B	16,900	4	B
McKinley w of Blythe	Fresno	6,700	2	B	17,000	4	B	18,500	4	B
McKinley e of Brawley	Fresno	11,500	2	B	20,500	4	B	22,500	4	B
McKinley w of Brawley	Fresno	12,200	2	B	24,200	4	B	25,600	4	C
McKinley e of Bryan	Fresno	3,700	2	B	9,000	4	B	9,200	4	B
McKinley w of Bryan	Fresno	3,000	2	B	6,500	4	B	6,500	4	B
McKinley e of Cedar	Fresno	31,700	4	D	40,900	4	F	43,900	4	F
McKinley w of Cedar	Fresno	33,700	4	D	30,200	4	C	33,100	4	D
McKinley e of Chestnut	Fresno	34,600	4	F	28,900	4	C	31,500	4	C
McKinley w of Chestnut	Fresno	29,500	4	C	20,000	4	B	22,100	4	B
McKinley e of Clovis	Fresno		0		17,100	4	B	20,000	4	B
McKinley w of Clovis	Fresno	22,500	4	B	19,500	4	B	22,300	4	B
McKinley e of Cornelia	Fresno	6,100	2	B	16,400	4	B	17,900	4	B
McKinley w of Cornelia	Fresno	6,600	2	B	16,200	4	B	18,100	4	B
McKinley e of Dickenson	Unincorporated	1,900	2	A	4,400	2	B	4,200	2	B
McKinley w of Dickenson	Unincorporated	2,200	2	A	5,700	2	C	5,000	2	B
McKinley e of First	Fresno	33,800	4	D	29,400	4	C	31,900	4	D
McKinley w of First	Fresno	53,500	4	F	46,200	4	F	49,000	4	F
McKinley e of Fowler	Fresno		0		16,800	4	B	17,700	4	B
McKinley e of Grantland	Fresno	2,600	2	B	6,200	4	B	6,200	4	B
McKinley w of Grantland	Unincorporated	2,800	2	B	5,300	2	B	5,200	2	B
McKinley e of Hayes	Fresno	4,100	2	B	9,300	4	B	9,500	4	B
McKinley w of Hayes	Fresno	4,000	2	B	9,200	4	B	9,500	4	B
McKinley e of Howard	Unincorporated	2,000	2	A	5,300	2	C	4,700	2	B
McKinley w of Howard	Unincorporated	1,900	2	A	5,400	2	C	4,700	2	B
McKinley e of Marks	Fresno	8,400	2	B	17,200	4	B	18,400	4	B
McKinley w of Marks	Fresno	6,600	2	B	16,600	4	B	18,200	4	B
McKinley w of McCall	Unincorporated	3,500	2	B	5,900	2	B	5,600	2	B
McKinley e of Palm	Fresno	22,700	4	B	29,700	4	C	31,800	4	D
McKinley w of Palm	Fresno	20,900	4	B	28,100	4	C	30,000	4	C
McKinley w of Peach	Fresno	30,900	4	C	26,500	4	C	28,800	4	C
McKinley e of Polk	Fresno	4,600	2	B	13,300	4	B	14,800	4	B
McKinley w of Polk	Fresno	4,900	2	B	10,900	4	B	11,100	4	B
McKinley e of SR 145	Unincorporated	1,900	2	A	5,300	2	C	4,700	2	B
McKinley w of SR 41	Fresno	28,000	4	C	40,200	4	F	44,900	4	F

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
McKinley e of Temperance	Unincorporated	2,000	2	B	9,400	2	B	10,400	2	B
McKinley e of Valentine	Fresno	12,700	2	B	22,300	4	B	23,800	4	B
McKinley w of Valentine	Fresno	12,700	2	B	22,500	4	B	24,500	4	B
McKinley e of West	Fresno	15,200	4	B	21,700	4	B	23,400	4	B
McKinley w of West	Fresno	29,700	4	C	39,400	4	F	41,800	4	F
McMullin G e of Jameson	Unincorporated	1,900	2	A	5,400	2	C	5,100	2	B
McMullin G w of Jameson	Unincorporated	1,500	2	A	4,800	2	B	4,400	2	B
McMullin G n of Manning	Unincorporated	1,500	2	A	4,800	2	B	4,500	2	B
McMullin G s of Manning	Unincorporated	900	2	A	2,200	2	A	1,900	2	A
Merced s of Adams	Fowler	900	2	A	1,300	2	A	1,400	2	A
Millbrook e of Friant	Fresno	12,900	4	B	24,500	4	B	24,500	4	B
Millburn n of Herndon	Fresno	5,900	4	B	11,600	4	B	13,700	4	B
Millburn s of Herndon	Fresno	4,500	4	B	6,400	4	B	8,800	4	B
Millerton e of Auberry	Unincorporated	400	2	A	800	2	A	900	2	A
Millerton w of Auberry	Unincorporated	2,100	2	A	4,700	4	A	5,000	4	A
Millerton e of Friant	Unincorporated	2,800	2	B	5,500	4	A	5,800	4	A
Millerton w of SR 168	Unincorporated	400	2	A	900	2	A	1,000	2	A
Minnewawa n of Alluvial	Clovis	8,500	2	B	18,900	4	B	21,200	4	B
Minnewawa s of Alluvial	Clovis	7,800	2	B	15,300	4	B	16,400	4	B
Minnewawa n of Behymer	Unincorporated	8,600	2	B	17,800	4	B	18,700	4	B
Minnewawa s of Copper	Unincorporated	5,900	2	B	16,800	4	B	17,400	4	B
Minnewawa n of Herndon	Clovis	9,500	2	B	19,700	4	B	22,200	4	B
Minnewawa n of Nees	Clovis	6,100	4	B	17,600	4	B	20,400	4	B
Minnewawa s of Nees	Clovis	8,500	2	B	18,900	4	B	21,200	4	B
Minnewawa n of Shepherd	Unincorporated	8,600	2	B	23,700	4	B	26,400	4	C
Minnewawa s of Shepherd	Clovis	6,100	2	B	18,100	4	B	20,500	4	B
Motel n of Ashlan	Fresno	12,700	2	B	10,900	2	B	12,500	2	B
Mt. Whitney e of Cedar	Unincorporated	3,800	2	B	5,500	2	C	5,900	2	C
Mt. Whitney w of Cedar	Unincorporated	3,300	2	B	4,600	2	B	5,000	2	B
Mt. Whitney w of Fowler	Unincorporated	4,400	2	B	6,600	2	C	7,300	2	C
Mt. Whitney e of Jameson	Unincorporated	1,000	2	A	1,000	4	A	1,100	4	A
Mt. Whitney w of Jameson	Unincorporated	900	2	A	600	2	A	600	2	A
Mt. Whitney e of Marks	Unincorporated	3,900	2	B	8,000	2	C	8,700	2	D
Mt. Whitney w of Marks	Unincorporated	6,700	2	C	8,800	2	D	9,100	2	D
Mt. Whitney e of SR 145	Unincorporated	2,000	2	A	1,800	2	A	1,800	2	A
Mt. Whitney w of SR 145	Unincorporated	1,000	2	A	1,000	2	A	1,100	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Mt. Whitney w of SR 41	Unincorporated	3,100	2	B	7,400	2	C	8,000	2	C
Mtn. View e of Academy	Unincorporated	7,100	2	C	15,900	4	A	18,700	4	B
Mtn. View w of Academy	Unincorporated	6,600	2	C	14,800	4	A	17,000	4	B
Mtn. View e of Bethel	Unincorporated	9,700	2	D	17,800	4	B	20,000	4	B
Mtn. View w of Bethel	Unincorporated	12,900	4	A	20,500	4	B	23,200	4	B
Mtn. View e of Cedar	Unincorporated	1,500	2	A	3,100	2	B	3,400	2	B
Mtn. View w of Cedar	Unincorporated	1,700	2	A	3,000	2	B	3,200	2	B
Mtn. View e of Fowler	Unincorporated	1,300	2	A	3,800	2	B	4,100	2	B
Mtn. View w of Fowler	Unincorporated	1,400	2	A	3,700	2	B	4,100	2	B
Mtn. View w of Henderson	Unincorporated	800	2	A	2,100	2	A	2,200	2	A
Mtn. View w of SR 41	Unincorporated	2,800	2	B	6,000	2	C	6,100	2	C
Mtn. View e of SR 43	Unincorporated	1,700	2	A	4,900	2	B	5,600	2	C
Mtn. View w of SR 43	Unincorporated	1,200	2	A	3,400	2	B	3,900	2	B
N Motel Dr n of Bullard	Fresno	8,900	2	B	18,400	2	F	19,000	2	F
N Motel Dr s of Bullard	Fresno	9,500	2	B	16,800	2	D	18,500	2	F
N Motel Dr n of Herndon	Fresno	20,900	2	F	35,000	2	F	46,000	2	F
N Motel Dr s of Herndon	Fresno	7,500	2	B	8,600	2	B	11,300	2	B
N Motel Dr n of Shaw	Fresno	10,000	2	B	16,700	2	D	18,500	2	F
N Motel Dr s of Shaw	Fresno	13,200	2	C	17,700	2	F	19,300	2	F
Nees e of Blackstone	Fresno	8,500	4	B	34,600	4	F	43,600	4	F
Nees w of Blackstone	Fresno	11,800	4	B	37,600	4	F	39,300	4	F
Nees e of Cedar	Fresno	10,700	4	B	29,000	4	C	32,900	4	D
Nees w of Cedar	Fresno	12,200	4	B	34,200	4	F	38,300	4	F
Nees e of Chestnut	Fresno	3,700	2	B	20,700	4	B	25,400	4	B
Nees w of Chestnut	Fresno	10,300	2	B	26,600	4	C	31,100	4	C
Nees e of Clovis	Clovis	3,800	2	A	14,600	4	B	17,500	4	B
Nees w of Clovis	Clovis	3,800	2	A	14,700	4	B	17,800	4	B
Nees e of Fairfax	Unincorporated	1,900	2	A	4,100	2	B	4,400	2	B
Nees w of Fairfax	Unincorporated	1,400	2	A	3,100	2	B	3,300	2	B
Nees e of First	Fresno	16,300	4	B	41,700	4	F	45,700	4	F
Nees w of First	Fresno	12,900	4	B	33,500	4	D	39,700	4	F
Nees e of Fowler	Clovis	2,000	2	B	11,300	4	B	13,000	4	B
Nees w of Fowler	Clovis	2,200	2	B	9,200	4	B	11,100	4	B
Nees e of Fresno	Fresno	14,700	4	B	35,500	4	F	41,600	4	F
Nees w of Fresno	Fresno	8,500	4	B	36,100	4	F	44,400	4	F
Nees e of Locan	Clovis		0		3,900	4	B	4,300	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Nees w of Locan	Clovis	300	2	B	3,300	4	B	3,400	4	B
Nees e of Maple	Fresno	11,000	2	B	28,000	4	C	32,400	4	D
Nees w of Maple	Fresno	10,600	4	B	28,700	4	C	32,500	4	D
Nees e of Minnewawa	Clovis	3,800	2	B	15,100	4	B	18,200	4	B
Nees w of Minnewawa	Clovis	1,800	2	B	15,800	4	B	18,200	4	B
Nees e of Palm	Fresno		0		29,600	4	C	32,500	4	D
Nees e of Peach	Clovis	2,000	2	B	15,700	4	B	18,300	4	B
Nees w of Peach	Clovis	2,000	2	B	15,500	4	B	17,900	4	B
Nees e of Russell	Unincorporated	5,800	2	C	7,100	2	C	7,300	2	C
Nees w of Russell	Unincorporated	2,700	2	B	4,800	2	B	5,100	2	B
Nees e of Temperance	Clovis	300	2	B	3,300	4	B	3,400	4	B
Nees w of Temperance	Clovis	300	2	B	8,900	4	B	10,200	4	B
Nees e of Willow	Clovis	4,600	2	B	18,100	4	B	20,500	4	B
Nees w of Willow	Fresno	4,800	2	B	19,600	4	B	24,300	4	B
Newmark s of Adams	Unincorporated	3,000	2	B	5,400	2	C	5,500	2	C
Newmark n of Manning	Parlier	700	2	A	1,000	2	A	1,000	2	A
Newmark n of North	Sanger	400	2	A	100	2	A	100	2	A
NewNorLyon w of San Diego	Unincorporated	200	2	A	2,100	2	A	2,100	2	A
North e of Academy	Sanger	3,800	2	B	7,100	2	C	8,300	2	C
North w of Academy	Sanger	2,300	2	A	2,500	2	A	2,800	2	B
North e of Bethel	Sanger	2,300	2	A	3,100	2	B	3,500	2	B
North e of Cedar	Fresno	10,800	4	B	18,300	4	B	24,700	4	B
North w of Cedar	Fresno	10,400	2	B	20,300	4	B	26,900	4	C
North e of Chestnut	Fresno	6,200	2	B	10,400	2	B	14,000	2	C
North w of Chestnut	Fresno	8,900	4	B	16,400	4	B	21,700	4	B
North w of Clovis	Unincorporated	2,400	2	B	4,200	2	B	5,200	2	B
North e of Marks	Fresno	1,700	2	B	1,000	2	B	1,000	2	B
North w of Newmark	Sanger	400	2	A	100	2	A	100	2	A
North e of Peach	Fresno	4,400	2	B	7,200	2	B	9,300	2	B
North w of Peach	Fresno	4,800	2	B	8,200	2	B	10,400	2	B
North e of Reed	Reedley	15,000	2	E	19,700	2	E	20,500	2	E
North w of SR 41	Fresno	2,400	2	B	7,300	2	B	7,900	2	B
North e of Walnut	Fresno	2,100	2	B	6,500	2	B	7,100	2	B
North w of Walnut	Fresno	2,100	2	B	6,000	2	B	6,500	2	B
North e of West	Fresno	2,300	2	B	3,500	2	B	3,900	2	B
North w of West	Fresno	1,500	2	B	2,700	2	B	3,200	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
O St. n of Fresno	Fresno	2,700	2	B	4,600	2	B	4,900	2	B
O St. s of Fresno	Fresno	3,800	2	B	5,200	2	B	5,800	2	B
O St. n of SR 180	Fresno	5,600	2	B	6,200	2	B	6,400	2	B
O St. s of SR 180	Fresno	8,600	2	B	8,300	2	B	8,500	2	B
Oakland w of Jameson	Unincorporated	400	2	A	600	2	A	700	2	A
Oakland e of SR 145	Unincorporated	100	2	A	100	2	A	100	2	A
Oakland e of SR 269	Unincorporated	400	2	A	700	2	A	800	2	A
Olive w of Clovis	Fresno	12,400	4	B	9,600	4	B	10,400	4	B
Olive e of Marks	Fresno	4,400	2	B	11,800	4	B	12,800	4	B
Olive w of Marks	Fresno	6,000	2	B	14,000	4	B	15,300	4	B
Olsen e of Reed	Reedley	1,900	2	A	300	2	A	700	2	A
Olsen w of Reed	Reedley	3,400	2	B	4,400	2	B	4,400	2	B
Orange n of Butler	Fresno	2,800	2	B	3,100	4	B	3,500	4	B
Orange s of Butler	Fresno	6,300	2	B	7,900	4	B	8,500	4	B
Orange s of SR 180	Fresno	8,100	2	B	8,300	4	B	8,700	4	B
P St. n of Fresno	Fresno	4,400	6	B	7,800	6	B	8,700	6	B
P St. s of Fresno	Fresno	3,000	6	B	4,700	6	B	5,500	6	B
P St. n of SR 180	Fresno	2,500	6	B	4,100	6	B	4,700	6	B
P St. s of SR 180	Fresno	1,500	6	B	2,300	6	B	2,600	6	B
Paige e of Dickenson	Unincorporated	600	2	A	1,100	2	A	1,300	2	A
Palm n of Ashlan	Fresno	17,700	4	B	20,800	4	B	21,900	4	B
Palm s of Ashlan	Fresno	19,800	4	B	24,700	4	B	27,400	4	C
Palm n of Belmont	Fresno	12,900	4	B	12,400	4	B	14,700	4	B
Palm s of Belmont	Fresno	7,300	4	B	7,700	4	B	8,500	4	B
Palm n of Bullard	Fresno	18,300	4	B	26,700	4	C	31,500	4	C
Palm s of Bullard	Fresno	9,700	4	B	16,100	4	B	19,900	4	B
Palm n of Herndon	Fresno		0		34,500	4	F	37,700	4	F
Palm s of Herndon	Fresno	10,300	4	B	23,200	4	B	28,400	4	C
Palm n of McKinley	Fresno	20,400	4	B	19,200	4	B	21,000	4	B
Palm s of McKinley	Fresno	21,300	4	B	20,700	4	B	22,600	4	B
Palm s of Nees	Fresno		0		29,600	4	C	32,500	4	D
Palm n of Shaw	Fresno	21,100	4	B	25,000	4	B	27,600	4	C
Palm s of Shaw	Fresno	14,700	4	B	19,100	4	B	21,100	4	B
Palm n of Shields	Fresno	13,800	4	B	17,300	4	B	19,400	4	B
Palm s of Shields	Fresno	15,400	4	B	16,300	4	B	18,500	4	B
Panoche e of Fairfax	Unincorporated	700	2	A	1,900	2	A	2,000	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Panoche w of Fairfax	Unincorporated	700	2	A	1,300	2	A	1,400	2	A
Panoche e of I-5	Unincorporated	200	2	A	700	2	A	900	2	A
Panoche w of SR 180	Unincorporated	600	2	A	3,100	2	B	3,300	2	B
Panoche e of SR 33	Unincorporated	500	2	A	2,800	2	B	2,900	2	B
Parlier e of Academy	Parlier	400	2	A	800	2	A	800	2	A
Parlier w of Buttonwillow	Reedley	400	2	A	800	2	A	900	2	A
Parlier e of Reed	Reedley	1,200	2	A	1,500	2	A	1,500	2	A
Peach n of Alluvial	Clovis	100	4	B	2,500	4	B	3,100	4	B
Peach s of Alluvial	Clovis	300	4	B	3,300	4	B	4,800	4	B
Peach n of American	Unincorporated	400	2	B	2,300	2	B	2,700	2	B
Peach n of Ashlan	Fresno	5,600	4	B	8,300	4	B	9,900	4	B
Peach n of Behymer	Unincorporated		0		200	4	B	300	4	B
Peach n of Belmont	Fresno	11,400	2	B	32,100	4	D	35,000	4	F
Peach s of Belmont	Fresno	10,100	2	B	24,700	4	B	26,100	4	C
Peach n of Butler	Fresno	9,000	2	B	20,600	4	B	21,500	4	B
Peach s of Butler	Fresno	8,400	2	B	24,000	4	B	27,200	4	C
Peach n of Central	Unincorporated	600	2	B	2,600	2	B	3,100	2	B
Peach s of Central	Unincorporated	400	2	B	2,300	2	B	2,700	2	B
Peach n of Church	Fresno	8,600	2	B	24,000	4	B	27,300	4	C
Peach s of Church	Fresno	7,700	2	B	14,400	4	B	16,700	4	B
Peach s of Copper	Unincorporated		0		500	4	B	700	4	B
Peach n of Herndon	Clovis	1,700	4	B	7,100	4	B	9,700	4	B
Peach n of Jensen	Fresno	2,900	2	B	10,200	4	B	12,500	4	B
Peach s of Jensen	Fresno	1,000	2	B	5,800	2	B	7,800	2	B
Peach s of McKinley	Fresno	19,500	4	B	15,500	4	B	19,200	4	B
Peach s of Nees	Clovis	-	4	B	2,200	4	B	2,700	4	B
Peach n of North	Fresno	2,200	2	B	4,900	2	B	5,400	2	B
Peach s of North	Unincorporated	1,700	2	B	3,700	2	B	4,200	2	B
Peach s of Shaw	Clovis	20,300	4	B	23,300	4	B	26,500	4	C
Peach n of Shepherd	Unincorporated		0		500	4	B	700	4	B
Peach s of Shepherd	Clovis		0		1,300	2	B	1,700	2	B
Peach n of SR 180	Fresno	7,700	2	B	17,200	2	F	18,100	2	F
Peach s of SR 180	Fresno	13,100	2	C	23,900	2	F	24,800	2	F
Perrin e of Chestnut	Fresno		0		700	4	B	1,100	4	B
Perrin w of Chestnut	Fresno		0		400	4	B	500	4	B
Perrin w of Maple	Fresno	200	4	B	2,200	4	B	2,500	4	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Piedra n of SR 180	Unincorporated	1,000	2	A	1,200	2	A	1,200	2	A
Placer s of American	Unincorporated	400	2	A	700	2	A	700	2	A
Placer n of Manning	San Joaquin	2,900	2	B	5,700	2	C	5,800	2	C
Polk n of Ashlan	Fresno	4,100	2	B	15,100	4	B	16,500	4	B
Polk s of Ashlan	Fresno	3,200	2	B	11,700	4	B	13,500	4	B
Polk n of McKinley	Fresno	2,100	2	B	8,500	4	B	10,000	4	B
Polk s of Shaw	Fresno	10,000	2	B	26,200	4	C	28,100	4	C
Polk n of Shields	Fresno	2,700	2	B	10,300	4	B	11,700	4	B
Polk s of Shields	Fresno	2,700	2	B	11,900	4	B	13,700	4	B
Rainbow s of SR 180	Unincorporated	1,500	2	A	1,500	2	A	1,500	2	A
Reed n of Adams	Unincorporated	5,200	2	B	8,300	4	B	8,500	4	B
Reed s of Adams	Unincorporated	4,600	2	B	7,000	4	B	7,200	4	B
Reed n of Manning	Reedley	6,200	2	C	9,400	4	A	9,700	4	A
Reed s of Manning	Reedley	5,600	2	C	8,000	2	C	8,000	2	C
Reed s of SR 180	Unincorporated	4,400	2	B	6,400	2	C	6,400	2	C
Rose e of Academy	Unincorporated	4,100	2	B	5,000	2	B	5,000	2	B
Rose w of Academy	Unincorporated	3,800	2	B	4,700	2	B	4,900	2	B
Rose e of Bethel	Unincorporated	3,800	2	B	4,700	2	B	4,900	2	B
Rose w of Bethel	Unincorporated	3,100	2	B	3,900	2	B	3,900	2	B
Rose e of McCall	Selma	4,600	2	B	5,400	2	C	5,400	2	C
Russell n of I-5	Unincorporated	700	2	A	1,800	2	A	2,200	2	A
Russell n of Nees	Unincorporated	1,300	2	A	3,700	2	B	4,000	2	B
Russell s of Nees	Unincorporated	2,400	2	A	3,900	2	B	4,100	2	B
Russell n of Shields	Unincorporated	600	2	A	2,600	2	A	3,000	2	B
Russell s of Shields	Unincorporated	1,000	2	A	3,800	2	B	4,300	2	B
Russell s of SR 33	Unincorporated	1,300	2	A	3,600	2	B	3,800	2	B
San Benito e of Van Ness	Fresno	5,200	4	B	5,700	4	B	5,800	4	B
San Diego n of Belmont	Unincorporated	1,000	2	A	1,300	2	A	1,400	2	A
San Diego s of Belmont	Unincorporated	1,200	2	A	1,300	2	A	1,300	2	A
San Diego n of California	Unincorporated	200	2	A	300	2	A	300	2	A
San Diego s of California	Unincorporated	300	2	A	600	2	A	700	2	A
San Diego n of Manning	Unincorporated	100	2	A	200	2	A	200	2	A
San Diego s of SR 33	Unincorporated	1,200	2	A	1,500	2	A	1,600	2	A
San Jose s of Bullard	Fresno		0		3,900	4	B	7,500	4	B
SantaFeGrd s of SR 180	Unincorporated	400	2	A	1,300	2	A	1,300	2	A
Shaw w of Academy	Unincorporated	4,500	2	B	4,300	4	A	4,600	4	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Shaw e of Blackstone	Fresno	27,000	6	B	35,800	6	B	39,100	6	C
Shaw w of Blackstone	Fresno	25,100	6	B	32,300	6	B	37,100	6	B
Shaw e of Bryan	Fresno	9,900	2	B	18,600	6	B	21,600	6	B
Shaw w of Bryan	Fresno	6,500	2	B	9,600	6	B	10,600	6	B
Shaw e of Cedar	Fresno	49,600	6	D	52,000	6	F	55,300	6	F
Shaw w of Cedar	Fresno	27,600	6	B	32,200	6	B	36,400	6	B
Shaw e of Chestnut	Fresno	54,500	6	F	80,000	6	F	83,900	6	F
Shaw w of Chestnut	Fresno	54,600	6	F	67,500	6	F	69,200	6	F
Shaw e of Clovis	Clovis	16,900	6	B	36,600	6	B	40,600	6	C
Shaw w of Clovis	Clovis	46,200	6	C	59,500	6	F	62,400	6	F
Shaw e of De Wolf	Unincorporated	6,100	2	B	12,500	6	B	13,400	6	B
Shaw w of De Wolf	Unincorporated	6,700	2	B	13,800	6	B	15,400	6	B
Shaw e of Dickenson	Unincorporated	6,800	2	C	11,400	4	C	11,400	4	C
Shaw w of Dickenson	Unincorporated	5,200	2	B	6,900	2	C	7,200	2	C
Shaw e of First	Fresno	50,200	6	D	53,900	6	F	57,600	6	F
Shaw w of First	Fresno	60,000	6	F	64,100	6	F	69,500	6	F
Shaw e of Fowler	Clovis	13,900	4	B	27,800	4	C	29,900	4	C
Shaw w of Fowler	Clovis	23,900	4	B	36,400	6	B	39,400	6	C
Shaw e of Grantland	Fresno	7,700	2	B	10,900	2	B	11,800	2	B
Shaw w of Grantland	Fresno	7,900	2	B	12,800	4	B	13,000	4	B
Shaw e of Hayes	Fresno	11,000	2	B	22,900	6	B	26,100	6	B
Shaw w of Hayes	Fresno	9,900	2	B	18,600	6	B	21,600	6	B
Shaw e of Highland	Unincorporated	4,900	2	B	8,300	6	B	9,200	6	B
Shaw w of Highland	Unincorporated	6,200	2	B	11,200	6	B	12,200	6	B
Shaw e of Leonard	Unincorporated	6,500	2	B	15,000	6	B	16,600	6	B
Shaw w of Leonard	Unincorporated	5,800	2	B	12,200	6	B	13,100	6	B
Shaw e of Marks	Fresno	48,800	6	D	68,100	6	F	73,000	6	F
Shaw w of Marks	Fresno	46,100	6	C	70,400	6	F	76,100	6	F
Shaw e of McCall	Unincorporated	5,900	2	C	7,200	4	A	7,400	4	A
Shaw w of McCall	Unincorporated	5,000	2	B	7,900	6	B	7,800	6	B
Shaw e of Palm	Fresno	49,700	6	D	61,100	6	F	64,100	6	F
Shaw w of Palm	Fresno	44,900	6	C	56,300	6	F	62,000	6	F
Shaw e of Peach	Clovis	57,900	6	F	64,600	6	F	66,300	6	F
Shaw w of Peach	Clovis	54,700	6	F	72,000	6	F	75,000	6	F
Shaw e of Polk	Fresno	21,400	2	F	50,500	6	D	54,100	6	F
Shaw w of Polk	Fresno	11,000	2	B	22,900	6	B	26,100	6	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Shaw e of SR 145	Unincorporated	2,800	2	B	4,900	2	B	5,100	2	B
Shaw w of SR 41	Fresno	70,600	6	F	80,300	6	F	84,000	6	F
Shaw e of Temperance	Clovis	8,200	2	B	15,500	6	B	17,100	6	B
Shaw w of Temperance	Clovis	4,900	2	B	14,500	4	B	16,500	4	B
Shaw e of West	Fresno	21,200	6	B	34,300	6	B	39,600	6	C
Shaw w of West	Fresno	32,000	6	B	47,300	6	C	51,500	6	F
Shaw e of Willow	Clovis	58,000	6	F	75,700	6	F	77,800	6	F
Shaw w of Willow	Clovis	53,400	6	F	69,900	6	F	71,700	6	F
Shepherd e of Cedar	Fresno	6,500	2	B	20,800	4	B	23,500	4	B
Shepherd w of Cedar	Fresno	6,900	2	B	20,800	4	B	23,700	4	B
Shepherd e of Chestnut	Fresno	5,000	2	B	19,100	4	B	22,200	4	B
Shepherd w of Chestnut	Fresno	5,700	2	B	17,200	4	B	21,000	4	B
Shepherd e of Fowler	Clovis	2,400	2	B	10,100	4	B	12,400	4	B
Shepherd w of Fowler	Clovis	3,100	2	B	12,600	4	B	15,700	4	B
Shepherd e of Friant	Fresno	8,600	4	B	23,500	4	B	27,100	4	C
Shepherd e of Maple	Fresno	5,700	2	B	17,200	4	B	21,000	4	B
Shepherd w of Maple	Fresno	6,500	2	B	20,800	4	B	23,500	4	B
Shepherd e of Minnewawa	Clovis	2,600	2	B	12,500	4	B	15,800	4	B
Shepherd e of Peach	Clovis		0		10,900	4	B	14,100	4	B
Shepherd w of Peach	Clovis	3,000	2	B	11,000	4	B	14,200	4	B
Shepherd e of Temperance	Clovis	1,300	2	B	16,100	4	B	18,200	4	B
Shepherd w of Temperance	Clovis	1,200	2	B	8,000	4	B	10,200	4	B
Shepherd e of Willow	Clovis	4,000	2	B	12,000	4	B	15,200	4	B
Shepherd w of Willow	Fresno	4,800	2	B	18,600	4	B	21,500	4	B
Shields e of Blackstone	Fresno	37,100	4	F	46,000	4	F	47,600	4	F
Shields w of Blackstone	Fresno	39,000	4	F	47,200	4	F	49,100	4	F
Shields e of Blythe	Fresno	700	2	B	14,800	6	B	14,700	6	B
Shields w of Blythe	Fresno	4,200	2	B	19,800	6	B	20,300	6	B
Shields e of Brawley	Fresno	4,800	2	B	27,500	6	B	26,900	6	B
Shields w of Brawley	Fresno	6,200	2	B	23,700	6	B	24,000	6	B
Shields e of Bryan	Fresno	3,500	2	B	11,000	6	B	10,900	6	B
Shields w of Bryan	Fresno	2,500	2	B	6,700	6	B	6,600	6	B
Shields e of Cedar	Fresno	15,800	4	B	24,300	4	B	28,400	4	C
Shields w of Cedar	Fresno	9,000	4	B	15,100	4	B	17,500	4	B
Shields w of Chestnut	Fresno	11,400	4	B	5,900	4	B	7,200	4	B
Shields e of Clovis	Fresno	10,700	4	B	24,400	4	B	29,700	4	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Shields w of Clovis	Fresno	10,800	4	B	30,700	4	C	35,400	4	F
Shields e of Cornelia	Fresno	4,400	2	B	19,100	6	B	19,700	6	B
Shields w of Cornelia	Fresno	4,300	2	B	18,400	6	B	18,400	6	B
Shields e of Dickenson	Unincorporated	2,800	2	B	6,500	2	C	6,400	2	C
Shields w of Dickenson	Unincorporated	3,700	2	B	6,800	2	C	6,900	2	C
Shields w of Fairfax	Unincorporated	600	2	A	1,300	2	A	1,200	2	A
Shields e of First	Fresno	31,100	4	C	35,600	4	F	38,000	4	F
Shields w of First	Fresno	30,500	4	C	32,800	4	D	36,000	4	F
Shields e of Fowler	Fresno	13,600	2	C	15,900	2	D	17,400	2	F
Shields w of Fowler	Fresno	15,300	2	C	23,300	4	B	23,800	4	B
Shields e of Grantland	Fresno	2,500	2	B	6,700	6	B	6,600	6	B
Shields w of Grantland	Unincorporated	4,700	2	B	9,700	4	B	9,800	4	B
Shields e of Hayes	Fresno	3,900	2	B	13,300	6	B	13,500	6	B
Shields w of Hayes	Fresno	3,400	2	B	10,100	6	B	10,000	6	B
Shields e of I-5	Unincorporated	700	2	A	1,200	2	A	1,300	2	A
Shields e of Marks	Fresno		0		57,300	6	F	59,200	6	F
Shields w of Marks	Fresno	10,700	2	B	46,600	6	C	47,600	6	D
Shields e of Palm	Fresno	30,900	4	C	39,900	4	F	42,100	4	F
Shields w of Palm	Fresno	28,200	4	C	38,700	4	F	40,800	4	F
Shields e of Polk	Fresno	3,900	2	B	16,400	6	B	16,500	6	B
Shields w of Polk	Fresno	3,900	2	B	13,100	6	B	13,800	6	B
Shields e of Russell	Unincorporated	100	2	A	800	2	A	700	2	A
Shields w of Russell	Unincorporated	400	2	A	1,200	2	A	1,400	2	A
Shields e of SR 145	Unincorporated	2,400	2	A	5,200	2	B	5,500	2	C
Shields w of SR 145	Unincorporated	2,800	2	B	6,600	2	C	6,500	2	C
Shields w of SR 41	Fresno	50,700	4	F	59,500	4	F	61,000	4	F
Shields e of Temperance	Fresno	1,100	2	B	3,900	2	B	3,900	2	B
Shields w of Temperance	Fresno	11,500	2	B	8,500	2	B	9,700	2	B
Shields e of Valentine	Fresno	4,600	2	B	32,300	6	B	32,500	6	B
Shields w of Valentine	Fresno	4,900	2	B	27,500	6	B	27,100	6	B
Shields e of West	Fresno	18,100	4	B	31,200	4	C	33,000	4	D
Shields w of West	Fresno	11,300	4	B	33,500	4	D	35,700	4	F
Sierra w of Clovis	Clovis	900	2	B	1,900	2	B	2,400	2	B
Sierra e of Willow	Clovis	1,400	2	B	1,900	2	B	3,000	2	B
Springfild w of Buttonwillow	Reedley	500	2	A	900	2	A	800	2	A
SR 145 n of American	Unincorporated	5,300	2	B	6,100	2	C	6,400	2	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR 145 s of American	Unincorporated	2,800	2	B	3,200	2	B	3,400	2	B
SR 145 n of Colorado	Unincorporated	1,700	2	A	2,900	2	B	2,700	2	B
SR 145 e of I-5	Unincorporated	4,200	2	B	5,400	2	C	5,200	2	B
SR 145 n of Jensen	Kerman	4,000	2	B	6,400	2	C	6,600	2	C
SR 145 s of Jensen	Unincorporated	2,300	2	A	3,100	2	B	3,400	2	B
SR 145 n of Kamm	Unincorporated	2,100	2	A	2,800	2	B	2,700	2	B
SR 145 s of Kamm	Unincorporated	2,000	2	A	2,700	2	B	2,600	2	A
SR 145 n of Manning	Unincorporated	1,300	2	A	1,500	2	A	1,700	2	A
SR 145 s of Manning	Unincorporated	800	2	A	700	2	A	800	2	A
SR 145 n of McKinley	Unincorporated	7,000	2	C	12,600	2	D	14,000	2	E
SR 145 s of McKinley	Unincorporated	8,500	2	C	16,700	2	E	17,400	2	E
SR 145 n of Mt. Whitney	Unincorporated	5,100	2	B	5,800	2	C	5,700	2	C
SR 145 s of Mt. Whitney	Unincorporated	200	2	A	900	2	A	700	2	A
SR 145 n of Oakland	Unincorporated	400	2	A	1,200	2	A	1,000	2	A
SR 145 s of Oakland	Unincorporated	400	2	A	1,300	2	A	1,100	2	A
SR 145 n of Shaw	Unincorporated	4,800	2	B	13,100	2	D	14,900	2	E
SR 145 s of Shaw	Unincorporated	6,400	2	C	14,600	2	E	16,000	2	E
SR 145 n of Shields	Unincorporated	5,200	2	B	12,000	2	D	13,300	2	D
SR 145 s of Shields	Unincorporated	7,000	2	C	12,600	2	D	14,000	2	E
SR 145 n of SR 180	Kerman	10,300	2	D	17,800	2	E	18,600	2	E
SR 145 s of SR 180	Kerman	14,000	2	E	21,800	2	E	22,300	2	F
SR 168 e of Academy	Unincorporated	5,500	2	C	7,700	2	C	7,800	2	C
SR 168 w of Academy	Unincorporated	4,600	2	B	7,500	2	C	7,600	2	C
SR 168 e of McCall	Unincorporated	4,300	2	B	7,500	4	B	7,700	4	B
SR 168 w of McCall	Unincorporated	4,300	2	B	8,700	4	B	9,200	4	B
SR 168 n of Millerton	Unincorporated	700	2	A	1,900	2	A	1,800	2	A
SR 168 Exp e of Temperance	Clovis		0		18,200	4	B	21,000	4	B
SR 180 n of 7th	Mendota	3,200	2	B	6,500	2	C	6,800	2	C
SR 180 s of 7th	Mendota	2,000	2	A	6,400	2	C	6,900	2	C
SR 180 e of Academy	Unincorporated	8,500	2	C	14,100	2	C	13,800	2	B
SR 180 w of Academy	Unincorporated	9,000	4	A	18,400	4	B	18,600	4	B
SR 180 e of Alta	Unincorporated	2,400	2	A	2,400	2	A	2,400	2	A
SR 180 w of Alta	Unincorporated	2,900	2	B	4,200	2	B	4,000	2	B
SR 180 n of Belmont	Mendota	2,700	2	B	7,700	2	C	8,300	2	C
SR 180 s of Belmont	Unincorporated	3,600	2	B	11,700	2	D	12,100	2	D
SR 180 w of Bethel	Unincorporated	16,900	4	B	30,300	4	C	31,000	4	C

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR 180 e of Broadway	Fresno	24,300	4	B	23,800	4	B	24,900	4	B
SR 180 w of Broadway	Fresno	16,300	4	B	15,600	4	B	16,400	4	B
SR 180 e of Cedar	Fresno	29,800	4	C	21,100	6	B	23,200	6	B
SR 180 w of Cedar	Fresno	45,500	4	F	40,400	6	C	41,500	6	C
SR 180 e of Chestnut	Fresno	37,500	4	F	43,700	6	C	45,300	6	C
SR 180 w of Chestnut	Fresno	36,000	4	F	31,600	6	B	33,600	6	B
SR 180 e of Clovis	Fresno	29,600	4	C	40,900	6	C	42,600	6	C
SR 180 w of Clovis	Fresno	29,500	4	C	36,100	6	B	39,200	6	C
SR 180 e of Dickenson	Unincorporated	7,500	2	C	13,500	2	D	13,400	2	D
SR 180 w of Dickenson	Unincorporated	6,900	2	C	14,300	2	E	14,300	2	E
SR 180 e of First	Fresno	44,000	4	F	38,300	6	C	39,500	6	C
SR 180 w of First	Fresno	39,500	4	F	35,600	6	B	36,800	6	B
SR 180 e of Fowler	Fresno	17,000	2	D	23,600	4	B	24,000	4	B
SR 180 w of Fowler	Fresno	21,600	4	B	31,900	6	B	33,600	6	B
SR 180 e of Grantland	Unincorporated	3,800	2	B	9,700	2	B	9,600	2	B
SR 180 w of Grantland	Unincorporated	3,800	2	B	10,400	2	B	10,200	2	B
SR 180 e of Howard	Unincorporated	6,900	2	C	14,200	2	E	14,200	2	E
SR 180 w of Howard	Unincorporated	7,300	2	C	15,100	2	E	15,400	2	E
SR 180 e of James	Unincorporated	5,900	2	C	15,100	2	E	15,200	2	E
SR 180 w of James	Unincorporated	4,100	2	B	13,300	2	D	13,300	2	D
SR 180 e of Lake	Unincorporated	3,200	2	B	9,600	2	D	9,700	2	D
SR 180 e of Marks	Fresno	5,600	4	B	5,000	4	B	8,000	4	B
SR 180 w of Marks	Fresno	5,600	4	B	6,600	4	B	8,600	4	B
SR 180 e of McCall	Unincorporated	9,000	4	A	24,100	4	B	24,800	4	B
SR 180 w of McCall	Unincorporated	8,300	4	B	26,200	4	C	27,000	4	C
SR 180 e of O St	Fresno	19,900	4	B	20,100	4	B	21,200	4	B
SR 180 w of O St	Fresno	24,300	4	B	25,500	4	C	26,600	4	C
SR 180 e of P St	Fresno	19,400	4	B	20,100	4	B	21,300	4	B
SR 180 e of Peach	Fresno	36,300	4	F	40,400	6	C	41,500	6	C
SR 180 w of Peach	Fresno	32,800	4	D	37,000	6	B	39,200	6	C
SR 180 e of Reed	Unincorporated	6,200	2	C	7,800	2	A	7,600	2	A
SR 180 w of Reed	Unincorporated	8,100	2	C	11,900	2	B	11,600	2	B
SR 180 e of Santa Fe Grade	Unincorporated	2,400	2	A	10,300	2	D	10,200	2	D
SR 180 n of Santa Fe Grade	Unincorporated	2,800	2	B	9,600	2	D	9,600	2	D
SR 180 e of SR 145	Kerman	8,700	2	D	16,700	2	E	17,300	2	E
SR 180 w of SR 145	Kerman	7,300	2	C	15,200	2	E	15,500	2	E

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR 180 e of SR 33	Mendota	4,500	2	B	7,900	2	C	8,200	2	C
SR 180 w of Temperance	Fresno	15,800	2	D	20,700	4	B	21,500	4	B
SR 180 e of Van Ness	Fresno	27,600	4	C	26,800	4	C	28,000	4	C
SR 180 w of Van Ness	Fresno	26,400	4	C	25,900	4	C	27,000	4	C
SR 180 e of West	Fresno	8,400	4	B	10,800	4	B	13,800	4	B
SR 180 w of West	Fresno	7,800	4	B	12,300	4	B	15,300	4	B
SR 198 s of Coalinga City	Coalinga		0		3,700	2	B	3,700	2	B
SR 198 e of I-5	Unincorporated	1,600	2	A	3,100	2	B	3,300	2	B
SR 198 w of I-5	Unincorporated	200	2	A	800	2	A	900	2	A
SR 198 w of SR 269	Unincorporated	3,400	2	B	5,100	2	B	5,300	2	B
SR 201 e of Academy	Kingsburg	9,500	2	D	15,900	4	C	17,100	4	C
SR 201 w of Academy	Kingsburg	11,800	2	D	19,800	4	D	21,200	4	D
SR 269 n of I-5	Unincorporated	2,500	2	A	10,100	2	D	11,900	2	D
SR 269 n of Jayne	Unincorporated	10,600	2	D	18,600	2	E	20,300	2	E
SR 269 s of Jayne	Unincorporated	10,500	2	D	18,100	2	E	19,900	2	E
SR 269 s of Mt. Whitney	Unincorporated	3,500	2	B	3,700	2	B	3,700	2	B
SR 269 n of Oakland	Unincorporated	2,400	2	A	2,900	2	B	3,200	2	B
SR 269 s of Oakland	Unincorporated	2,400	2	A	2,900	2	B	3,100	2	B
SR 269 n of SR 198	Unincorporated	2,100	2	A	2,800	2	B	3,000	2	B
SR 269 s of SR 198	Unincorporated	3,100	2	B	5,100	2	B	5,500	2	C
SR 33 n of 12th	Firebaugh	12,400	2	D	16,900	2	E	17,400	2	E
SR 33 s of 12th	Firebaugh	7,700	2	C	12,200	2	D	12,800	2	D
SR 33 n of Belmont	Mendota	200	2	A	500	2	A	500	2	A
SR 33 s of Belmont	Unincorporated	1,400	2	A	2,400	2	A	2,600	2	B
SR 33 n of California	Unincorporated	600	2	A	1,300	2	A	1,500	2	A
SR 33 s of California	Unincorporated	600	2	A	1,100	2	A	1,400	2	A
SR 33 n of Clarkson	Unincorporated	600	2	A	1,000	2	A	1,300	2	A
SR 33 s of Clarkson	Unincorporated	800	2	A	1,400	2	A	1,800	2	A
SR 33 e of Coalinga City	Coalinga	3,600	2	B	6,800	2	C	7,500	2	C
SR 33 n of Fairfax	Unincorporated	3,300	2	B	5,100	2	B	5,400	2	C
SR 33 s of Fairfax	Unincorporated	2,000	2	A	3,900	2	B	4,100	2	B
SR 33 n of Harlan	Unincorporated	4,400	2	B	4,800	2	B	5,100	2	B
SR 33 e of I-5	Unincorporated	2,600	2	A	3,000	2	B	3,300	2	B
SR 33 s of Jayne	Unincorporated	1,400	2	A	3,200	2	B	3,900	2	B
SR 33 w of Jayne	Unincorporated	7,300	2	C	9,900	2	D	10,600	2	D
SR 33 n of Kamm	Unincorporated	500	2	A	900	2	A	1,300	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR 33 s of Kamm	Unincorporated	600	2	A	1,000	2	A	1,300	2	A
SR 33 n of Manning	Unincorporated	2,300	2	A	2,800	2	B	3,100	2	B
SR 33 s of Manning	Unincorporated	4,400	2	B	4,900	2	B	5,300	2	B
SR 33 n of Russell	Unincorporated	5,100	2	B	9,600	2	D	10,200	2	D
SR 33 s of Russell	Unincorporated	2,100	2	A	4,700	2	B	4,900	2	B
SR 33 n of San Diego	Firebaugh	4,300	2	B	7,300	2	C	7,600	2	C
SR 33 s of San Diego	Unincorporated	4,700	2	B	7,300	2	C	7,600	2	C
SR 33 n of SR 180	Mendota	5,000	2	B	8,500	2	C	8,900	2	D
SR 33 s of SR 180	Mendota	1,300	2	A	2,100	2	A	2,200	2	A
SR 33 n of SR 198	Unincorporated	3,000	2	B	4,000	2	B	3,800	2	B
SR 33/198 n of Coalinga City	Unincorporated	400	2	A	1,900	2	A	1,800	2	A
SR 33/198 s of SR 198	Unincorporated	4,000	2	B	5,500	2	C	5,300	2	C
SR 41 n of American	Unincorporated	16,800	2	D	39,600	4	F	40,600	4	F
SR 41 s of American	Unincorporated	17,500	2	F	25,000	4	B	26,700	4	B
SR 41 n of Central	Fresno	15,800	2	C	39,000	4	F	40,100	4	F
SR 41 s of Central	Unincorporated	16,800	2	D	39,600	4	F	40,600	4	F
SR 41 n of Elkhorn	Unincorporated	4,800	2	B	14,800	4	C	16,500	4	C
SR 41 s of Jensen	Fresno	24,200	4	B	51,500	4	C	56,400	4	D
SR 41 n of Manning	Unincorporated	12,000	2	D	22,900	4	B	24,700	4	B
SR 41 s of Manning	Unincorporated	12,000	2	D	18,300	4	B	19,800	4	B
SR 41 n of Mt. Whitney	Unincorporated	8,400	2	C	17,000	4	C	18,900	4	D
SR 41 s of Mt. Whitney	Unincorporated	7,000	2	C	13,900	4	C	15,900	4	C
SR 41 n of Mtn. View	Unincorporated	9,500	2	D	18,300	4	D	19,800	4	D
SR 41 s of Mtn. View	Unincorporated	8,700	2	D	14,800	4	C	16,500	4	C
SR 41 n of North	Fresno	13,700	4	B	51,500	4	C	56,400	4	D
SR 41 s of North	Fresno	16,100	2	D	39,000	4	F	40,100	4	F
SR 43 n of Elkhorn	Unincorporated	8,800	2	D	16,400	2	E	18,000	2	E
SR 43 s of Elkhorn	Unincorporated	11,100	2	D	21,400	2	E	23,000	2	F
SR 43 n of Mt. Whitney	Unincorporated	10,800	2	D	21,100	2	E	22,900	2	F
SR 43 n of Mtn. View	Unincorporated	12,500	2	D	20,000	2	E	21,300	2	E
SR 43 s of Mtn. View	Unincorporated	12,500	2	D	20,500	2	E	22,000	2	E
SR 63 n of Adams	Unincorporated	1,700	2	A	1,600	2	A	1,600	2	A
SR 63 s of Adams	Unincorporated	1,700	2	A	1,700	2	A	1,800	2	A
SR 63 n of Manning	Unincorporated	3,300	2	B	3,500	2	B	3,700	2	B
SR 63 s of Manning	Unincorporated	2,800	2	B	3,300	2	B	3,800	2	B
SR 63 s of SR 180	Unincorporated	800	2	A	700	2	A	700	2	A

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR168 From SR180 to McKinley	Fresno		0		106,200	6	E	108,400	6	E
SR168 From McKinley to Shields	Fresno		0		133,500	6	F	138,700	6	F
SR168 From Shields to Ashland	Fresno		0		147,200	6	F	153,400	6	F
SR168 From Ashland to Shaw	Fresno		0		138,200	6	F	144,200	6	F
SR168 From Shaw to Bullard	Clovis		0		100,100	6	D	109,200	6	E
SR168 From Bullard to Herndon	Clovis		0		71,300	4	E	79,900	4	F
SR168 From Herndon to Fowler	Clovis		0		43,500	4	C	49,500	4	D
SR168 From Fowler to Temperance	Clovis		0		28,700	4	B	33,200	4	C
SR168 From Temperance to Locan	Clovis		0		18,200	4	B	21,000	4	B
SR168 From Locan to DeWolf	Clovis		0		14,400	4	B	17,200	4	B
SR168 From DeWolf to Shepherd	Unincorporated		0		9,300	4	B	11,500	4	B
SR180 From Brawley to Marks	Fresno		0		20,600	2	F	22,100	2	F
SR180 From Marks to Teilman	Fresno		0		26,500	2	F	27,300	2	F
SR180 From Teilman to SR99	Fresno		0		53,400	6	B	58,900	6	C
SR 180 From SR 99 to Fulton	Fresno	41,300	6	B	97,700	6	D	104,400	6	D
SR180 From Fulton to Blackstone	Fresno	42,200	6	B	100,400	6	D	105,800	6	D
SR180 From Blackstone to SR41	Fresno	35,700	6	B	107,900	6	E	112,300	6	E
SR180 From SR 41 to Cedar	Fresno		0		194,300	6	F	198,500	6	F
SR180 From Cedar to Chestnut	Fresno		0		109,700	6	F	112,800	6	F
SR180 From Chestnut to Peach	Fresno		0		118,600	4	F	122,100	4	F
SR180 From Peach to Clovis	Fresno		0		89,800	4	F	92,900	4	F
SR180 From Clovis to Fowler	Fresno		0		61,300	4	F	62,300	4	F
SR180 From Fowler to Temperance	Fresno		0		50,600	4	F	51,400	4	F
SR-41 From SR-99 To M	Fresno	54,300	6	B	61,900	4	C	67,300	4	C
SR-41 From M To Divisadero	Fresno	73,500	6	C	134,500	6	F	144,300	6	F
SR-41 From Divisadero To McKinley	Fresno	107,000	8	D	157,500	8	F	165,700	8	F
SR-41 From McKinley To SR-168	Fresno	118,000	6	F	138,800	6	F	142,100	6	F
SR-41 From SR-168 To Bullard	Fresno	98,000	6	E	148,700	6	F	155,600	6	F
SR-41 From Bullard To Herndon	Fresno	75,000	6	C	143,600	6	F	150,900	6	F
SR-41 From Herndon To Friant	Fresno	47,500	6	B	134,800	6	F	149,000	6	F
SR-41 From Friant To Madera	Fresno	12,300	1	B	132,300	4	F	178,900	4	F
SR-99 From Tulare Co To SR-201	Unincorporated	37,900	4	C	100,400	6	F	114,800	6	F
SR-99 From SR-201 To Bethel	Kingsburg	40,500	4	C	97,500	6	F	110,200	6	F
SR-99 From Bethel To Mountain	Kingsburg	41,500	4	C	96,900	6	F	107,300	6	F
SR-99 From Mountain To 2nd	Selma	43,000	4	D	100,600	6	F	111,900	6	F
SR-99 From 2nd To SR-43	Selma	44,000	4	D	97,800	6	F	107,800	6	F

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
SR-99 From SR-43 To Mannin	Selma	65,900	6	D	109,700	6	F	118,200	6	F
SR-99 From Manning To Merced	Fowler	61,000	6	C	116,500	6	F	123,700	6	F
SR-99 From Merced To Adams	Fowler	67,100	6	D	123,600	6	F	130,800	6	F
SR-99 From Adams To Clovis	Fowler	66,000	6	D	123,400	6	F	130,800	6	F
SR-99 From Clovis To American	Fowler	56,000	6	C	103,600	6	F	109,300	6	F
SR-99 From American To Chestnut	Unincorporated	57,000	6	C	105,500	6	E	112,100	6	E
SR-99 From Chestnut To Central	Unincorporated	49,000	6	B	91,000	6	D	94,900	6	D
SR-99 From Central To Cedar	Unincorporated	62,000	6	C	107,300	6	E	111,700	6	E
SR-99 From Cedar To North	Fresno	59,000	6	C	100,300	6	E	102,300	6	E
SR-99 From North To SR-41	Fresno	66,000	6	C	117,000	6	F	125,900	6	F
SR-99 From SR-41 To Ventura	Fresno	92,000	6	D	127,800	4	F	133,700	4	F
SR-99 From Ventura To Fresno	Fresno	64,000	6	C	116,600	6	F	126,200	6	F
SR-99 From Fresno To SR-180	Fresno	64,100	6	C	112,700	6	F	122,000	6	F
SR-99 From SR-180 To Belmont	Fresno	63,000	6	C	129,300	6	F	138,300	6	F
SR-99 From Belmont To Olive	Fresno	71,000	6	C	140,700	6	F	149,500	6	F
SR-99 From Olive To McKinley	Fresno	68,000	6	C	132,900	6	F	142,600	6	F
SR-99 From McKinley To Clinton	Fresno	61,000	6	C	115,100	6	F	124,100	6	F
SR-99 From Clinton To Shields	Fresno	56,000	6	C	100,300	6	D	109,000	6	E
SR-99 From Shields To Ashlan	Fresno	57,600	6	C	117,100	6	F	128,100	6	F
SR-99 From Ashlan To Shaw	Fresno	41,000	4	C	99,900	4	F	110,400	4	F
SR-99 From Shaw To Herndon	Fresno	39,000	4	C	102,500	4	F	112,000	4	F
SR-99 From Herndon To Madison	Unincorporated	51,400	4	C	159,600	4	F	186,800	4	F
Stanislaus e of H St	Fresno	3,600	6	B	2,200	6	B	2,600	6	B
Stanislaus w of H St	Fresno	4,200	6	B	2,000	6	B	2,400	6	B
Stanislaus w of O St	Fresno	5,300	6	B	4,700	6	B	5,200	6	B
Stanislaus e of Van Ness	Fresno	5,400	6	B	4,600	6	B	5,000	6	B
Stanislaus w of Van Ness	Fresno	3,600	6	B	2,900	6	B	3,200	6	B
Stroud e of Academy	Kingsburg	2,800	2	B	4,200	2	B	4,300	2	B
Sunnyside s of Herndon	Clovis	1,400	4	B	2,000	4	B	2,000	4	B
Teague e of Cedar	Fresno	2,700	2	B	5,800	4	B	6,900	4	B
Teague e of Chestnut	Fresno	200	2	B	6,400	4	B	8,300	4	B
Teague w of Chestnut	Fresno	900	2	B	6,400	4	B	7,200	4	B
Teague e of Maple	Fresno	200	2	B	4,500	4	B	5,500	4	B
Teague w of Maple	Fresno	200	2	B	2,700	4	B	3,800	4	B
Teague w of Willow	Fresno	200	2	B	2,400	4	B	3,500	4	B
Temperance n of Adams	Fowler	6,100	2	C	12,800	2	D	13,800	2	E

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Temperance s of Adams	Fowler	4,400	2	B	10,100	2	D	11,000	2	D
Temperance n of Alluvial	Clovis	400	2	B	17,100	4	B	18,500	4	B
Temperance s of Alluvial	Clovis	600	2	B	18,200	4	B	20,000	4	B
Temperance n of American	Unincorporated	400	2	B	7,700	2	B	8,600	2	B
Temperance s of American	Unincorporated	500	2	A	7,100	2	C	8,000	2	C
Temperance n of Ashlan	Clovis	3,800	4	B	15,100	4	B	17,700	4	B
Temperance s of Ashlan	Fresno	1,600	4	B	15,800	4	B	20,000	4	B
Temperance n of Belmont	Fresno	4,000	2	B	13,400	4	B	17,500	4	B
Temperance s of Belmont	Fresno	1,900	2	B	5,300	4	B	8,500	4	B
Temperance n of Bullard	Clovis	4,600	2	B	15,600	4	B	19,000	4	B
Temperance s of Bullard	Clovis	5,300	2	B	14,900	4	B	17,400	4	B
Temperance n of Herndon	Clovis		0		18,000	4	B	21,500	4	B
Temperance s of Herndon	Clovis	1,300	2	B	12,100	4	B	15,600	4	B
Temperance n of Jensen	Fresno	2,000	2	B	25,200	4	B	28,000	4	C
Temperance s of Jensen	Unincorporated	600	2	B	7,900	2	B	9,100	2	B
Temperance n of McKinley	Fresno	24,500	4	B	36,200	4	F	40,500	4	F
Temperance s of McKinley	Fresno	21,900	2	F	32,500	4	D	37,400	4	F
Temperance n of Nees	Clovis	500	2	B	9,800	4	B	10,400	4	B
Temperance s of Nees	Clovis	400	2	B	17,100	4	B	18,500	4	B
Temperance n of Shaw	Clovis	1,700	4	B	12,800	4	B	15,300	4	B
Temperance s of Shaw	Clovis	3,700	2	B	14,800	4	B	17,400	4	B
Temperance s of Shepherd	Clovis	300	2	B	9,400	4	B	10,000	4	B
Temperance n of Shields	Fresno	18,500	4	B	31,400	4	C	35,500	4	F
Temperance s of Shields	Fresno	24,300	4	B	33,500	4	D	36,200	4	F
Temperance n of SR 180	Fresno	3,700	2	B	22,600	4	B	26,000	4	C
Temperance s of SR 180	Fresno	400	2	B	26,800	4	C	29,600	4	C
Tollhouse e of SR 168	Unincorporated	2,100	2	A	3,200	2	B	3,300	2	B
TrimmerSpr n of SR 180	Unincorporated	1,500	2	A	1,300	2	A	1,300	2	A
Tulare e of Clovis	Fresno		0		14,200	4	B	15,900	4	B
Tulare e of Fowler	Fresno		0		5,500	4	B	5,700	4	B
Tulare w of Fowler	Fresno		0		5,000	4	B	5,900	4	B
Tuolumne e of H St	Fresno	3,300	6	B	4,900	6	B	5,800	6	B
Tuolumne w of H St	Fresno	5,200	6	B	6,800	6	B	7,500	6	B
Tuolumne e of O St	Fresno	4,700	6	B	5,600	6	B	6,000	6	B
Tuolumne w of O St	Fresno	4,800	6	B	5,700	6	B	6,000	6	B
Tuolumne w of P St	Fresno	4,700	6	B	5,600	6	B	5,900	6	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
Tuolumne e of Van Ness	Fresno	4,200	6	B	6,000	6	B	6,500	6	B
Tuolumne w of Van Ness	Fresno	5,200	6	B	6,500	6	B	7,200	6	B
Upper Brdg w of Reed	Reedley	14,500	2	E	20,800	2	E	22,000	2	E
Valentine n of Ashlan	Fresno	3,100	4	B	10,100	4	B	13,300	4	B
Valentine s of Ashlan	Fresno	1,500	2	B	9,100	4	B	11,700	4	B
Valentine n of Clinton	Fresno	800	2	B	2,700	4	B	3,300	4	B
Valentine s of Clinton	Fresno	800	2	B	1,200	4	B	1,600	4	B
Valentine n of McKinley	Fresno	700	2	B	1,000	4	B	1,400	4	B
Valentine n of Shaw	Fresno	1,100	4	B	1,600	4	B	2,300	4	B
Valentine s of Shaw	Fresno	700	4	B	3,200	4	B	3,300	4	B
Valentine n of Shields	Fresno	300	2	B	900	4	B	1,200	4	B
Valentine s of Shields	Fresno	600	2	B	4,700	4	B	5,400	4	B
Van Ness n of Fresno	Fresno	7,900	4	B	10,400	4	B	11,300	4	B
Van Ness s of Fresno	Fresno	7,700	4	B	9,500	2	B	10,200	2	B
Van Ness n of SR 180	Fresno	11,800	4	B	15,500	4	B	17,100	4	B
Van Ness s of SR 180	Fresno	12,500	2	B	17,400	4	B	18,700	4	B
Ventura n of California	Fresno	11,500	4	B	10,500	4	B	11,300	4	B
Walnut s of California	Fresno	3,900	2	B	7,300	4	B	7,800	4	B
Walnut n of Church	Fresno	2,600	2	B	5,700	4	B	6,000	4	B
Walnut s of Church	Fresno	3,200	2	B	6,800	4	B	7,100	4	B
Walnut n of Jensen	Fresno	2,000	2	B	3,700	4	B	3,800	4	B
Walnut s of Jensen	Fresno	800	2	B	6,200	2	B	6,400	2	B
Walnut n of North	Fresno	500	2	B	600	2	B	700	2	B
WattsVally n of Ashlan	Unincorporated	300	2	A	100	2	A	100	2	A
Weber n of Belmont	Fresno	10,400	2	B	14,900	4	B	17,500	4	B
Weber w of Marks	Fresno	10,900	2	B	24,200	4	B	27,700	4	C
Weber n of McKinley	Fresno		0		28,100	4	C	30,500	4	C
Weber n of Shields	Fresno	22,000	2	F	44,300	4	F	48,100	4	F
Weber s of Shields	Fresno	16,500	2	D	25,600	4	C	28,100	4	C
West n of Ashlan	Fresno	31,600	4	C	35,100	4	F	38,800	4	F
West s of Ashlan	Fresno	24,900	4	B	26,800	4	C	28,400	4	C
West n of Bullard	Fresno	12,400	4	B	16,400	4	B	17,800	4	B
West s of Bullard	Fresno	12,600	4	B	17,200	4	B	18,800	4	B
West s of California	Fresno	800	2	B	2,300	2	B	2,900	2	B
West n of Church	Fresno	600	2	B	2,100	2	B	2,600	2	B
West s of Church	Fresno	300	2	B	1,500	2	B	2,100	2	B

TABLE A-1 ESTIMATED DAILY TRAFFIC VOLUMES AND LEVELS OF SERVICE - 1995, 2020 NO PROJECT AND 2020 PREFERRED SCENARIO										
Segment	Sphere of Influence	1995 Base			2020 No Project			2020 Preferred Scenario		
		VOLUME	LANES	LOS	VOLUME	LANES	LOS	VOLUME	LANES	LOS
West s of Herndon	Fresno	10,900	4	B	13,600	4	B	15,000	4	B
West n of Jensen	Fresno	200	2	B	1,200	2	B	1,500	2	B
West s of Jensen	Fresno	1,400	2	B	8,100	2	B	8,300	2	B
West n of McKinley	Fresno	29,600	4	C	24,800	4	B	27,000	4	C
West s of McKinley	Fresno	18,000	4	B	15,600	4	B	17,200	4	B
West n of North	Fresno	300	2	B	400	2	B	400	2	B
West n of Shaw	Fresno	18,500	4	B	25,200	4	B	27,600	4	C
West s of Shaw	Fresno	20,600	4	B	25,300	4	B	30,300	4	C
West n of Shields	Fresno	18,100	4	B	21,000	4	B	23,200	4	B
West s of Shields	Fresno	26,400	4	C	22,600	4	B	24,900	4	B
West s of SR 180	Fresno	600	2	B	3,700	2	B	4,100	2	B
Willow n of Alluvial	Fresno	10,500	6	B	39,000	6	C	44,300	6	C
Willow s of Alluvial	Fresno	11,100	6	B	43,500	6	C	50,900	6	E
Willow n of Ashlan	Fresno	29,600	4	C	25,800	4	C	27,800	4	C
Willow n of Behymer	Fresno	8,600	6	B	13,500	6	B	15,100	6	B
Willow s of Behymer	Fresno	8,600	6	B	22,700	6	B	26,100	6	B
Willow n of Bullard	Fresno	7,900	4	B	32,500	6	B	34,300	6	B
Willow s of Bullard	Fresno	7,500	6	B	27,400	6	B	30,700	6	B
Willow n of Copper	Unincorporated	3,700	2	B	13,900	2	C	15,000	2	C
Willow s of Copper	Fresno	6,500	6	B	11,600	6	B	13,000	6	B
Willow e of Friant	Unincorporated	3,100	2	B	7,400	2	B	8,700	2	B
Willow n of Herndon	Fresno	15,900	6	B	50,700	6	D	58,500	6	F
Willow s of Herndon	Fresno	17,900	4	B	47,700	6	D	50,600	6	D
Willow n of Nees	Fresno	6,300	6	B	32,000	6	B	35,600	6	B
Willow s of Nees	Fresno	7,300	6	B	35,900	6	B	41,200	6	C
Willow n of Shaw	Clovis	34,500	6	B	55,200	6	F	59,200	6	F
Willow s of Shaw	Clovis	31,300	4	C	32,200	4	D	32,400	4	D
Willow n of Shepherd	Fresno	5,600	6	B	24,800	6	B	28,900	6	B
Willow s of Shepherd	Fresno	6,100	6	B	24,400	6	B	26,700	6	B

COUNTY OF FRESNO

FINAL ENVIRONMENTAL IMPACT REPORT

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
1. <u>INTRODUCTION</u>	1-1
<u>DRAFT ENVIRONMENTAL IMPACT REPORT</u>	
2. <u>CHANGES TO THE DRAFT EIR</u>	2-1
3. <u>WRITTEN COMMENTS AND RESPONSES</u>	3-1
<u>State</u>	
1. <u>Carl L. Carlucci, State Department of Health Services (March 15, 2000)</u>	3-1
2. <u>Carol Birch, State Reclamation Board (March 16, 2000)</u>	3-3
3. <u>Moses Stites, State Department of Transportation (April 18, 2000)</u>	3-5
4. <u>Jason Marshall, Department of Conservation (April 21, 2000)</u>	3-9
5. <u>Jo Anne Kipps, California Environmental Protection Agency, California Regional Water Quality Control Board, Central Valley Region (April 24, 2000)</u>	3-15
6. <u>Mary Griggs, California State Lands Commission (April 27, 2000)</u>	3-17
<u>Local Agencies</u>	
7. <u>Mary Ann Ulik, City of Coalinga (April 14, 2000)</u>	3-19
8. <u>John R. Wright, City of Clovis (April 18, 2000)</u>	3-29
9. <u>Terry Bradley, Clovis Unified School District (April 20, 2000)</u>	3-33
10. <u>Melinda S. Marks, Fresno Metropolitan Flood Control District (April 20, 2000)</u>	3-35
11. <u>A. Michael Olmos, City of Reedley (April 20, 2000)</u>	3-37
12. <u>Nick P. Yovino, City of Fresno (April 21, 2000)</u>	3-39

Private Individuals/Groups

13.	<u>Thomas J. Riggs, Lozano Smith Attorneys at Law (April 10, 2000)</u>	3-49
14.	<u>Dennis Hardgrave, Development Planning Services (April 19, 2000)</u>	3-51
15.	<u>David Cehrs, Ph.D (April 20, 2000)</u>	3-53
16.	<u>Kelley M. Taber, De Duir & Somach (April 20, 2000)</u>	3-55
17.	<u>Richard Machado, Economic Development Corporation (April 20, 2000)</u>	3-57
18.	<u>Mary Savala and Faye Wall, The League of Women Voters of Fresno (April 20, 2000)</u>	3-59
19.	<u>Mary Savala and Faye Wall, The League of Women Voters of Fresno (April 20, 2000)</u>	3-71
20.	<u>Gregory Kirkpatrick, American Farmland Trust (April 21, 2000)</u>	3-79
21.	<u>Deborah North, River Parkway Trust (April 21, 2000)</u>	3-83
22.	<u>Harold Tokmakian (April 21, 2000)</u>	3-85

Letters Received After the Close of the Public Comment Period

23.	<u>The Growth Alternatives Alliance (May 3, 2000)</u>	3-87
24.	<u>Joni Johnson, Fresno Neighborhood Alliance (May 7, 2000)</u>	3-93
25.	<u>Joni Johnson, Fresno Neighborhood Alliance (June 22, 2000)</u>	3-97
4.	<u>PUBLIC HEARING COMMENTS</u>	4-1

LIST OF TABLES

<u>Table</u>	<u>Page</u>
3-1 <u>Comparison of Estimated Traffic Volumes and Levels of Service Under Draft EIR and Final EIR Growth Assumptions</u>	3-30

1. INTRODUCTION

This Final Environmental Impact Report (Final EIR) for the Fresno County General Plan was prepared in order to respond to written public comments received on the Draft EIR, circulated from March 3, 2000 to April 21, 2000.

Contents of the Final EIR

Responses to all substantive comments were prepared by the lead agency and its consultant in accordance with the CEQA Guidelines. Comments and responses are grouped by letter and where appropriate, responses are cross-referenced between two letters. As the subject matter of one topic may overlap between letters, the reader must occasionally refer to more than one letter and response to collect all information on a given subject. Where this occurs, cross-references are provided.

These comments and responses, in conjunction with the Draft EIR and the text changes, constitute the Final EIR, which will be considered for certification by the Fresno County Board of Supervisors.

The Final EIR is organized as follows:

Chapter 1 - Introduction

Chapter 2 - Changes to the Draft EIR: This chapter lists the changes to the Draft EIR made either in response to comments or at the initiative of the lead agency. It should be noted that none of the changes to the Draft EIR, comments received, or responses provided result in a change to the substantive conclusions of the Draft EIR.

Chapter 3 - Written Comments and Responses: This chapter contains the comment letters followed by responses to the comments. Each letter and each comment within a letter has been given a number. Responses are numbered so that they correspond to the appropriate comment. Where appropriate, responses are cross-referenced between letters.

Policy numbers cited in the responses refer to the original policy numbers used in the January 2000 Draft General Plan Policy Document. For information regarding changes in policy numbers as a result of revisions to the Draft General Plan Policy Document directed by the Board of Supervisors in June 2000, please see *Proposed Revisions to General Plan Update Documents* (August 2000), published separately and available from the Fresno County Planning and Resource Management Department.

Chapter 4 - Public Hearing Comments: This section includes a list of people who provided oral comments at the public meetings on the Draft EIR. Each person has also provided written comments responded to in Chapter 3. The deadline for oral comments was the April 20, 2000 Planning Commission hearing.

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2. CHANGES TO THE DRAFT EIR

INTRODUCTION

This chapter contains changes to the text of the Draft EIR made either in response to comments or at the initiative of the Lead Agency. These changes correct errors and make clarifications in the Draft EIR. Deleted text is shown by strike-through and new text is underlined. Revisions to the Draft EIR did not result in a change in the substantive conclusions of the Draft EIR (i.e., identification of new significant impacts).

REVISIONS TO THE DRAFT EIR

Text Changes in Response to Comments

2.0 Project Description and Demographic Information

Data for the distribution of population, employment, non-residential space, land use, housing, and employment profile/non-residential acreage for the Unincorporated East Valley, Sierra foothills, and Sierra Nevada shown in Tables 2-5 through 2-10 of the Draft EIR, respectively, have been revised. The revised Tables 2-5 through 2-10 are provided at the end of this chapter.

3.0 Summary of Impacts and Mitigation Measures

Where applicable, mitigation measures in the column labeled “Mitigation Measure(s) in Table 3-1 on pages 3-6 through 3-23 in the Draft EIR have been revised to reflect new policy or program numbering and the inclusion of new policies or programs, as indicated in the changes included in the *Proposed Revisions to General Plan Update Documents* (August 2000), published separately and available from the Fresno County Planning and Resource Management Department. It should be noted that the policy or program numbering in the revised summary table differs from that cited in the Draft EIR discussions, mitigation measures, or responses to comments provided in Chapter 3 of this Final EIR, to minimize confusion when responding to the original comment(s) containing policy or program references. Revised Table 3-1 is included at the end of the chapter.

4.2 Land Use

The last sentence in the paragraph under the bullet items in Impact 4.2-1 on page 4.2-6 of the Draft EIR discussed by the commentor has been revised as follows:

~~Policies LU-C.2 and LU-C.5 ensure consistency with the San Joaquin River Parkway Plan policies.~~ The County conducted a thorough review of the policies in the San Joaquin River Parkway Master Plan and has included all the policies that Fresno County can implement through the exercise of its land use authority. Other policies, such as those dealing with the management of the Parkway and acquisitions which are within the scope of the San Joaquin River Conservancy are not included in the General Plan Policy Document.

4.5 Wastewater, Storm Drainage and Flooding

The third full paragraph on page 4.5-2 of the Draft EIR is revised as follows:

Industries in the unincorporated areas, which primarily consist of food processing plants, also provide wastewater treatment subject to discharge permits issued by the Regional Board. These systems also typically discharge to evaporation/percolation ponds. Many of these discharges are to either crops or to fallow land that is planted with crops during the non-processing season. Other agricultural wastewater is also disposed of ~~in this manner~~ to evaporation/percolation ponds.

4.6 **Public Services**

The discussion on page 4.6-22 under Proposition 1A/Senate Bill 50 of the Draft EIR is revised to add the following text:

School impact mitigation fee agreements entered into prior to the adoption of Proposition 1A and SB 50 (November 4, 1998) were expressly “grandfathered” by the State legislature by language contained in California Government Code section 65995, subsections (c)(1) and (c)(2).

The first sentence on page 4.6-26 of the Draft EIR is revised to read:

Based on the Department of Finance enrollment projections, ~~future growth in by 2007 the total number of students in~~ Fresno County would be as follows: generate 104,460 elementary students, 29,120 middle school students, and 56,020 high school-age students ~~by 2007.~~

4.8 **Water Resources**

The third sentence in the fourth paragraph on page 4.8-3 of the Draft EIR is revised to read:

The major element of this program is the joint recharge effort by the City of Fresno and FID, whereby the City’s surface water allocations ~~of from the San Joaquin and Kings Rivers water~~ are conveyed ~~by through FID canals to city~~ recharge ~~basins facilities in the Fresno area~~ and the District’s ponding basins. In the rain season, the District’s ponding basins retain and recharge stormwater to groundwater, and during the dry season, surface water allocations are delivered to the ponding basins and recharged.

The last sentence in the second complete paragraph on page 4.8-5 of the Draft EIR is revised to read:

The City of Fresno’s surface water treatment plant site may be large enough to accommodate ~~will be expandable to~~ a treatment capacity of 60 mgd, but to date no special permit or environmental analysis for a plant this size has been approved by the City.

The following sentence is added to the last paragraph after the fifth sentence on page 4.8-14 of the Draft EIR:

Although not enforceable, the adopted maximum contaminant goal for DBCP is 0.002 ppb, which is one order of magnitude lower than the old MCL. The California Public Health Goal for DBCP is 0.0017 ppb.

The sixth sentence in the last paragraph on page 4.8-14 of the Draft EIR is revised to read:

~~DHS is currently proposing to lower the MCL to 0.1 ppb.~~ In February 2000, the Department of Health Services completed a review of the DBCP MCL and determined that no change in the MCL for DBCP is warranted.

4.11 Mineral Resources

The first sentence of the fourth paragraph on page 4.11-1 in the Draft EIR has been updated as follows:

For the period ~~1994-95~~ 1997-1998, there were ~~48~~ 15 active mines and mineral producers in Fresno County.

4.12 Air Quality

The following text has been added to clarify the Method of Analysis discussion on page 4.12-6 of the Draft EIR:

“Quantification of toxic air contaminant (TAC) emissions from stationary sources associated with the projected development is not possible at this time because the specific sources and receptors that would occur under the General Plan are not yet known.”

TABLE 2-5 (REVISED)

GEOGRAPHIC DISTRIBUTION OF POPULATION

	1996 Base	1996-2020 Increase	2020 Total	Change (in percent)
FRESNO COUNTY TOTAL	769,700	344,085	1,113,785	44.7
INCORPORATED COUNTY TOTAL	652,705	318,587	971,292	48.8
UNINCORPORATED COUNTY TOTAL	116,995	25,498	142,493	21.8
EAST VALLEY TOTAL	709,805	<u>320,937</u> 325,592	<u>1,030,742</u> 1,035,397	<u>45.2</u> 45.9
Clovis	69,260	42,274	111,534	61.0
Fowler	5,347	1,795	7,142	33.6
Fresno	445,199	230,782	675,981	51.8
Kerman	8,009	3,006	11,015	37.5
Kingsburg	9,042	2,519	11,562	27.9
Orange Cove	7,186	1,964	9,150	27.3
Parlier	9,967	2,925	12,892	29.3
Reedley	20,928	6,787	27,715	32.4
San Joaquin	3,718	2,573	6,291	69.2
Sanger	21,577	5,304	26,880	24.6
Selma	21,867	7,172	29,038	32.8
Unincorporated East Valley	87,705	<u>13,837</u> 18,493	<u>101,542</u> 106,197	<u>15.7</u> 21.1
SIERRA FOOTHILLS (county)	11,727	<u>5,711</u> 2,211	<u>17,438</u> 13,938	<u>48.7</u> 18.9
SIERRA NEVADA MTNS. (county)	6,146	<u>1,720</u> 565	<u>7,866</u> 6,711	<u>28.0</u> 9.2
WEST VALLEY TOTAL	41,748	15,692	57,440	37.6
Coalinga	9,859	3,183	13,042	32.3
Firebaugh	5,853	1,905	7,757	32.5
Huron	6,267	3,189	9,456	50.9
Mendota	8,627	3,211	11,838	37.2
Unincorporated West Valley	11,142	4,204	15,347	37.7
COAST RANGE FOOTHILLS	274	25	299	9.1

Source: Applied Development Economics, *Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology*, Exhibits 11,13, and 14, February 1999; revised May 2000.

TABLE 2-6 (REVISED)

GEOGRAPHIC DISTRIBUTION OF EMPLOYMENT

	1996	1996-2020 Increase						2020 Total					
	Total	Retail/Local	Office	Industrial	Pub./Inst.	Ag. Prod.	Total	Retail/Local	Office	Industrial	Pub./Inst.	Ag. Prod.	Total
FRESNO COUNTY TOTAL	370,781	43,905	83,308	59,975	28,443	15,610	231,241	412,122	112,632	153,253	92,070	101,943	602,022
EAST VALLEY TOTAL	342,999	<u>40,952</u> 41,546	82,660	56,061	<u>26,529</u> 26,914	12,478	<u>218,680</u> 219,660	<u>135,060</u> 135,653	111,160	143,991	<u>87,601</u> 87,989	83,865	<u>561,679</u> 562,658
Clovis	34,238	5,394	13,587	6,043	3,494	260	28,779	14,323	16,470	17,349	11,317	3,557	63,017
Fowler	2,282	229	209	480	148	124	1,191	587	368	1,179	443	895	3,473
Fresno	221,994	29,448	66,782	40,937	19,077	3,750	159,995	97,880	87,551	105,216	62,527	28,816	381,989
Kerman	2,699	384	180	466	248	188	1,466	871	315	746	837	1,396	4,165
Kingsburg	4,137	321	190	776	208	114	1,610	1,339	530	2,287	736	854	5,746
Orange Cove	2,317	251	63	699	162	34	1,209	555	177	2,098	395	302	3,526
Parlier	3,293	373	209	873	242	85	1,782	758	369	2,505	754	690	5,076
Reedley	8,863	866	402	1,142	561	701	3,672	3,174	1,119	2,261	1,894	4,087	12,535
San Joaquin	798	328	84	188	213	18	831	494	130	459	417	129	1,629
Sanger	8,273	677	368	1,954	438	275	3,713	2,437	1,018	4,846	1,763	1,922	11,986
Selma	7,139	915	391	1,563	593	201	3,662	3,268	810	3,988	1,377	1,358	10,801
Unincorporated East Valley	46,966	<u>1,766</u> 2,360	194	939	<u>1,144</u> 1,529	6,728	<u>10,771</u> 11,750	<u>9,373</u> 9,967	2,303	1,057	<u>5,144</u> 5,529	39,859	<u>57,737</u> 58,716
SIERRA FOOTHILLS (county)	2,234	<u>728</u> 282	167	110	<u>473</u> 183	454	<u>1,932</u> 1,196	<u>1,324</u> 879	229	115	<u>855</u> 565	1,643	<u>4,166</u> 3
SIERRA NEVADA (county)	906	<u>219</u> 72	0	0	<u>142</u> 47	0	<u>361</u> 119	<u>883</u> 736	59	6	<u>318</u> 223	0	<u>1,267</u> 1,024
WEST VALLEY TOTAL	24,609	2,002	481	3,804	1,297	2675	10,260	4,828	1,175	9,140	3,290	16,436	34,870
Coalinga	4,265	406	105	1,113	263	91	1,977	1,162	305	3,211	985	578	6,242
Firebaugh	2,626	243	81	746	157	99	1,326	568	151	2,014	563	656	3,952
Huron	2,483	407	84	899	264	191	1,844	631	136	1,832	452	1,278	4,328
Mendota	2,975	410	159	638	265	213	1,685	743	282	1,664	561	1,410	4,661
Unincorporated West Valley	12,260	536	53	409	348	2081	3,427	1,724	301	419	729	12,514	15,687
COAST RANGE FOOTHILLS	33	3	0	0	2	0	5	26	9	1	3	0	38

Source: Applied Development Economics, Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology, Exhibits 13,14, and17, February 1999; revised May 2000.

TABLE 2-7 (REVISED)

GEOGRAPHIC DISTRIBUTION OF NON-RESIDENTIAL SPACE

	1996-2020 Increase				2020 Total			
	Retail	Office	Industrial	Public/Inst.	Retail	Office	Industrial	Public/Inst.
	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)	Total Sq Ft. (inc. vac.)
FRESNO COUNTY TOTAL	<u>26,561,920</u> 26,562,525	27,491,731	65,972,500	428,670	<u>85,982,600</u> 85,983,810	37,168,560	168,578,300	30,383,100
EAST VALLEY TOTAL	<u>24,775,960</u> 25,135,330	27,277,674	61,666,000	<u>8,754,240</u> 8,881,290	<u>81,710,695</u> 82,070,065	36,682,800	158,390,100	<u>28,909,320</u> 29,036,370
Clovis	3,263,370	4,483,710	6,647,300	1,153,020	8,665,415	5,435,100	19,083,900	3,734,610
Fowler	138,545	69,072	528,000	48,840	355,135	121,440	1,296,900	146,190
Fresno	17,816,040	22,038,060	45,030,700	6,295,410	59,217,400	28,891,830	115,737,600	20,633,910
Kerman	232,320	59,400	512,600	81,840	526,955	103,950	820,600	276,210
Kingsburg	194,205	62,700	853,600	68,640	810,095	174,900	2,515,700	242,880
Orange Cove	151,855	20,790	768,900	53,460	335,775	58,410	2,307,800	130,350
Parlier	225,665	69,072	960,300	79,860	458,590	121,770	2,755,500	248,820
Reedley	523,930	132,660	1,256,200	185,130	1,920,270	369,270	2,487,100	625,020
San Joaquin	198,440	27,720	206,800	70,290	298,870	42,900	504,900	137,610
Sanger	409,585	121,440	2,149,400	144,540	1,474,385	335,940	5,330,600	581,790
Selma	553,575	129,030	1,719,300	195,690	1,977,140	267,300	4,386,800	454,410
Unincorporated East Valley	<u>1,068,430</u> 1,427,800	64,020	1,032,900	<u>377,520</u> 504,570	<u>5,670,665</u> 6,030,035	759,990	1,162,700	<u>1,697,520</u> 1,824,570
SIERRA FOOTHILLS (county)	<u>440,440</u> 470,610	55,110	121,000	<u>156,090</u> 60,390	<u>801,020</u> 531,795	75,570	126,500	<u>282,150</u> 486,450
SIERRA NEVADA (county)	<u>132,495</u> 43,560	0	0	<u>46,860</u> 45,510	<u>534,215</u> 445,280	19,470	6,600	<u>104,940</u> 73,590
WEST VALLEY TOTAL	1,211,210	158,947	4,185,500	428,010	2,920,940	387,750	10,054,000	1,085,700
Coalinga	245,630	34,537	1,224,300	86,790	703,010	100,650	3,532,100	325,050
Firebaugh	147,015	26,730	820,600	51,810	343,640	49,830	2,215,400	185,790
Huron	246,235	27,720	988,900	87,120	381,755	44,880	2,015,200	149,160
Mendota	248,050	52,470	701,800	87,450	449,515	93,060	1,830,400	185,130
Unincorporated West Valley	324,280	17,490	449,900	114,840	1,043,020	99,330	460,900	240,570
COAST RANGE FOOTHILLS	1,815	0	0	660	15,730	2,970	1,100	990

Source: Applied Development Economics, *Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology*, Exhibits 26 and 27, February 1999; revised May 2000.

TABLE 2-8 (REVISED)

GEOGRAPHIC DISTRIBUTION OF LAND USE

	1996-2020 Increase			2020 Total		
	Residential Gross Acreage	Non-Residential Gross Acreage	Total Gross Acreage	Residential Gross Acreage	Non-Residential Gross Acreage	Total Gross Acreage
FRESNO COUNTY TOTAL	24,070	<u>13,665</u> 43,667	<u>37, 735</u> 37,737	77,511	38,104	115,615
EAST VALLEY TOTAL	23,079	<u>12,842</u> 42,940	<u>35,921</u> 36,019	73,153	<u>35,872</u> 35,974	<u>109,025</u> 409,124
Clovis	2,928	1,628	4,556	7,724	4,152	11,876
Fowler	132	81	213	522	229	751
Fresno	16,684	9,415	26,099	48,869	25,449	74,318
Kerman	203	105	308	743	262	1,005
Kingsburg	195	120	315	892	425	1,317
Orange Cove	107	101	208	497	319	816
Parlier	157	136	293	692	418	1,110
Reedley	451	244	695	1,840	752	2,592
San Joaquin	126	71	197	306	149	455
Sanger	332	281	613	1,679	905	2,584
Selma	434	289	723	1,756	892	2,648
Unincorporated East Valley	1,330	<u>372</u> 470	<u>1,702</u> 4,800	7,633	<u>1,920</u> 2,019	<u>9,553</u> 9,652
SIERRA FOOTHILLS (county)	173	<u>131</u> 59	<u>304</u> 232	1,092	<u>301</u> 227	<u>1,393</u> 4,319
SIERRA NEVADA (county)	31	<u>36</u> 42	<u>67</u> 43	368	<u>79</u> 423	<u>447</u> 494
WEST VALLEY TOTAL	785	656	1,441	2,876	1,779	4,655
Coalinga	148	161	309	605	513	1,118
Firebaugh	113	104	217	458	304	762
Huron	150	143	293	447	305	752
Mendota	149	122	271	548	328	876
Unincorporated West Valley	225	126	351	818	329	1,147
COAST RANGE FOOTHILLS	2	0	2	22	4	26

Source: Applied Development Economics, *Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology*, Exhibit 28, February 1999; revised May 2000.

TABLE 2-9 (REVISED)

GEOGRAPHIC DISTRIBUTION OF HOUSING

	1996 Base	1996-2020 Increase					2020 Total					DU Change (in percent)
	Total DU	SF HH	SF DU	MF HH	MF DU	Total DU	SF HH	SF DU	MF HH	MF DU	Total DU	
FRESNO COUNTY TOTAL	245,997	<u>77,807</u> <u>77,735</u>	<u>81,697</u> <u>81,624</u>	<u>27,744</u> <u>27,865</u>	<u>29,131</u> <u>29,258</u>	<u>110,828</u> <u>110,879</u>	<u>250,727</u> <u>250,656</u>	<u>263,265</u> <u>263,194</u>	<u>89,103</u> <u>89,225</u>	<u>93,557</u> <u>93,685</u>	<u>356,822</u> <u>356,876</u>	45.1
EAST VALLEY TOTAL	230,227	<u>73,623</u> <u>74,698</u>	<u>77,304</u> <u>78,433</u>	<u>26,003</u> <u>26,401</u>	<u>27,304</u> <u>27,722</u>	<u>104,608</u> <u>106,155</u>	<u>235,901</u> <u>236,977</u>	<u>247,969</u> <u>248,826</u>	<u>82,989</u> <u>83,387</u>	<u>87,138</u> <u>87,556</u>	<u>335,107</u> <u>336,382</u>	<u>45.5</u> <u>46.4</u>
Clovis	24,130	8,276	8,690	5,751	6,039	14,729	21,835	22,927	15,173	15,932	38,859	61.0
Fowler	1,797	425	446	149	156	602	1,690	1,775	594	624	2,399	33.5
Fresno	145,467	55,299	58,064	16,518	17,344	75,408	161,975	170,074	48,382	50,801	220,875	51.8
Kerman	2,480	657	690	231	243	933	2,406	2,526	845	887	3,413	37.6
Kingsburg	3,533	544	571	394	414	985	2,496	2,621	1,807	1,897	4,518	27.9
Orange Cove	1,734	361	379	90	95	474	1,682	1,766	421	442	2,208	27.3
Parlier	2,432	516	542	163	171	713	2,276	2,390	719	755	3,145	29.3
Reedley	6,575	1,402	1,472	630	662	2,134	5,723	6,009	2,571	2,700	8,709	32.5
San Joaquin	862	387	406	182	191	597	945	992	445	467	1,459	69.3
Sanger	6,378	1,030	1,082	463	486	1,568	5,222	5,483	2,346	2,463	7,946	24.6
Selma	5,687	1,528	1,604	249	261	1,865	6,186	6,495	1,007	1,057	7,552	32.8
Unincorporated East Valley	29,152	<u>3,198</u> <u>7,273</u>	<u>3,358</u> <u>4,487</u>	<u>1,183</u> <u>1,581</u>	<u>1,242</u> <u>1,660</u>	<u>4,600</u> <u>6,147</u>	<u>23,465</u> <u>24,541</u>	<u>24,638</u> <u>25,768</u>	<u>8,679</u> <u>9,077</u>	<u>9,113</u> <u>9,531</u>	<u>33,751</u> <u>35,299</u>	<u>15.7</u> <u>21.4</u>
SIERRA FOOTHILLS (county)	4,085	<u>1,515</u> <u>587</u>	<u>1,591</u> <u>616</u>	<u>379</u> <u>147</u>	<u>398</u> <u>154</u>	<u>1,989</u> <u>770</u>	<u>4,627</u> <u>3,699</u>	<u>4,858</u> <u>3,884</u>	<u>1,157</u> <u>925</u>	<u>1,215</u> <u>974</u>	<u>6,073</u> <u>4,855</u>	<u>48.7</u> <u>18.8</u>
SIERRA NEVADA MTNS. (county)	1,475	<u>326</u> <u>407</u>	<u>342</u> <u>412</u>	<u>67</u> <u>22</u>	<u>70</u> <u>23</u>	<u>412</u> <u>435</u>	<u>1,491</u> <u>1,272</u>	<u>1,566</u> <u>1,336</u>	<u>305</u> <u>264</u>	<u>320</u> <u>274</u>	<u>1,886</u> <u>1,610</u>	<u>27.9</u> <u>9.2</u>
WEST VALLEY TOTAL	10,107	2,338	2,455	1,291	1,355	3,810	8,649	9,083	4,604	4,834	13,917	37.7
Coalinga	2,078	486	510	153	161	671	1,990	2,090	628	659	2,749	32.3
Firebaugh	1,673	337	354	182	191	545	1,373	1,442	739	776	2,218	32.6
Huron	1,580	382	401	382	401	802	1,134	1,191	1,134	1,191	2,382	50.8
Mendota	1,951	442	464	249	261	725	1,631	1,713	917	963	2,676	37.2
Unincorporated West Valley	2,825	691	726	325	341	1,067	2,521	2,647	1,186	1,245	3,892	37.8
COAST RANGE FOOTHILLS	103	5	5	4	4	9	59	62	48	50	112	8.7

SF - single-family; MF - multi-family; HH - households; DU - dwelling units

Source: Applied Development Economics, *Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology* Exhibits 24 and 25, February 1999; revised May 2000.

TABLE 2-10 (REVISED)

**COMPARISON OF EMPLOYMENT PROFILE AND NON-RESIDENTIAL ACREAGE
WITH AND WITHOUT PROPOSED PROJECT**

	Without Proposed Project						With Proposed Project					
	2020 Total						2020 Total					
	Retail/Local	Office	Industrial	Pub./Inst.	Ag. Prod.	Total Acreage	Retail/Local	Office	Industrial	Pub./Inst.	Ag. Prod.	Total Acreage
FRESNO COUNTY TOTAL	142,200	65,193	113,408	92,120	88,429	33,979	142,122	112,632	153,253	92,070	101,943	38,104
EAST VALLEY TOTAL	<u>135,135</u> 135,728	63,361	106,906	<u>87,748</u> 88,036	73,118	32,068	<u>135,060</u> 135,653	111,160	143,991	<u>87,601</u> 87,989	83,865	35,971
Clovis	14,331	6,410	13,746	11,324	3,377	3,678	14,323	16,470	17,349	11,317	3,557	4,152
Fowler	588	353	851	443	790	201	587	368	1,179	443	895	229
Fresno	97,934	46,172	78,149	62,561	25,674	22,486	97,880	87,551	105,216	62,527	28,816	25,449
Kerman	872	302	340	837	1,237	228	871	315	746	837	1,396	262
Kingsburg	1,340	755	1,837	737	758	392	1,339	530	2,287	736	854	425
Orange Cove	555	252	1,701	395	274	286	555	177	2,098	395	302	319
Parlier	758	354	1,985	754	620	374	758	369	2,505	754	690	418
Reedley	3,176	1,594	1,361	1,895	3,468	687	3,174	1,119	2,261	1,894	4,087	752
San Joaquin	494	104	329	417	113	138	494	130	459	417	129	149
Sanger	2,438	1,445	3,516	1,764	1,687	803	2,437	1,018	4,846	1,763	1,922	905
Selma	3,270	932	2,949	1,378	1,185	808	3,268	810	3,988	1,377	1,358	892
Unincorporated East Valley	<u>2,379</u> 9,973	4,688	143	<u>5,147</u> 5,532	33,935	1,985	<u>2,373</u> 9,967	2,303	1,057	<u>5,144</u> 5,529	39,859	2,019
SIERRA FOOTHILLS (county)	<u>1,324</u> 879	136	6	<u>855</u> 565	1,218	218	<u>1,324</u> 879	229	115	<u>855</u> 565	1,643	227
SIERRA NEVADA (county)	<u>884</u> 737	131	7	<u>318</u> 223	0	125	<u>883</u> 736	59	6	<u>318</u> 223	0	123
WEST VALLEY TOTAL	4,830	1,545	6,488	3,292	14,093	1,563	4,828	1,175	9,140	3,290	16,436	1,779
Coalinga	1,163	446	2,552	986	499	459	1,162	305	3,211	985	578	513
Firebaugh	568	157	1,542	564	570	264	568	151	2,014	563	656	304
Huron	631	115	1,134	452	1,113	247	631	136	1,832	452	1,278	305
Mendota	744	274	1,247	561	1,226	294	743	282	1,664	561	1,410	328
Unincorporated West Valley	1,725	553	12	730	10,685	300	1,724	301	419	729	12,514	329
COAST RANGE FOOTHILLS	26	20	1	3	0	5	26	9	1	3	0	4

Source: Applied Development Economics, *Fresno County General Plan Update Preferred Economic and Growth Scenario Economic and Growth Allocation and Methodology*, Exhibits 14 and 28, February 1999; Mintier & Associates, May 24, 1999; revised May 2000.

3. WRITTEN COMMENTS AND RESPONSES

COMMENT LETTER 1: Carl L. Carlucci, Department of Health Services (March 15, 2000)

Response to Comment 1-1:

The information provided by the commentor is added to the text of the Draft EIR.

The following sentence is added to the last paragraph after the fifth sentence on page 4.8-14 of the Draft EIR:

Although not enforceable, the adopted maximum contaminant goal for DBCP is 0.002 ppb, which is one order of magnitude lower than the old MCL. The California Public Health Goal for DBCP is 0.0017 ppb.

Response to Comment 1-2:

The text is revised to address the new information provided by the commentor.

The sixth sentence in the last paragraph on page 4.8-14 of the Draft EIR is revised to read:

~~DHS is currently proposing to lower the MCL to 0.1 ppb.~~ In February 2000, the Department of Health Services completed a review of the DBCP MCL and determined that no change in the MCL for DBCP is warranted.

COMMENT LETTER 2: Carol Birch, State Reclamation Board (March 16, 2000)

Response to Comment 2-1:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Prior to any construction activities, the necessary permits will be obtained.

Response to Comment 2-2:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 2-3:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

COMMENT LETTER 3: Moses Stites, Department of Transportation (April 18, 2000)**Response to Comment 3-1:**

Policies TR-A.5, TR-A.6 and TR-A.7 do apply to State highways as well as to local roadways, and thus can be considered to be mitigation measures for Impact 4.4-2, as well as Impacts 4.4-4 and 4.4-9. However, even with these policies applicable to State highways, Impacts 4.4-2, 4.4-4 and 4.4-9 would remain significant and unavoidable.

Policy TR-A.5 requires an analysis of impacts of traffic from all land development projects and that each such project shall construct or fund improvements necessary to mitigate the effects of traffic from the project. The County may allow a project to fund a fair share of improvements that provide significant benefits to others through traffic impact fees.

If a land development project has a significant impact on a State highway, the County through its development review process, or Caltrans through its encroachment permit process, may require the project to dedicate right-of-way and/or fund some localized improvements to a State highway that are primarily caused by, or principally benefit that project. If a development project would contribute to the need for a major improvement on a State highway, but the required improvement also benefits others, the County may require the development project to contribute its fair share of the improvement cost.

Through Policy TR-A.7, the County will assess fees on new development sufficient to cover the fair share portion of that developments impacts on the local and regional transportation system. The County's fee program will thus include its fair share portion of regional facilities. However, through Policy TR-A.9, the County does not intend to participate financially in the upgrading of the Inter-regional Highway System, which includes I-5, SR 99, SR 41, except as may affect local interchanges.

As discussed under Impact 4.4-2, funding may not be available to mitigate all of the level of service impacts on the State highway system outside the spheres of influence of cities in Fresno County. Therefore, Impact 4.4-2 would remain significant and unavoidable.

Response to Comment 3-2:

Under Policies TR-A.5 and TR-A.7 the County may require development to pay its fair share of required improvements to State interchanges. It was determined that Impact 4.4-4 would remain significant and unavoidable because funding may not be available to mitigate all of the level of service impacts on the State highway system within the spheres of influence of cities in Fresno County. See also Response to Comment 3-1.

Response to Comment 3-3:

See Response to Comment 3-1.

Response to Comment 3-4:

The comment appears to be referring to the portion of Table 4.4-1 concerning SR 41. The existing level of service information in Table 4.4-1 reflects 1995/96 conditions along Elm Avenue. It is recognized that a new alignment SR 41 has recently been completed, and these segments of SR 41 now operate at LOS C or better conditions.

Response to Comment 3-5:

The traffic volume data in Table 4.4-1 reflects counts compiled by COFGG throughout Fresno County.

Response to Comment 3-6:

For the purpose of the analysis in Table 4.4-1, SR 43 was classified as a rural 2-lane highway. As shown on Table 4.4-7, such a facility would operate at LOS D conditions with a daily volume between 8,600 and 13,600.

Response to Comment 3-7:

Table 4.4-2 describes the roadway improvements under the 2020 Baseline Transportation System, which includes funded/committed roadway improvements based on Project List in the 1999 Draft Air Quality Conformity Determination prepared by COFCG in April 1999. The 2020 Baseline Transportation System was used as a basis for defining additional transportation need in Fresno County under the General Plan. The commentor sites several capacity improvement projects that have recently been completed, or are near completion. These projects are included in Table 4.4-2. Updating Table 4.4-2 to eliminate these projects since they have recently been completed, or are near completion, would not effect the impact analysis in the Draft EIR.

Response to Comment 3-8:

If the roadway is classified as a State Route, it will be designed and constructed according to required State standards.

Response to Comment 3-9:

The 1995 Base volumes in Table 4.4-9 reflect available traffic count data. Caltrans Traffic Volumes on State Highways does not provide traffic volumes for all of the individual segments used in our analysis. Therefore, some 1995 Base volumes reflect 1995 volumes from the COFCG's travel model.

The comment refers to discrepancies in LOS determinations for some locations, but does not identify those locations. One possible source for differing calculations is how a highway is classified.

Response to Comment 3-10:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was

distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 3-11:

Tables 4.4-9 and 4.4-11 identify all segment of the State highway system that either currently, or in 2020 would operate at LOS D or worse.

COMMENT LETTER 4: Jason Marshall, Department of Conservation (April 21, 2000)**Response to Comment 4-1:**

Every reference in the General Plan and Draft EIR to the Agricultural Land Stewardship Program has been changed to refer to the California Farmland Conservancy Program.

Response to Comment 4-2:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the current source of Figure 7-8 as follows:

California Division of Mines and Geology, *Mines and Mineral Producers Active in California (1990-95) (1997-98)*, (Special Publication 103, Revised 1996 1999; ~~EHP Associates, March 1997.~~

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue because the updated information was considered in the Draft EIR analysis.

Response to Comment 4-3:

The first sentence of the fourth paragraph of Page 4.11-1 in the Draft EIR has been updated as follows:

For the period ~~1994-95~~ 1997-1998, there were ~~18~~ 15 active mines and mineral producers in Fresno County.

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the correct Figure 7-8 which shows the locations of mineral resources based on Special Publication 103 (Revised 1999).

In addition, the fourth sentence of the third paragraph of Page 7-64 in the General Plan Background Report has been updated as follows:

For the period ~~1994-95~~ 1997-1998, there were ~~18~~ 15 active mines and mineral producers in Fresno County.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-4:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The General Plan Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the updated Figure 7-9, and the correct source of Figure 7-9 as follows:

~~State of California, Division of Mines and Geology, Generalized Mineral Land Classification of Aggregate Resources in the Fresno P-C Region, 1998, Plate 1~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plate 1

The source of Figure 7-10 in the General Plan Background Report has been replaced as follows:

~~State of California, Division of Mines and Geology, Revised Mineral Land Classification of Aggregate Resources in the Fresno P-C Region, Plates 2, 3 and 4~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plates 2, 3, and 4

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-5:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the correct source of Figure 7-10 as follows:

~~State of California, Division of Mines and Geology, Revised Mineral Land Classification of Aggregate Resources in the Fresno P-C Region, 1998, Plates 2, 3 and 4~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plates 2, 3, and 4

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-6:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the updated Figure 7-11, and the source of Figure 7-11 as follows:

~~State of California, Division of Mines and Geology, Revised Mineral Land Classification of Aggregate Resources in the Fresno P-C Region, 1998, Plate 5~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plate 5; California Division of Mines and Geology, *Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (Special Report 158) 1999, Plates 7.8, and 9.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-7:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the updated Figure 7-12 which reflects the correct shape and designation of certain areas. In addition, the correct source of Figure 7-12 is as follows:

~~State Mining and Geology Board, *San Joaquin River Designated Resource Areas Updated Map, 1998, Plate 6*~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plate 7.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-8:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect the correct source of Figure 7-13 as follows:

~~State Mining and Geology Board, *San Joaquin River Designated Resource Areas Updated Map, 1998, Plate 6*~~

California Division of Mines and Geology, *Update of Mineral Land Classification: Aggregate Materials in the Fresno Production-Consumption Region, California*, (OFR 99-02) 1999, Plate 7.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-9:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect a revision to the first paragraph under “aggregate resources” on page 7-66 of the General Plan Background as follows:

The California Division of Mines and Geology (CDMG) has classified the Fresno Production-Consumption (P-C) Region according to the presence or absence of significant Portland cement-concrete (PCC)-grade aggregate deposits. The land classification, originally published in 1988, is presented in the form of MRZs. The boundaries of the Fresno P-C Region, which covers an area of 1,400 square miles, and generalized locations of MRZs are shown in Figure 7-9. In ~~1997~~ 1999, changes were made to some of the mineral land classifications to reflect 1997 conditions. Fifteen reclassifications from MRZ-2 and MRZ-3 to MRZ-1 resulted from the depletion of reserves by mining. Most of the reclassifications were along the San Joaquin River. Two areas were classified from ~~MRZ-2~~ MRZ-1 and MRZ-3 to MRZ-2. Figures 7-10 and 7-11 show the updated MRZ classifications for areas along the San Joaquin and Kings Rivers, respectively.

In addition, the second sentence in the third paragraph under “aggregate resources” on page 7-66 of the General Plan Background Report has been updated as follows:

The total includes ~~2.093~~ 2.107 billion tons of unpermitted resources and 93 million tons of reserves permitted for PCC aggregate production.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

Response to Comment 4-10:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised to reflect a revision to the eighth bulleted item on page 7-72 of the General Plan Background Report as follows:

Some areas along the San Joaquin and Kings Rivers have been classified MRZ-2 for aggregate resources by the California Division of Mines and Geology. All of the aggregate produced within the Fresno area is consumed within the region. Annual demand in 1997 was approximately ~~9.7~~ 4.7 million tons. There are 93 million tons of permitted aggregate resources, which are estimated to supply regional demand until 2011.

To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue.

COMMENT LETTER 5: Jo Anne Kipps, California Environmental Protection Agency, California Regional Water Quality Control Board, Central Valley Region (April 24, 2000)

Response to Comment 5-1:

Impact 4.8-6 on pages 4.8-35 through 4.8-36 in the Draft EIR recognizes the effects of wastewater disposal and references several General Plan policies that address this issue. The information provided by the commentor regarding water reclamation and levels of treatment does not change the conclusions of the Draft EIR.

Response to Comment 5-2:

The discussion in “Groundwater Quality” on page 4.8-8 in Section 4.8, Water Resources, in the Draft EIR, notes that groundwater quality has been impaired by nitrate from a variety of sources, including agricultural and industrial practices. The additional level of detail provided by the commentor does not affect the conclusions of the Draft EIR.

Response to Comment 5-3:

The third full paragraph on page 4.5-2 of the Draft EIR is revised to include the additional information provided by the commentor:

Industries in the unincorporated areas, which primarily consist of food processing plants, also provide wastewater treatment subject to discharge permits issued by the Regional Board. These systems also typically discharge to evaporation/percolation ponds. Many of these discharges are to either crops or to fallow land that is planted with crops during the non-processing season. Other agricultural wastewater is also disposed of ~~in this manner~~ to evaporation/percolation ponds.

The information provided by the commentor does not change the conclusions of the Draft EIR.

Response to Comment 5-4:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The intent of the referenced policy is to ensure that in any wastewater-related discretionary action by the County, the maximum level of treatment will be provided. In the long term, the highest level of wastewater treatment is in the best interest of Fresno County and any other area within a closed basin that relies on groundwater. The referenced policy provides flexibility in that it specifies “The County shall generally require treatment to tertiary or higher levels”. Also, wastewater treated to higher levels can be used for a greater variety of recycling projects.

Response to Comment 5-5:

The Draft EIR does provide the information noted by the commentor. As noted on page 4.5-1 in Section 4.5, Wastewater, Storm Drainage, and Flooding, water quality-related issues pertaining to storm drainage and flooding are discussed in Section 4.8, Water Resources. The regulatory framework

for the protection of water quality is provided on pages 4.8-9 through 4.8-13 in Section 4.8, Water Resources, in the Draft EIR. The text on pages 4.8-11 through 4.8-14 describes both the Phase 1 and Phase 2 MS4 storm water requirements, along with information regarding construction site stormwater permits. Impacts 4.8-4 and 4.8-5 in Section 4.8 address construction site and urban stormwater runoff quality, respectively.

COMMENT LETTER 6: Mary Griggs, California State Lands Commission (April 27, 2000)**Response to Comment 6-1:**

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Background Report, which is incorporated by reference into the Draft EIR, is revised as described below. To the extent the revisions to the Background Report amend the Environmental Setting presented in the Draft EIR, the information provided by the commentor would not alter the conclusions of the Draft EIR regarding this issue. The following is added on page 1-75 of the Background Report under a new heading:

California State Lands Commission

The State acquired sovereign ownership of all tidelands and submerged lands and beds of navigable waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes that include: waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space.

California holds a fee ownership in the beds of the San Joaquin and the Kings Rivers between the two ordinary low water marks. Each of these waterways between the ordinary high water marks is subject to a Public Trust Easement. Both easement and fee owned lands are under the jurisdiction of the CSLC. The landward boundaries of the State's sovereign interests are often based upon the ordinary high water marks of these waterways as they existed prior to man made influences such as channelization, dams, diversions, etc. Thus, such boundaries may not be readily apparent from present day site inspections. A lease from the Commission is required for any portion of a project extending onto State-owned lands that are under its exclusive jurisdiction. Use of lands underlying the State's easement must be consistent with Public Trust needs in the area.

This comment was distributed to the Planning Commission and Board of Supervisors for considerations during the public hearing process.

COMMENT LETTER 7: Mary Ann Ulik, City of Coalinga (April 14, 2000)**Response to Comment 7-1:**

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The Fresno County General Plan includes over 40 regional plans, community plans, and specific plans, of which the Coalinga Regional Plan and the Coalinga Community Plan are two. The large number of these “area plans” preclude simultaneous update. Pursuant to the new Policy LU-H.10 and Board of Supervisors' direction, the County will adopt a schedule for updating these area plans following adoption of the Countywide General Plan Update.

Response to Comment 7-2:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County will consult with and provide opportunities for the City of Coalinga during any future update of the Coalinga Regional Plan or Coalinga Community Plan.

Response to Comment 7-3:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-4:

See Response to Comment 7-3.

Response to Comment 7-5:

See Response to Comment 7-3.

Response to Comment 7-6:

The County has considered the “Reduced Population Growth” alternatives and is selecting the Preferred Scenario as modified.

Response to Comment 7-7:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comments 7-8 through 7-38:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-39:

See Response to Comment 7-1.

Response to Comment 7-40:

The California Department of Housing and Community Development (HCD) will establish a countywide housing unit target for a five year time frame 2002 to 2007. HCD will start with the same projections from the California Department of Finance that are used in the Fresno County General Plan Update. The allocation of housing needs to the 15 cities and the unincorporated county will be the responsibility of the Council of Fresno County Governments.

Response to Comment 7-41:

As noted in the introduction to the January 2000 Revised Draft of the General Plan Background Report:

The report has been revised based on public comments on the May 1997 Background Report, information developed for the Economic & Growth Scenarios Report, and other work completed more recently as part of the General Plan Update. This document, however, does not represent a wholesale update of the May 1997 Background Report: the overall baseline date for the General Plan Background Report, 1996-1997, has not changed and most of the information in the document has not been updated to 1999. However, key information, such as population projections, has been updated.

See also Response to Comment 7-1.

Response to Comment 7-42:

The County feels that 20-acres and 40-acres are appropriate minimum parcels sizes for agricultural land, but Policy LU-A-6 allows the County to require larger parcel sizes “based on zoning, local agricultural conditions, and to help insure the viability of agricultural operations.”

Response to Comment 7-43:

See Response to Comment 7-3.

Response to Comment 7-44:

See Response to Comment 7-1.

Response to Comment 7-45:

Comment noted. The information provided by the commentor does not affect the conclusions of the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-46:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Over 93 percent of projected population and job growth is expected to occur within incorporated cities based on General Plan policies and market forces.

Response to Comment 7-47:

See Response to Comment 7-3.

Response to Comment 7-48:

See Response to Comment 7-3.

Response to Comment 7-49:

See Response to Comment 7-43.

Response to Comment 7-50:

This comment is speculative regarding potential negative applications of Policy LU-E.15. The County disagrees with the commentor's assertion and feels that the correct application of this policy will preclude the effects the commentor is concerned with.

Response to Comment 7-51:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-52:

This is not a comment on the Draft EIR; however, the following has been provided to clarify the issue noted by the commentor. Although it has not conducted a comprehensive inventory, the County believes that Policy LU-E.18 applies to relatively few parcels in rural residential areas. The County feels an incentive approach is superior to a regulatory approach in this case, given the context of undeveloped parcels in rural residential areas that are bordered by substantial rural residential development.

Response to Comment 7-53:

See Response to Comment 7-1.

Response to Comment 7-54:

See Response to Comment 7-42.

Response to Comment 7-55:

As stated on page 4.2-7, in the Draft EIR, the Draft General Plan includes policies to minimize potential land use conflicts. Policy LU-E.15 gives direction not to designate additional areas for Rural Residential development. Redesignation of undeveloped rural residential areas is addressed in Policy

LU-E.17. Under the policies of the General Plan (see Policy LU-G.1), the County acknowledges that cities have primary responsibility for planning within their LAFCO-adopted spheres of influence. The following policy has been included in the General Plan Policy Document to further address this issue:

Policy LU-G.____ The County shall, during the update of its community plans pursuant to Policy LU-G.7, evaluate the alternative of re-designating undeveloped rural-residential areas to the Reserve designation to support the efforts of the affected city to achieve more efficient use of land within its existing sphere of influence.

The General Plan Update also includes new provisions that significantly limit circumstances under which parcels less than 20 acres in size may be created areas designated for agriculture (Policies LU-A.7 and LU-A.9).

Response to Comment 7-56:

During the public hearing process, the Board of Supervisors directed that the following additional policies and programs be added to the Draft General Plan to address agricultural land protection and conversion:

Policy LU-A.____ The County shall ensure that the review of discretionary permits includes an assessment of the conversion of productive agricultural land and that mitigation be required where appropriate.

Program LU-A.____ The County shall evaluate minimum parcel sizes necessary for sustained agricultural productivity on land designated for agriculture throughout the county, and, as appropriate amend the Zoning Ordinance according to the results of that analysis. (See Policy LU-A.6.)

Responsibility: Planning and Resource Management Department
Time Frame: FY 03-04

Program LU-A.____ The County shall develop and implement guidelines for design and maintenance of buffers to be required when new non-agricultural uses are approved in agricultural areas. Buffer design and maintenance guidelines shall include, but not be limited to, the following:

- 1) Buffers shall be physically and biologically designed to avoid conflicts between agriculture and non-agricultural uses.
- 2) Buffers shall be located on the parcel for which a permit is sought and shall protect the maximum amount of farmable land.
- 3) Buffers generally shall consist of a physical separation between agricultural and non-agricultural uses. The appropriate width shall be determined on a site-by-site basis taking into account the type of existing agricultural uses, the nature of the proposed development, the natural features of the site, and any other factors that affect the specific situation.

- 4) Appropriate types of land uses for buffers include compatible agriculture, open space and recreational uses such as parks and golf courses, industrial uses, and cemeteries.
- 5) The County may condition its approval of a project on the ongoing maintenance of buffers.
- 6) A homeowners association or other appropriate entity shall be required to maintain buffers to control litter, fire hazards, pests, and other maintenance problems.
- 7) Buffer restrictions may be removed if agricultural uses on all adjacent parcels have permanently ceased. (See Policy LU-A.15.)

Responsibility: Planning and Resource Management
Department
Time Frame: FY 03-04

Response to Comment 7-57:

See Response to Comment 7-42.

Response to Comment 7-58:

See Response to Comment 7-42.

Response to Comment 7-59:

The new General Plan also includes new provisions that significantly limit circumstances under which parcels less than 20 acres in size may be created. Policies LU-A.7, LU-A.8, and LU-A.9 reduce the residential holding capacity of land designated Agriculture and Rangeland by at least 50 percent compared to the existing General Plan. See Response to Comment 7-42.

Response to Comment 7-60:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County feels that this policy should not be written as an absolute and that the second and third sentences of Policy LU-A.7 create appropriate safeguards against exceptions.

Response to Comment 7-61:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. The County disagrees with the commentor's assertion.

Response to Comment 7-62:

The new General Plan, including policies LU-A.7, LU-A.8, and LU-A.9, have substantially limited residential holding capacity and exceptions compared to the existing General Plan. See Response to Comment 7-59.

Response to Comment 7-63:

The County does not consider 20-acre and 40-acre minimize zoning “small parcel size agriculture zoning.” It should be noted that the new General Plan reduces the exceptions to a 20-acre minimum compared to the existing General Plan. See Response to Comment 7-62.

Response to Comment 7-64:

Table 4.4-2 on page 4.4-5 of the Draft EIR, lists all the projects included in the *1999 Draft Air Quality Conformity Determination*, prepared by the Council of Fresno County Governments. This information provides all the roadway improvements which have a secure funding source and are anticipated to be constructed by the year 2020. This provides the 2020 Baseline Transportation System which was used to evaluate conditions both with and without the Proposed Project. If roadways in Coalinga or the surrounding areas were not included in the table it is because they were not included in the *1999 Draft Air Quality Conformity Determination*. Therefore, if roadway improvements were not assumed to occur by 2020, the impact discussion would identify those areas as potential impacts (i.e., if the roadways were adversely affected by the Proposed Project).

Response to Comment 7-65:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The current County practice for traffic impact mitigation is site and project-specific. Traffic studies are performed, and fees are collected and expended only on the specific roads impacted by the project. Decisions on the possible future methodologies of fee collection per the referenced traffic impact fee study have not been made.

Response to Comment 7-66:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The discussion on page 4.4-44 in the Draft EIR centers on demand for bicycle facilities as a result of population increases. The Draft General Plan policies generally direct growth to cities. Urban development inside the sphere of influence typically occurs concurrent with an annexation. Bikeways are constructed in conjunction with the road improvements needed to serve the new development.

Response to Comment 7-67:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Large lots may result in greater water consumption through larger landscape areas.

Response to Comment 7-68:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 7-67.

Response to Comment 7-69:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Under the proposed General Plan policies (see PF-C.17) all discretionary land use projects will require a water supply evaluation, including a hydrogeologic study if necessary. [Note: it is assumed the commentor's reference to pages 4.4-17 through 4.4-19 in Comments 7-69, 7-70, and 7-71 refer to pages 4.8-17 to 4.8-19 (containing the cited policies) in the Draft EIR.]

Response to Comment 7-70:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The two policies are not contrary. A small, non-public, water system can be designated as a community system.

Response to Comment 7-71:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The referenced policy would allow surplus water to be used for groundwater recharge in the general vicinity where the surplus originates.

Response to Comment 7-72:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The term "vistas" occurs in a sentence which makes the point that Fresno County has a "variety" of areas that could be considered scenic. The sentence includes several examples to illustrate the point. The County acknowledges that scenic vistas are found in the Coalinga area. The comment provided by the commentor does not affect the conclusions of the Draft EIR.

Response to Comment 7-73:

Cumulative impacts are identified and evaluated in each section of Chapter 4 of the DEIR and they are summarized in Chapter 5 as well. The Draft General Plan has numerous policies to protect water resources. See also Responses to Comments 7-67 through 7-71, 12-10, 12-34, 12-38, 15-1, and 19-6.

Response to Comment 7-74:

See Responses to Comments 7-42 and 7-63. Implementing large lot zoning is not an objective, but a tool for achieving a specific objective.

Response to Comment 7-75:

See Response to Comment 7-6. The County has considered the "Reduced Population Growth" alternatives and is selecting the Preferred Scenario as modified.

Response to Comment 7-76:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-77:

The County has no jurisdiction over mitigation measures in the incorporated areas.

Response to Comment 7-78:

See Responses to Comments 7-42 and 7-55.

Response to Comment 7-79:

This statement concerning the slightly declining population in the Coalinga Regional Plan area excludes the Coalinga Community Plan Area and is taken directly from the Coalinga Regional Plan (Section 403-01:3.01a in the existing General Plan).

Response to Comment 7-80:

The Natural Resources Conservation Service (formerly Soil Conservation Service) has not published a map of soil associations for the Coast Range Foothills in Fresno County. An NRCS status map (October 1999) shows this area as having project mapping complete but soil survey not yet published.

Response to Comment 7-81:

Such a map has not been prepared to date, and preparation of such a map is beyond the scope of the current General Plan Update.

Response to Comment 7-82:

The Coalinga Library is identified in the text on page 5-80 in the Background Report. Figure 5-1 in the Background Report depicts only those libraries that are part of the Fresno County Public Library System.

Response to Comment 7-83:

This comment on page 5-79 of the Background Report regarding the RC Baker Museum being a private facility is unclear since the museum is not mentioned in the text of the Background Report.

Response to Comment 7-84:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 7-85:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The siting of treatment, storage, and disposal (TSD) facilities is addressed in the County's Hazardous Waste Management Plan (HWMP), as indicated on pages 9-21 and 9-23 in the Background Report. Siting of TSD's takes into account air quality issues

to the extent required by applicable State laws and regulations. The comment letter was distributed to the Planning and Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comments 7-86 through 7-93:

See Response to Comment 7-3.

COMMENT LETTER 8: John R. Wright, City of Clovis (April 18, 2000)**Response to Comment 8-1:**

The context for cumulative impacts is discussed on pages 5-1 and 5-2 of the Draft EIR. As described, the cumulative context includes the effects of growth related directly to the project along with growth that would occur in the County with or without the project. In other words, the difference between the project and not approving the project is the growth that would occur in the employment sector and the mix of employment and the patterns of development that would occur in the unincorporated area.

Chapter 4.1 in the Draft EIR indicates that the scope of the EIR does not include updated land use maps for County regional, community, or specific plans, or identify specific locations where future growth would occur. Thus, the site-specific projects mentioned in the comment are not discussed. In addition, the CEQA Guidelines provide at Section 15130 that probable future projects include only those projects for which an application has been received at the time of the Notice of Preparation. The site-specific projects listed post-date the Notice of Preparation.

The County reviewed and considered the Clovis General Plan (adopted in 1993) during the General Plan Update process (see page 133 of the Background Report). However, the Clovis area is covered by a County-adopted community Plan. The current General Plan Update did not amend any of the existing community plans in the county. The appropriate time to address specific changes for the Clovis area is the update process for the County-adopted Clovis Community Plan.

Responses to Comments 8-2 and 8-3:

Policy LU-E.15 indicates the County will not designate additional land for rural residential development, except for unique circumstances to be determined by the Board of Supervisors. Under Policy LU-E.8, rezoning and development of uncommitted lands presently designated Rural Residential will only be permitted if specific determinations are made regarding water supply issues, including a determination that the proposed water supply is sustainable. Other related policies include PF-C.12, PF-C.13, and OS-A.21, which limit development in areas identified as having groundwater concern, and require the protection of groundwater resources from contamination and overdraft.

Response to Comment 8-4:

This concern is addressed in Policies PF-D.6, OS-A.1, and OS-A.21. Policy PF-D.6 permits individual on-site sewer systems only where such systems can be installed “without threatening surface or groundwater quality or posing any other health hazards...” Policy OS-A.1 requires the development and implementation of a County-wide plan to achieve water resource sustain ability, including addressing anticipated growth and overdraft. Policy OS-A.21 states that the County “shall protect groundwater resources from contamination and overdraft” through seven different measures.

Response to Comment 8-5:

As described under the Method of Analysis (page 4.4-19 in the Draft EIR), the transportation impact analysis in the Draft EIR was based on projected 1996 through 2020 population and employment growth under the Proposed Project. Growth estimates for each city sphere of influence and each major rural area of the County (described in Chapter 2 in the Draft EIR) were allocated to about 1,300 traffic analysis zones (TAZ) used in COFCG's travel demand model. The allocation was based on COFCG's development allocation by five-year increments for 1995, 2000, 2005, 2010, 2015 and 2020.

The Final EIR contains the same County-wide estimates of population and employment for 2020, but assumes some minor changes in the allocation of 1996 to 2020 population and employment growth within the major rural areas of the county. These changes are shown in revised Tables 2-5 through 2-10, included at the end of Chapter 2, Changes to the Draft EIR, of this Final EIR (see also Response to Comment 14-1). The estimated growth in the East Valley Unincorporated Area was decreased from the Draft EIR estimates, while growth in the Foothill and Mountain unincorporated areas were increased. The primary reason for revising this allocation of growth was to reflect somewhat higher levels of development by 2020 in two specific areas: Shaver Lake and the Millerton New Town. To provide a "worst- case" assessment of the transportation impacts of this revised growth assumptions, the Fresno County travel demand model was run with the increased growth concentrated in these two areas and no decreases in population and employment in other areas of the County.

Table 3-1 shows the estimated traffic volumes and levels of service under the Draft EIR and Final EIR growth assumptions.

<p style="text-align: center;">TABLE 3-1</p> <p style="text-align: center;">COMPARISON OF ESTIMATED TRAFFIC VOLUMES AND LEVELS OF SERVICE UNDER DRAFT EIR AND FINAL EIR GROWTH ASSUMPTIONS</p>						
Roadway Segment	Draft EIR Growth Assumptions			Final EIR Growth Assumptions		
	ADT	Lanes	LOS	ADT	Lanes	LOS
SR 168 west of Lodge	7,300	2	C	7,800	2	C
Auberry north of Millerton	5,900	2	C	6,400	2	C
Auberry north of Copper	11,500	2	D	16,600	2	E
Millerton east of Friant	5,800	4	A	6,800	4	A
Minnewawa south of Copper	17,400	4	B	19,100	4	B

The additional 1,155 residents in the Shaver Lake area under the Final EIR assumptions would generate about 3,300 to 4,200 more vehicle trips per day than the population estimated in the Draft EIR. The additional 242 employees in the Shaver Lake area under the Final EIR assumptions would generate about 2,500 to 3,500 more vehicle trips per day than the employment estimated in the Draft EIR. Most of the additional residential and retail trips would be "linked" to each other and would remain within the Shaver Lake area. This additional growth could result in localized traffic impacts in Shaver Lake area. Yet the projected 2020 daily traffic volume on SR 168 west of Lodge Road increased from 7,300 under the Draft EIR growth assumptions to only 7,800 under the Final EIR

growth assumptions. Under both 2020 growth assumptions this section of SR 168 would operate at LOS “C” conditions.

The additional 3,500 residents in the Millerton New Town area under the Final EIR assumptions would generate about 12,000 to 13,000 more vehicle trips per day than the population estimated in the Draft EIR. The additional 736 employees in the Millerton New Town area under the Final EIR assumptions would generate about 9,000 to 10,000 more vehicle trips per day than the employment estimated in the Draft EIR. Many of the additional residential and retail trips would be “linked” to each other and remain within the Millerton New Town area.

The Fresno County travel demand model estimated that Auberry Road between Millerton and Copper would carry 11,500 average daily traffic (ADT) by 2020 and operate at LOS “D” conditions as a two lane roadway under the Draft EIR growth assumptions for the Proposed Project. Under the revised Final EIR growth assumptions, this section of Auberry Road would carry about 16,600 ADT by 2020 and operate at LOS “E” conditions as a two lane roadway. Auberry Road would not meet the County’s proposed level of service “C” policy as a two-lane roadway under either the Draft EIR and the Final EIR growth assumptions but it would meet that policy as a four lane roadway under both growth assumptions.

The Draft General Plan has policies that would help fund and implement improvements needed to meet the County’s proposed level of service policy, such as widening Auberry to four lanes from Millerton and Copper. As noted in the Draft EIR, these policies may or may not provide adequate funding by 2020 to improve all rural roadways in Fresno County that would not meet the proposed level of service policy. Therefore, this impact is considered significant and unavoidable.

Response to Comment 8-6:

The proposed project does not promote increased growth within the county. As discussed on page 2-13 of the Draft EIR,

The Plan promotes compact growth by directing most new urban development to incorporated cities and existing urban communities that already have the infrastructure to accommodate such growth. The Plan assumes over 93 percent of new population growth and new job growth will occur within incorporated city spheres of influence and seven percent would occur in unincorporated areas. Accordingly, this Plan prohibits designation of new areas as Planned Rural Community and restricts the designation of new areas for rural residential development while allowing for the orderly development of existing rural residential areas.

The goal of the project is to encourage new growth to occur within the incorporated cities, the existing unincorporated communities, and other areas planned for development, to promote a more compact urban form. Under the project, it is anticipated that a majority of growth will occur within the incorporated cities. As discussed in the Draft EIR, Policies PF-G.1 through PF-G.5 would ensure that adequate facilities and funds are provided to serve residents in the unincorporated areas of the county. Within the incorporated areas of the county, new development would contribute taxes to each jurisdictions’ general fund which would be used to fund additional law and fire protection services.

Response to Comment 8-7:

The commentor is correct in his statement concerning how the “Preferred Scenarios” report compared land demand and available land for Clovis and the other 14 cities in the county. The comparison was only intended as an overall indication of the ability of spheres of influence countywide to accommodate projected growth. Any specific decision concerning proposed modification of a SOI would be informed by a much more detailed demand/land availability analysis.

Response to Comment 8-8:

The land demand projections in Exhibit 28 of the “Preferred Scenarios” report are based on the General Plan growth assumptions that are presented in Appendix A of the General Plan Policy Document. As the text in Appendix A makes clear, the projections in Table A-1 of the appendix are “assumptions only and are not intended to be used as policy.” These projections, therefore, should not be construed as policy recommendations to the City of Clovis or any other city in Fresno County.

COMMENT LETTER 9: Terry Bradley, Clovis Unified School District (April 20, 2000)

Response to Comment 9-1:

The first sentence on page 4.6-26 of the Draft EIR is revised to read:

Based on the Department of Finance enrollment projections, ~~future growth in by 2007 the~~
total number of students in Fresno County would be as follows: generate 104,460 elementary
students, 29,120 middle school students, and 56,020 high school-age students by 2007.

Response to Comment 9-2:

Comment noted. For the purposes of CEQA, payment of required development fees is considered adequate mitigation for impacts on schools. The Draft EIR, on page 4.6-22, concludes that the impact is less than significant because, not only are existing funding mechanisms in place, but also because proposed General Plan policies ensure adequate funding and construction of schools to serve projected student growth associated with new development.

Response to Comment 9-3:

As described on page 4.6-26 of the Draft EIR, new development would contribute its “fair share” of taxes (property taxes) to support the construction and operation of new school facilities in addition to State funding. See also Response to Comment 9-2.

Response to Comment 9-4:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 9-5:

For the purposes of the Draft EIR analysis, the number of school-age children in each school district is not relevant because proposed General Plan policies and funding mechanisms would provide for needed construction and operation of school facilities in all affected school districts in the county. See also Response to Comments 9-1 through 9-4.

**COMMENT LETTER 10: Melinda S. Marks, Fresno Metropolitan Flood Control District
(April 20, 2000)**

Response to Comment 10-1:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. The County acknowledges the District's support for the policies cited.

Response to Comment 10-2:

At present, the referenced Flood Control Master Plan is being reviewed in light of a request by the City of Fresno to alter how the Plan is implemented. It is therefore inappropriate to include the Plan until it has been finalized.

Response to Comment 10-3:

Policies in the proposed General Plan support the type of flood control facilities referenced. However, the broad scope of the General Plan and its associated EIR dictate that discussion of specific projects (such as the Fancher Creek detention basin and restoration of stream channels draining watersheds of 160 acres or more) be addressed in environmental documentation prepared for that specific project.

Response to Comment 10-4:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Responses to Comments 10-2 and 10-3.

Response to Comment 10-5:

The third sentence in the fourth paragraph on page 4.8-3 of the Draft EIR is revised to read:

The major element of this program is the joint recharge effort by the City of Fresno and FID, whereby the City's surface water allocations of ~~from the San Joaquin and Kings Rivers~~ water are conveyed ~~by through~~ FID canals to city recharge basins facilities in the Fresno area and the District's ponding basins. In the rain season, the District's ponding basins retain and recharge stormwater to groundwater, and during the dry season, surface water allocations are delivered to the ponding basins and recharged.

COMMENT LETTER 11: A. Michael Olmos, City of Reedley (April 20, 2000)**Response to Comment 11-1:**

The population projections used throughout the General Plan Update documents come from the “Preferred Economic and Growth Scenarios” report prepared by the General Plan Consultants and County Staff with input from planning directors of Fresno county cities. Dated February 11, 1999, the report lays out in detail the methodology and assumptions used in developing the allocation assumptions.

The total projected population of 1.1 million for Fresno County by 2020 is based on the California Department of Finance (DOF) estimates released in November 1998. The implied annual growth rate of 1.6 percent in these estimations is lower than the 2.5 percent rate that occurred during the 1970-1990 period and the 2.2 percent rate that occurred during the 1990-1996 period.

As noted, in the Response to Comment 8-8, the projections for the county and cities are “assumptions only and are not intended to be used as policy.”

The County is comfortable that the projections are based on a logical and well-documented methodology and assumptions and that if growth were to occur more rapidly than assumed, it would not substantially change any policy decisions in the General Plan based to any extent on the projections.

Response to Comment 11-2:

The Kings River Regional Plan establishes the range and intensity of land use and development within the boundaries of the Kings River Regional Plan (see Policy LU-1 and Program LU-C.1). The Countywide General Plan Update does not propose any new development within the Kings River Regional Plan boundaries. The update of the Kings River Regional Plan sometime following the adoption of the Countywide General Plan will provide the opportunity for consideration of specific land use changes and for analysis of the impacts of any proposed changes.

Response to Comment 11-3:

Policy LU-G.15 is a continuation of existing General Plan policy. The County feels this policy is appropriate and allows for adequate community input because: 1) it only applies to areas identified as “existing urban” (substantially developed) in a community plan; 2) it directs a “holding zone” be applied to undeveloped or under developed properties to preclude further urban development; 3) it requires that the proposed development be consistent with the community plan; 4) as provided for in the General Plan, community plans will be updated in partnership with the affected city; 5) County procedures solicit review comments from an affected city to address any issues associated with a development proposal; and 6) the policy provides for infrastructure issues to be addressed.

COMMENT LETTER 12: Nick P. Yovino, City of Fresno (April 21, 2000) and letter dated April 19**Response to Comment 12-1:**

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The new General Plan contains numerous new and revised policies which the County believes will significantly further the objectives listed on pages 2-12 and 2-13 of the Draft EIR and the themes listed on pages 2-13 and 2-14 of the Draft EIR.

Response to Comment 12-2:

The General Plan Update documents assume that over 93 percent of new population growth and job growth would occur within city spheres of influence, under city jurisdiction, and within areas designated for urban densities. The “Increased Residential Densities” alternative would have its greatest effect on this 93 percent of proposed countywide growth which is essentially beyond the control of the County. Much of the seven percent of unincorporated County growth will occur in areas designated agriculture and rural residential where residential densities cannot and should not be increased, short of eliminating it or moving it to other areas.

While the analysis of the alternative does not contain all the information requested by the commentor, the alternative section contains an impact-by-impact comparison of each of the alternatives. This analysis provides a fact-based comparison of the alternatives and allows for evaluation of the relative merits of alternatives and the project. The alternatives analysis provides for a level of detail consistent with the project being evaluated, the General Plan Update, a policy document. Please see CEQA Guidelines Section 15126.6.

Response to Comment 12-3:

The General Plan Update would not expand rural residential areas or promote new towns or urban village designations. The Friant-Millerton Regional Plan Area is not proposed to facilitate new urban development but to focus in the near-to-mid-term on expanding and enhancing the area’s recreational activities and resources. Policy LU-E.15 restricts designation of additional areas for Rural Residential development. Policy LU-E.27 restricts designation of additional areas for Rural Residential development.

Response to Comment 12-4:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy LU-E.17 and a policy added during the public hearing (see below) indicates the County will consider re-designating land within the SOI to the Reserve designation to support the City’s effort to achieve more efficient use of land within the existing SOI.

Policy LU-G.____

The County shall, during the update of its community plans pursuant to Policy LU-G.7, evaluate the alternative of re-designating undeveloped rural-residential areas to the Reserve designation to support the efforts of the affected city to achieve more efficient use of land within its existing sphere of influence.

See also Responses to Comments 7-55 and 12-3.

Response to Comment 12-5:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The policy referenced by the commentor (LU-E.16) is directed at ensuring orderly development of land areas previously designated Rural Residential or Foothill Rural Residential by discouraging approval of new subdivisions until the inventory of available lots in the area have been developed. Designation of new areas for rural residential development is restricted under Policy LU-E.15, and redesignation of land from rural residential to agriculture is promoted under Policy LU-E.18. Other policies target land areas within city spheres-of-influence, which is a particular concern of the commentor. These policies (LU-E.17), and a policy added during the public hearing process, indicate the County will consider redesignating land within the SOI to the “Reserve” designation to support the city’s effort to achieve more efficient use of land within the existing SOI boundary.

Response to Comment 12-6:

The Draft General Plan does not propose further intensification, urbanization, or more rural residential development in the Friant-Millerton area, but calls for the preparation of a new regional plan that in the near- to mid-term would focus on expanding and enhancing the area’s recreational activities and resources.

Response to Comment 12-7:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The referenced policies are not new policies; they are carried forward from the existing general Plan. They are not designed to promote “urban style” development. The policies allow for consideration of two subdivision design options, however, the overall density under both options is still limited to a maximum of one dwelling unit per two acres. Reduced lot sizes (less than two acres) and provision of community services are possible under one of the policies; however, because of the criteria included in the policy the application is expected to be extremely limited. Consideration of either design option is only possible through a discretionary permit process which will be subject to environmental review and compliance with other policies of the General Plan that pertain to issues noted by the commentor.

Response to Comment 12-8:

Policy LU-H.8 (and companion implementation Program LU-H.A) commits the County to preparing a Friant-Millerton Regional Plan. It does not in itself propose new development in the area, and, therefore, does not need to be assessed for its environmental impacts at this point. No additional environmental review beyond that provided in the Draft EIR is required. Any regional plan would require its own environmental review at the time of its consideration. Requiring environmental review of that plan at this time would require speculation.

As explained in Policy LU-H.8, the preliminary study area boundaries are designed to encompass the area's major recreational facilities and open space resources, existing and potential residential growth areas, but exclude productive agricultural lands.

Response to Comment 12-9:

The new General Plan imposes limitations on further rural residential development compared to the existing General Plan and does not propose additional “villages” and “new towns.” However, any major development proposals in the future will be subject to separate environmental review and mitigation will be developed as appropriate. Any regional plan would require its own environmental review at the time of its consideration. Environmental review of that plan at this time would require speculation.

Response to Comment 12-10:

Policies OS-A.20 through 24, PF-C.2, PF-C.4, PF-C.6, OS-A.5, OS-A.11, OS-A.12, OS-A.14, OS-A.15, OS-A.17, OS-A.19 address the issues noted by the commentor.

Response to Comment 12-11:

County funding for law enforcement is addressed in Draft General Plan policies PF-G.2 and PF-G.3, which direct that the County identify and establish funds for acquisition of adequate sheriff facility sites in the unincorporated areas, and that new development pay its fair share of the costs for providing law enforcement facilities and equipment to maintain service standards. Draft General Plan policy PF-H.19 requires new development to develop or pay its fair share of the costs to fund fire protection facilities that, at a minimum, maintain the service level standards established in policies PF-H.7 and PF-H.8. Such policies would minimize the effect on the demand for City of Fresno services. No additional mitigation is necessary.

Response to Comment 12-12:

As discussed in Impact 4.4-6 on page 4.4-41 through 4.4-43 in the Draft EIR, about 93 percent of the increase in the number of daily person trips would occur inside the spheres of influence of cities, resulting in an equivalent increase in the demand for transit services. The impact of increased transit demand in the rural areas of the County would be reduced by policies contained in the Draft General Plan. The Plan calls for the County to work with transit providers to implement transit services that are responsive to existing and future transit demand and which can demonstrate cost-effectiveness by meeting minimum farebox recovery levels required by State and federal funding programs (TR-B.1). Another policy emphasizes transit services in existing transit corridors in the rural areas of the County (TR-B.2). These policies would be implemented through the County’s participation in the Short Range Transit Plan process and are generally consistent with the current SRTP. The Plan also calls for the County to work with transit providers and the COFCG to pursue all available sources of funding for transit services (TR-B.4). The land use and transportation policies represent a substantial contribution by the county to reducing impacts of increased transit demand in both the rural and urban areas of the County. As stated on pages 4.4-42 through 4.4-43 in the Draft EIR, the County’s role in implementing transit services in the rural areas of the county is only as a participant in regional transportation planning agencies, and it is uncertain whether the funding for transit services would be able to keep pace with increases in transit demand, especially within urban areas. As stated on page 4.4-43 in the Draft EIR, transit providers together with COFOG must implement improvements to transit service. There are no reasonable mitigation measures available to the County to further reduce this impact.

Response to Comment 12-13:

The San Joaquin Valley APCD and the ARB track ambient air quality. Based on trends in these indicators, the air quality management agencies develop plans and guidelines for use by other agencies to focus their air quality control efforts. The County participates in regional transportation and air quality planning efforts. Reductions in air emissions in the incorporated areas is not within the County's jurisdiction to monitor and enforce. Nonetheless, the policies of the Draft General Plan have been developed to be consistent with the plans and guidelines prescribed by the air quality management agencies. As discussed in Impact 4.12-2 on pages 4.12-8 through 4.12-12 in the Draft EIR, proposed General Plan policies would offset project air quality impacts by reducing reliance on the automobile. Policies for congestion management and transportation control measures (Policies OS-G.3, OS-G.5 and OS-G.7 through OS-G.11), transportation infrastructure (OS-G.6), and land use practices (OS-G.12) would each serve to minimize mobile source impacts. Policies OS-G.14 and OS-G.15, in particular, address paving requirements suggested by the commentor. Draft General Plan policy TR-A.2 addresses traffic capacity enhancements. Elsewhere in the Draft General Plan, Land Use strategies encouraging growth to remain in existing development areas and encouraging compact, mixed-use, and pedestrian or transit-oriented development would help to minimize mobile source emissions. Please see Response to Comment 12-12 regarding mass transit in unincorporated areas.

Response to Comment 12-14:

As noted in Response to Comment 12-3, the new General Plan imposes limitations on further residential development compared to the existing General Plan and does not propose additional "villages" and "new towns." See Policies LU-E.15 through LU-E.18. The issue of existing designated rural residential land would be addressed in more detail in future updates of Fresno-Clovis Metropolitan Area community plans following adoption of new City and County General Plans. Finally, the City and County will both be updating their housing elements by June 2002, providing an opportunity for the City and County to coordinate housing initiatives.

Response to Comment 12-15:

Policies in Section G (Incorporated City, City Fringe Area, and Unincorporated Community Development) in the Land Use Element of the General Plan seek to encourage coordination and consistency with the county and cities regarding all land use matters. Policy LU-G.1 acknowledges that cities have primary responsibility for planning within their LAFCO-adopted spheres of influence and are responsible for urban development and the provision of urban services within their spheres of influence. Recognizing this, General Plan Policies LU-G.6 and LU-G.8 are intended to reduce the potential for conflicts between city and County plans and development standards related to infrastructure and public services. For example, under Policy LU-G.6, the county intends to promote consultation between the cities and county at the staff level in the early stages of preparing general plan amendments and other policy changes that could affect growth or the provision of urban services within the spheres of influence and two miles beyond, allowing for resolution of issues prior to presentation to decision-making bodies. LU-G.8 encourages consultation between the cities and the County at the staff level when cities are developing proposed annexation boundaries or proposed sphere of influence expansions.

With regard to the analysis of specific environmental issue areas noted by the commentor (traffic studies, utility calculations, air quality modeling, and school capacity estimates), there are standard methodologies and criteria adopted by agencies or entities with legal authority or responsibility for those issue areas at the regional or State level that are used to determine potential effects. As noted on page 4.4-19 in the Draft SEIR, the identification of future transportation system needs and impacts was based on the Fresno County Peak Period Travel Model prepared by the Council of Fresno

County Governments. The model covers all of Fresno County, including its cities and unincorporated areas, thus ensuring a consistent approach to the county's traffic analysis with that used by the cities. The San Joaquin Valley APCD's Guide for Assessing and Mitigating Air Quality Impacts, along with California Air Resources Board protocols in combination with regional growth data published by government agencies, were used to calculate air emissions (see pages 4.12-4 through 4.12-6 in the Draft EIR). These guidelines apply equally to cities with regard to the evaluation of potential effects associated with development within the cities. School capacity estimates were based on the State of California Department of Education guidelines for service levels, as noted on page 4.6-24 in the Draft EIR. The County assumes these adopted methods and guidelines are used to identify potential effects of plans or projects within cities' jurisdictions. As such, it is unclear why the commentor suggests there is "uncertainty and confusion" in assessing plans, regardless of policies proposed in the General Plan Update. Therefore, the Draft EIR's analysis of impacts remains valid.

The County is mandated to comply with the applicable requirements of CEQA as it pertains to environmental review of discretionary projects. The County routes all discretionary permit applications within spheres of influence to affected cities for review and comment. The County also complies with General Plan annexation referral policies in Section LU-G.

The EIR preparers have been unable to locate any statements in the Draft EIR stating that "city development policies and impact fees apply to county projects being done within urban spheres of influence." The Draft EIR does not "[deny] there are significant differences between the County's proposed General Plan update and the adopted proposed general plans of incorporated cities." Instead, the Draft EIR states (page 4.2-6): "The General Plan was designed specifically to achieve and promote consistency with the cities general plans over time."

Response to Comment 12-16:

The County cannot automatically adopt plans of other jurisdictions. The County may not delegate its constitutionally granted land use police powers.

Response to Comment 12-17:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Responses to Comments 12-18 and 12-19:

See Responses to Comments 12-3 and 12-4.

Response to Comment 12-20:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County exercises land use control over all unincorporated land within a city's sphere of influence until that land is annexed to the city. Therefore, the County feels it should apply its river influence area policies to all County-controlled resource lands despite other policies that recognize the primary role of cities in planning for urbanization within the spheres of influence.

Response to Comment 12-21:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The following policy was added to the General Plan Policy Document during the public hearing process.

Policy LU-C.____ Fresno County shall take into consideration the presence of the regulatory floodway or other designated floodway, the FEMA-designated 100-year floodplain, estimated 250-year floodplain, the Standard Project Flood, and the FMFCD Riverine Floodplain Policy in determining the location of future development within the San Joaquin River Parkway area. Any development sited in a designated 100-year floodplain shall comply with regulatory requirements at a minimum and with the FMFCD Riverine Floodplain Policy criteria, or requirements of other agencies having jurisdiction, where applicable

Response to Comment 12-22:

The Draft Circulation Diagrams (Figures TR-1a and TR-1b in the Draft General Plan Policy Document) have been revised to ensure consistency with the City of Fresno Circulation Element.

Response to Comment 12-23:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Response to Comment 12-22.

Response to Comment 12-24:

This is more of a development question, and relates to the larger questions identified in Response to Comment 12-23. The County cannot mitigate adverse traffic impacts merely by adoption of appropriate standards for new development, as the commentor suggests. This concept, though possibly applicable to urban areas which expect to fully develop, is not applicable to rural counties whose transportation system serves not only unincorporated communities and areas that for the most part are not planned for intensive development, but provides connectivity between incorporated cities, regional destinations, and the State transportation system. The County recognizes that in a non-urban county, there will be a public cost for unincorporated road improvement that cannot be fully offset by new development, particularly when policies primarily direct new growth to cities.

Response to Comment 12-25:

The discussion appropriately recognizes the City's planning responsibility, including the planned circulation system definition and roadway capital improvement program for eventual urbanization, within the Sphere of Influence. Program TR-A.B allows cities to apply comparable mitigation fees to development in unincorporated areas within Spheres that the respective cities would apply to development within the city.

Response to Comment 12-26:

Conformity between the agency's circulation systems within the spheres will also provide consistency of roadway standards for new development within spheres. The cities have opportunity through environmental review process to comment to development proposals within the Spheres. Plan Line adoption by the County may be requested by the cities, consistent with policies for adoption of specific plan lines.

The County is not aware of any documentation that there are "significant impacts to life safety, capacity, and air quality" as the result of inconsistent street improvement standards, and dispute this conclusion.

The reference to abrupt termination of travel lanes is a transitional design element. We are not aware of any documentation that these transitions have created an unusual accident risk, but if this can be shown, the City could consider using a higher design speed transitional standard between older two-lane roadways and new urban development.

The County is also not aware of any documentation that shows elevated accident rates at heavily used unsignalized intersections in unincorporated areas within the Spheres. Fresno County maintains a signal priority study that regularly evaluates intersections, including intersections in the Spheres of Influence, that are considered to potentially meet traffic signal warrants. Accident rate evaluation is part of the study evaluation. References to deficiencies and implied unsafe conditions for school pedestrian safety and unmarked crosswalks are undocumented.

If the City of Fresno staff is aware of specific operational deficiencies or locations with higher than expected accident rates in areas under County jurisdiction, they should contact the Fresno County Public Works Department.

Response to Comment 12-27:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 12-28:

See Program TR-A.B. The City has opportunity to review and comment on development, which includes street improvements within the spheres of influence. Other than for operational and maintenance activities, it is the County's practice to consult with City of Fresno staff for street improvements constructed within spheres. No change to this practice is anticipated. County staff also intends to consult with cities in the County on development of a traffic impact fee program.

Response to Comment 12-29:

The Draft General Plan includes new provisions that significantly limit the circumstances under which parcels less than 20 acres in size may be created in areas designated for agriculture (Policies LU-A.7,

LU-A.9). Regarding “other” allowable land uses referenced by the commentor, the policies in the GPU provide that such uses may only be approved through a discretionary permit and only if specific criteria included in the general Plan policies are met. Also, new criteria is included in Policy LU-A.3 for reviewing proposed schools and churches in agricultural areas. Pursuant to Implementation Program LU-H.E, the County will be amending its zoning ordinance text to reflect new policies and standards set forth in GPU. Only within the unincorporated area does the County have jurisdiction to enforce compliance with the policies in the GPU and the mitigation measures in the Draft EIR.

Response to Comment 12-30:

See Responses to Comments 7-56 and 7-59.

Response to Comment 12-31:

See Responses to Comments 7-55, 7-59, 11-3, and 12-4.

Response to Comment 12-32:

The last sentence in the second complete paragraph on page 4.8-5 of the Draft EIR is revised to read:

The City of Fresno’s surface water treatment plant site may be large enough to accommodate will be expandable to a treatment capacity of 60 mgd, but to date no special permit or environmental analysis for a plant this size has been approved by the City.

Response to Comment 12-33:

Any water storage or water control project will be subject to an environmental analysis to be conducted at the time a specific project is defined. Without information about the specific project, it would be speculative to identify impacts in the Draft EIR.

Response to Comment 12-34:

These concerns are addressed in the following: Policies PF-C.4, PF-C.6, PF-C.7, PF-C.25, PF-C.27, PF-C.29, OS-A.5, OS-A.11, OS-A.12, OS-A.14, OS-A.15, OS-A.17, OS-A.19, and OS-A.26; and Programs PF-C.G and OS-A.10. These policies and programs cover the following topics: expansion of groundwater storage, water conservation, water pricing, water banking, creation of additional water storage, recharging groundwater, and tertiary levels of wastewater treatment.

Response to Comment 12-35:

The concern expressed in this comment is addressed in Policies OS-A.21 through OS-A.25. Specific reference to National Pollution Discharge Elimination System (NPDES) is not necessary as NPDES is administered locally through the California Regional Water Quality Control Board and the Fresno Metropolitan Flood Control District.

Response to Comment 12-36:

See revised Policy PF-E.19.

Response to Comment 12-37:

The concern expressed in this comment is addressed in Policies OS-A.21 through OS-A.25, which cover a wide range of water quality measures.

Response to Comment 12-38:

It is the County's existing policy in all areas to work cooperatively with other agencies to maximum extent practical. Reference to authority over groundwater is a legal issue inappropriate to the General Plan.

Response to Comment 12-39:

The statement regarding "50 modifications" apparently refers to the proposals that the public was allowed to submit for consideration during the General Plan Update process. Many of the policy-related proposals were addressed by policy statements in the Draft General Plan Policy Document. With one exception, the land use designation/zoning proposals were not recommended for inclusion in the update and have not been included in the update. The proposals included in the Draft General Plan Policy Document were detailed in the public hearing record and have been considered within the scope of the Draft EIR.

Response to Comment 12-40:

Comment noted. Any changes made to the policies of the Draft General Plan Policy Document will be reflected in the Draft Final Policy Document and the Final EIR.

COMMENT LETTER 13: Thomas J. Riggs, Lozano Smith Attorneys at Law (April 10, 2000)

Response to Comment 13-1:

The discussion on page 4.6-22 under **Proposition 1A/Senate Bill 50** of the Draft EIR is revised to add the following text:

School impact mitigation fee agreements entered into prior to the adoption of Proposition 1A and SB 50 (November 4, 1998) were expressly “grandfathered” by the State legislature by language contained in California Government Code section 65995, subsections (c)(1) and (c)(2).

COMMENT LETTER 14: Dennis Hardgrave, Development Planning Services (April 19, 2000)**Response to Comments 14-1 through 14-8:**

Tables 2-5, 2-6, 2-7, 2-8, 2-9, and 2-10 in the Draft EIR have been revised to show greater population and employment growth in the Sierra Foothills and the Sierra Nevada Mountain areas. The East Valley area's new population has decreased by 4,655 and Sierra Foothills and Sierra Nevada Mountains together have increased by the same amount. Total county population and total unincorporated population remains the same. A similar shift has been made in employment.

Appendix A (General Plan Growth Assumptions) in the General Plan Policy Document has also been revised to reflect these changes. Please see Chapter 2, Changes to the Draft EIR, in this Final EIR for revised Draft EIR Tables 2-5 through 2-10.

COMMENT LETTER 15: David Cehrs, Ph.D (April 20, 2000)

Response to Comment 15-1:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Groundwater resources are described in pages 4.8-2 through 4.8-4 of the Draft EIR. It is acknowledged that groundwater overdraft occurs in the Fresno area as a result of urban and agricultural demand.

Development under the proposed Draft General Plan could result in the demand for water exceeding supply, exacerbating overdraft conditions. This impact was identified as significant (see Impact 4-8.1 on pages 4.8-25 through 4.8-30 of the Draft EIR). Mitigation measures included implementation of Draft General Plan policies to ensure that adequate water supplies are available to support new development, and to develop a plan to achieve water supply sustainability.

COMMENT LETTER 16: Kelley M. Taber, De Duir & Somach (April 20, 2000)

Response to Comment 16-1:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 16-2:

See Response to Comment 8-1.

COMMENT LETTER 17: Richard Machado, Economic Development Corporation (April 20, 2000)

Response to Comment 17-1:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Given that only seven percent of new countywide population and employment growth is expected to occur in unincorporated county area outside the spheres of influence, less than 700 acres of commercial and industrial land is estimated to be absorbed in the unincorporated county area by 2020 . (See Table 2-8 in the Draft EIR.)

Fresno County has not conducted a thorough inventory of vacant and underutilized land outside the city spheres of influence.

Response to Comment 17-2:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 17-3:

See Response to Comment 17-2.

Response to Comment 17-4:

This is not a comment on the Draft EIR. However, the comment letter was distributed to the Planning Commission and the Board of Supervisors for consideration during the public hearing process.

COMMENT LETTER 18: Mary Savala and Faye Wall, The League of Women Voters of Fresno (April 6, 2000)**Response to Comment 18-1:**

All references to the “San Joaquin Parkway Plan” in the General Plan Update have been changed to the “San Joaquin River Parkway Master Plan.”

The County has reviewed the policies in the San Joaquin River Parkway Master Plan and has included only those policies that Fresno County can implement through the exercise of its land use authority. Other policies, such as those dealing with the management of the Parkway and acquisitions which are assumed to be within the scope of the San Joaquin River Conservancy are not included in the General Plan Policy Document.

Response to Comment 18-2:

Operational emissions from mobile sources are addressed under Impact 4.12-2 and Cumulative Impact 4.12-6. The estimated net emission increases documented in the Draft EIR were calculated using the most up-to-date model approved by the California Air Resources Board (ARB) and the San Joaquin Valley APCD. The version of the model used in the Draft EIR analysis is known as the Motor Vehicle Emission Inventory (MVEI7G). As the commentor points out, the BURDEN7G and EMFAC7G models within MVEI7G were used to characterize net emission changes caused by vehicle activity changes with the General Plan Update.

The ARB conditionally approved the EMFAC2000 emission model in late May 2000. As the commentor points out, emissions attributed to mobile sources by EMFAC2000 are generally higher than those calculated using EMFAC7G. It is anticipated that the final version of EMFAC2000 would be used by the San Joaquin Valley APCD during the upcoming planning process for ozone attainment.

The approval of EMFAC2000 came after the General Plan Update Draft EIR public comment period (March 3, 2000 to April 21, 2000). The updated model includes new emission factors for vehicles statewide and provides estimates of mobile source fleet emission rates, but, at this time (mid-August 2000), it does not possess the capability of calculating emission rates for user-defined project-specific analyses. In other words, a version of EMFAC2000 has not yet been released that would allow calculation of the emission changes caused by vehicle activity trends such as changes in vehicle miles traveled and number of trips, and the present versions of EMFAC2000 cannot be used to analyze the trends affected by implementation of the General Plan Update. The ARB plans to release updated versions of the EMFAC2000 model in the coming months that would include this necessary functionality as well as address the other conditions of approval set forth by the ARB in May.¹

Because the EMFAC2000 model was not approved by the ARB at the time of Draft EIR publication, and the model does not presently have the capability to be used in this type of analysis, the analysis of the Draft EIR applied the appropriate model, and no further emission estimates are necessary.

¹ Personal Communication, Jeff Long, California Air Resources Board, Mobile Source Division, with Brewster Birdsall, EIP Associates. August 8, 2000.

Response to Comment 18-3:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor.

A directive to conduct an annual review of the General Plan is contained in Policy LU-H.11 and Implementation Program LU-H.C. Additionally, the text in the “Introduction” section of the Plan was revised to include reference to the annual review, which the County will conduct in accordance with Government Code Section 65400. Policy LU-H.12 informs the public that amendments to the Plan will occur no more than four times per year.

Response to Comment 18-4:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 18-5

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The policies in the General Plan Update were drafted with the intent of maintaining a level of specificity and detail appropriate to statements of policy. The objective is to have policies that are sufficiently clear in meaning to guide future decision-making without being so rigid that there is no flexibility to deal with unique or unanticipated circumstances that vary across the county.

Response to Comments 18-6 through 18-10:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Response to Comment 18-5.

Response to Comment 18-11:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-1.

Response to Comment 18-12:

See Responses to Comments 18-6 through 18-10.

Response to Comment 18-13:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comments 12-8 and 12-20.

Response to Comment 18-14:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The intent of the language in Policy LU-H.8 is to hold the area in reserve pending a future determination concerning its use for recreation and resource protection versus urbanization. The Plan makes no commitment concerning how this question should be resolved.

Response to Comment 18-15:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-5.

Response to Comment 18-16:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. “Planned Residential Developments” and “Planned Development” are now capitalized in the General Plan Policy Document for consistency. See Policy LU-H.5 for a list of uses allowed in Planned Residential Developments.

Response to Comment 18-17:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See also Response to Comment 18-5.

Response to Comment 18-18:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-5. The Fresno County Planning Commission debated the “80 percent” issue at length during their deliberations in May, 2000, but the Board of Supervisors chose not to: 1) more precisely define “area” of change the percentage from 60 to 80. Staff advised the Board that during the review or subdivision proposals, the term “area” could be defined based on common topographic features, geographic location, common water supply issues, and/or related characteristics.

Response to Comment 18-19:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-5.

Response to Comment 18-20:

See Responses to Comments 18-6 through 18-10.

Response to Comment 18-21:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County cannot dictate land use policy for incorporated city areas. The County can only urge cities to adopt policies and, through implementation, work with cities to carry out these policies.

Response to Comment 18-22:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County feels that the policy as written will achieve the same purpose as the proposed rewrite.

Response to Comment 18-23:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. In the General Plan Background Report, holding capacity and the 80 percent build-out figure are not to be construed as policy guidance. This was just used as a working assumption and an analytical device.

Response to Comment 18-24:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-5.

Response to Comment 18-25:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Responses to Comments 18-5 and 18-21.

Response to Comment 18-26:

See Responses to Comments 18-6 through 18-10.

Response to Comment 18-27:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy LU-G.7 has been modified to refer to general or community plans adopted by cities. The County legally cannot delegate its authority for land use decisions to another public agency and is legally obligated to make land use decisions for unincorporated areas in city spheres of influence consistent with its own (county-) adopted policies.

Response to Comment 18-28:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-5.

Response to Comment 18-29:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County feels that Policy LU-G.11 is consistent with Policy LU-G.1. See Response to Comment 18-27.

Response to Comment 18-30:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The term is defined in the glossary on 2-2 of the Draft General Plan Policy Document (note that the definition has been amended).

Response to Comment 18-31:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See page 2-6 in the Draft General Plan Policy Document for a description of the Reserve designation.

Response to Comment 18-32 through 18-34:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-30.

Response to Comment 18-35:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. A community plan is a plan for the development of a geographic area adopted as part of the County's General Plan. See pages 7-8 of the Introduction to the Draft General Plan Policy Document for a list of officially-adopted community plans in Fresno County.

Response to Comment 18-36:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-3. With regard to the comment on Policy LU-H.12, the provision is consistent with the State law limitation and allows the County appropriate flexibility to accommodate changing conditions and needs.

Response to Comments 18-37:

See Responses to Comments 18-6 through 18-10.

Response to Comment 18-38:

See Responses to Comments 18-6 through 18-10.

Response to Comment 18-39:

The referenced policy is applicable to areas that have been designated for growth outside of urban boundaries (e.g., Millerton New Town Specific Plan Area).

Response to Comment 18-40:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The suggested change has been made.

Response to Comment 18-41:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The suggested citation has been provided.

Response to Comment 18-42:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The suggested change has been made.

Response to Comment 18-43:

The referenced policy allows for the transfer of water surplus to the needs of agriculture for use by urban users in lieu of groundwater pumping. The result is the same as groundwater banking.

Response to Comment 18-44:

The two policies referenced apply to different situations. PF-C.7 is a policy for recommendation to the cities. PF-C.25 allows the County to establish water conservation practices for development within its jurisdiction; including non-urban type development. County-prescribed conservation practices may require greater flexibility to meet conservation goals than provided under urban best management practices.

Response to Comment 18-45:

There are areas of the County where over-irrigation is detrimental and conservation should be encouraged (e.g., western Fresno County). However, there are other areas where over-irrigation is an essential component of groundwater recharge and should be encouraged. The referenced policies reflect these differences.

Response to Comment 18-46:

In most areas of the County, use of groundwater to sustain artificial lakes must be discouraged. However, there are some areas of the County where use of available groundwater for the same purpose is of benefit (e.g., areas of extremely shallow groundwater). The term “generally” provides flexibility necessary to accommodate differing geohydrological circumstances.

Response to Comment 18-47:

The referenced program has been amended to read “The Fresno County Water Advisory Committee shall provide advice to the Board of Supervisors on water resource management issues”. The amendment as written was requested by the Water Advisory Committee.

Response to Comment 18-48:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 18-49:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy OS-A.18 is not the only policy in the General Plan concerning the San Joaquin River Parkway Master Plan. The County has reviewed the policies in the San Joaquin River Parkway Master Plan and has included policies in the General Plan update that Fresno County can implement through the exercise of its land use authority. The vast majority of the policies in the San Joaquin River Parkway Master Plan concern the management of the Parkway and are not the direct concern of Fresno County. Such policies dealing with the management of the Parkway and acquisitions, which are assumed to be within the scope of the San Joaquin River Conservancy, are not included in the General Plan Policy Document. Furthermore, it is inappropriate for the County to adopt another agency's plan wholesale.

Response to Comment 18-50:

The referenced policy is intended to convey first, that the County shall encourage the multiple use of public lands, and second, to include groundwater recharge in that multiple use. The suggested changes would appear to limit the encouragement of groundwater use to those lands already subject to multiple use.

Response to Comment 18-51:

The citation has been included.

Response to Comment 18-52:

The referenced policy does not include the term "excessive consumptive use".

Response to Comment 18-53:

The suggested change has been made.

Response to Comment 18-54:

The referenced policy simply supports efforts to require the U.S. Bureau of Reclamation to uphold its obligation to provide drainage. Without drainage, the long-term maintenance of agriculture within the San Joaquin Valley (i.e., a closed basin) is in question. Any resulting drainage project would be subject to environmental analysis and review.

Response to Comment 18-55:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 18-56 below.

Response to Comment 18-56:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor.

- 1) The air district does not have the authority to approve city/county methods for determining and mitigating project air quality impacts and has never played such a role.
- 2) Policy OS-G.11 is not the only Congestion Management measure/TCM. Congestion Management and adopted Transportation Control Measures are encouraged by multiple Fresno County policies and practices. Some are listed in Section TR-C of the General Plan Policy Document. The General Plan also addresses TCMs such as transit and bicycling in the Transportation Element, and employee trip reduction (OS-G.7 and OS-G.B), but does not specifically label them as such. Land use policies that direct development to cities and support increased densities will encourage situations where TCMs can be effective.

The most effective TCMs, traffic flow improvements and transit are most effective in reducing emissions where there is greater urban density. Most unincorporated areas are rural in nature without congestion or urban densities. Within the FCMA, in addition to transit support, Fresno County has constructed extensive fiber-optic interconnection for signal synchronization in recent years, and implements operational improvements to improve traffic flow as funding allows. Emphasizing other TCM improvements which have little or no effectiveness in measurable reducing emissions, especially in non-urbanized areas, may not be the best focus of County resources or policy.

- 3) California Department of Transportation Standard Specifications address requirements for dust control. This language is incorporated in contract documents for all Fresno County road projects.
- 4) California Department of Transportation Standard Specifications address requirements for dust control. This language is incorporated in contract documents for all Fresno County road projects.
- 5) Policy OS-G.16 is revised as follows:

The County shall ~~encourage the~~ require the use of natural gas or the installation of low-emission, EPA-certified fireplace inserts and/or wood stoves, pellet stoves, or natural gas heating appliances in lieu of normal in all open hearth fireplaces in new houses homes. The County shall promote the use of natural gas over wood products in space heating devices and fireplaces in all existing and new homes.

- 6) The air district does not have the authority to approve city/county methods for determining and mitigating project air quality impacts and has never played such a role.
- 7) See responses above for item numbers 3 and 4.

Response to Comment 18-57:

Activity solely within Fresno County may be independently responsible for localized violations, but because ozone and particulate matter are pollutants that travel throughout the entire San Joaquin Valley, the background concentrations caused by out-of-county sources cannot be ignored. Similarly, sources of pollution throughout Fresno County contribute to elevated background concentrations elsewhere in the valley and foothills. The statement (on p. 4.12-1) that violations of ambient air quality standards in Fresno County are caused by the combined effects of transported pollution and pollution from local sources is accurate and does not require revision.

Response to Comment 18-58:

As stated on page 4.12-4 of the Draft EIR, the method of analysis for air quality impacts takes into consideration that the science foundation will evolve. The analysis includes a reasonable projection of future trends, without being overly speculative or prescriptive. Air quality and transportation trends considered reasonable in the air quality analysis include growth of area source emissions consistent with population and employment growth projections, growth of vehicle miles traveled and vehicle trips caused by population and employment growth, and ongoing implementation of the control strategies for mobile sources presently in place on the regional, state, and federal level. For example, gradual turnover of high-polluting motor vehicles will cause a reduction in emissions from on-road sources. In the analysis, these trends were then extended to the 2020 horizon year and analyzed for impacts with and without the Draft General Plan policies.

Response to Comment 18-59:

Impact 4.12-1 addresses all development under the General Plan, which includes construction of roadways. Policy OS-G.6 encourages transportation improvement projects to be included in the regional transportation plans, and Policies OS-G.14, OS-G.15, and TR-A.17 encourage reducing emissions from roadway projects. Emissions specifically associated with development of the Fresno County Council of Governments' (COG) Regional Transportation Plan (RTP) would be evaluated separately by the COG during the environmental review process for the RTP.

Response to Comment 18-60:

See Response to Comment 18-2.

Response to Comment 18-61:

As the commentor notes, quantification of emissions of toxic air contaminants from mobile sources can be accomplished using existing traffic information and available emission factors, although approved guidelines or standardized methods for emission quantification do not exist. The County does not have jurisdiction to reduce emissions from vehicle tailpipes, but the County does have jurisdiction over land use decisions affecting placement of sensitive uses near potential sources of toxic air contaminants. Impact 4.12-5 and Policy OS-G.12 address this issue and do not preclude protecting sensitive uses from emissions caused by transportation-related land uses. In recent months, the ARB has embarked on efforts to identify and reduce risks caused by toxic air contaminants from vehicle exhaust.

The following text has been added to clarify the Method of Analysis discussion on page 4.12-6 of the Draft EIR:

“Quantification of toxic air contaminant (TAC) emissions from stationary sources associated with the projected development is not possible at this time because the specific sources and receptors that would occur under the General Plan are not yet known.”

Response to Comment 18-62:

Use of BURDEN7G for the Draft EIR analysis is discussed in Response to Comment 18-2. Table 4.12-1 does not require revision.

Response to Comment 18-63:

The policies of the Draft General Plan are the result of an extensive review of strategies that would be technically and economically feasible for the County to implement. Policies related to transportation emphasize mass transit through preservation of right-of-way and development of land use and design standards to enhance the viability of transit and encourage development of systems that would enhance goods movement by rail (see Policies TR-E.1 through TR-E.6). Additionally, Policy OS-G.5 directs the County to coordinate development of air quality control strategies (which include transportation control measures) with other agencies. This encourages County involvement in transportation-related planning efforts such as those of Caltrans and the Council of Governments that may be related to congestion management and the regional transportation Plan.

Response to Comment 18-64:

No mitigation measures are required for Impact 4.12-5 because implementation of Policy OS-G.12 combined with the other identified policies would reduce potential impacts to a less-than-significant level. Implementation of these policies would not preclude protecting sensitive uses from emissions caused by freeways, expressways, new passing lanes, et cetera. No text revision is necessary.

Response to Comment 18-65:

The San Joaquin Valley APCD and the ARB track ambient air quality using many of the indicators described by the commentor. Based on trends in these indicators, the air quality management agencies develop plans and guidelines for use by other agencies to focus their air quality control efforts. The policies of the Draft General Plan have been developed to be consistent with the plans and guidelines prescribed by the air quality management agencies, and thus are responsive to these indicators.

Response to Comments 18-66 through 18-71:

See Responses to Comments 18-6 through 18-10.

COMMENT LETTER 19: Mary Savala and Faye Wall, The League of Women Voters of Fresno (April 20, 2000)

Response to Comments 19-1:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 19-2:

See Response to Comment 19-1.

Response to Comment 19-3:

See Response to Comment 19-13.

Response to Comment 19-4:

The commentor's assertion that there is no commitment to regional transit, and that local transit is second rate system is not correct in light of Goal TR-B and the following policies and programs. Transit services exists in all of the incorporated cities, several unincorporated communities, and on several inter-city and inter-County routes. Because the County is not a direct provider of transit services, the extent of available transit services and transit activities was, therefore, perhaps not made clear in the documents.

Regional transit service is provided by the Fresno County Rural Transit Agency (FCRTA), which includes intra and inter-City services, as well as inter-County services. Service is coordinated with Fresno Area Express, Clovis Stageline, and Rural Transit Agencies of other Counties. Fresno County is a member of the Fresno County Rural Transit Agency. Both fixed and para-transit routes, as well as various social service transit services, are available to the majority of the residents of Fresno County.

Transit Service within the Fresno-Clovis metropolitan area is provided by Fresno Area Express (City of Fresno) and by Clovis Transit (City of Clovis). The County participates in funding these transit services but has no direct authority over their operations.

Response to Comment 19-5:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy OS-A.26 states that the County will "generally require treatment to tertiary or higher levels" for new wastewater treatment facilities.

Response to Comment 19-6:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Responses to Comments 15-1 and 12-10 for a discussion of groundwater resources.

Response to Comment 19-7:

Any water storage project would be subject to an environmental analysis to be conducted at the time a specific project is defined. Without information about the specific project, it would be speculative to identify potential impacts.

Responses to Comments 19-8:

CEQA does not mandate a form for evaluating impacts. However, the policies were developed at the same time to maximize consistency.

Response to Comment 19-9:

See Policies TR-A.2 and TR-A.11, where road funding priorities are given to preservation of the existing 3,620-mile road system, over capacity needs; and Policies TR-B.1 through TR-B.6, where transit-supportable development is encouraged (see also Response to Comment 19-4).

The unincorporated County area encompasses over 6,000 square miles, and with the exception of unincorporated pockets within the Fresno-Clovis metropolitan area, primarily consists of relatively sparse population dispersed over a large rural area, with relatively small population concentrations in the thirteen rural cities. County policies reflect the responsibility to provide for mobility for both rural and urban areas. The County will not have direct control over the conditions of urban development in incorporated cities, but directing development to cities will have the effect of concentrating development and urban uses in appropriate locations planned for that use, where transit may be most effectively deployed and used.

Future transit rail corridors are identified in Figure TR-3 in the Draft General Plan Policy Document. It should be noted that light rail is not an inherently superior or progressive transit mode over buses. Buses and commuter rail each have their advantages and disadvantages, according to varying locally specific circumstances.

It is important to identify and preserve transportation corridors for long-term growth. The County seeks to provide mobility for all of its' residents by the most advantageous means, regardless of mode, and to Plan for future needs. Therefore, potential rail transit corridors have been identified in Figure TR-3 in the Draft General Plan Policy Document.

Response to Comment 19-10:

See Response to Comment 19-9.

Response to Comment 19-11:

General Plan policies to direct growth to cities are the most effective means that the County has to reduce vehicle miles traveled (VMT). In addition, the bikeways plan has been significantly expanded in this General Plan Update, and transit policies support concentration of development that can be effectively served by transit.

Response to Comment 19-12:

See Response to Comment 19-9, concerning light rail. See also Policy TR.B.3 and Figure TR-3 (in the Draft General Plan Policy Document), which support and identify corridors where rights-of-way is either preserved or recommended for preservation for future transit use. County policies which direct growth to Cities is the most effective means available to the County to encourage growth patterns and densities that support transit use.

Proposed policies LU-G.2 and LU-F.1 through LU-F.10 specifically support compact development. The circulation system in the unincorporated area outside of city spheres is intended to link cities, State highways, and other destinations, and provides access and mobility throughout rural agricultural areas of the County. Less than five miles of new road corridor has been added to the updated circulation element, in order to provide system continuity, and only one rural route (Auberry Road) was redesignated from a collector to an arterial. This was a result of existing use of the road as a major corridor serving the foothill and Sierra region.

Response to Comment 19-13:

The Draft EIR evaluates significant impacts and identifies General Plan policies that serve as mitigation. The document also recognizes that the most significant capacity deficiencies are expected to occur within the Fresno-Clovis Metropolitan Area, and on major State highways, under any of the growth scenarios originally evaluated, and with or without the County General Plan project.

Response to Comment 19-14:

The policies under the goal are designed to provide not only for capacity expansion as needed to provide necessary mobility of Fresno County residents, but to insure that the system is planned, constructed, maintained, and operated in as efficient manner as possible to provide for the future safety and mobility of Fresno County. New policies (especially TR-A.11) formalize long-standing County practice of placing a priority on maintenance and preservation of the 3,620-mile road system over capacity improvements.

The referenced capacity studies (which indicate that measures to increase roadway capacity immediately induces new traffic, which uses up to 50 percent of new capacity) generally document areas where intense growth has occurred, without corresponding transportation infrastructure improvements, thus creating a great latent demand for transportation facilities. The population of the State increased 70 percent over the past three decades, and vehicle miles traveled increased over 150 percent. Much of this increase was concentrated in already-populous areas of the State. During that period, State highway centerline miles increase only 4 percent, and lane-miles less than 20 percent. Local agencies were able to do even less. The imbalance between population and infrastructure

growth in the State has led to severe traffic congestion, air quality degradation, and delay. Where new facilities are incrementally added under these conditions, the extent of the latent demand may overwhelm a minor capacity improvement.

The Fresno County area as a whole does not reflect the model referenced in the study. Infrastructure improvements alone do not create growth demand, and conversely, growth demand does not wait on infrastructure, even when significantly lacking. This is evidenced by the following examples:

- P Jensen Avenue between Fresno and Sanger: Jensen Avenue is a major corridor in south Fresno connecting the City of Sanger, located about 10 miles east of Fresno, to Route 99 and Fresno. Jensen Avenue was improved from two to four lanes in the early 1970s. Transportation-Caused Growth models suggest that improvement of this corridor should have caused not only rapid development of Sanger, but urbanization of the rural area between Fresno and Sanger during the years when Fresno experienced its most rapid growth, leading to congestion of the corridor. This has not occurred. After nearly 30 years, the rural sections of Jensen Avenue operate at a Level of Service B, meaning that there is significant available capacity, and it is expected to operate at an acceptable level of service through 2020.
- P Growth of the Fresno/Clovis area has long been to the north and north/east, although the circulation element has long shown planned freeway corridors to the north, south, east, and west, potentially accommodating growth in any of these directions. Growth and development of north and northeast Fresno and Clovis during the 1970s and 1980s pre-dated construction of the freeways (Freeway 41 first opened to Bullard in 1982, and did not extend past that for several years), and, prior to Measure C in 1986, there was little expectation that Route 168 would be built. Clovis has doubled its population since 1980, despite the lack of freeway infrastructure, and only this year has had direct freeway access to downtown and SR 99 via SR 168.

The majority of County road facilities are rural two-lane roadways, which, for the most part, operate at acceptable levels of service, and most of which are expected to maintain reserve capacity throughout the 2020 period.

Response to Comment 19-15:

The commentor is correct. The Draft EIR found traffic volumes will increase and some roadway segments will operate at unacceptable levels.

Response to Comment 19-16:

The travel demand forecasts that were prepared to evaluate the traffic impacts of the General Plan were based on the best 2020 population and employment estimates under the Land Use Diagram and the General Plan policies. Through this evaluation, the General Plan Update strives to integrate the Circulation Element and the Land Use Element. It should be noted that there are very few changes to the circulation element to provide for additional capacity, and therefore the Circulation element remains consistent with the land use element, which also does not designate significant new land changes from the existing General Plan document. Less than 5 miles of new roadway corridor were designated, consisting primarily of extending Academy Avenue from Tollhouse (existing 168) to

proposed 168. The majority of changes to the circulation element consists of redesignation of existing high-volume local two-lane roads to rural collector two-lane roads.

Response to Comment 19-17:

The Draft EIR outlines the transportation impacts of projected growth under the Land Use Element of the General Plan. The transportation goals and their related policies in the Draft General Plan Policy Document provide the standards of significance by which those impacts are measured, and attempt to mitigate the impacts. The policies in the General Plan were developed as a package whereby several policies are needed together to meet the various goals in the General Plan. Therefore, most policies should not be evaluated individually.

The only transportation-related impacts that were found to be significant and unavoidable in the Draft EIR were impacts within the spheres of influence of cities in Fresno County, plus impacts to the State highway system. While the Draft EIR provides measures that the County can implement to mitigate its fair share of those impacts, the County can not ensure that adequate measures are fully funded and implemented on roadways that it does not control. The Draft EIR does provide a set of measures to fully mitigate impacts on the County's roadway system outside the spheres of influence of cities in Fresno County.

Response to Comment 19-18:

The East-West Corridor is only a conceptual facility that would link Fresno and Madera counties. A conceptual alignment was shown on the Draft Circulation Diagram. At the direction of the Board of Supervisors, that conceptual alignment will not be included in the Final Circulation Diagram, and references to the East-West Corridor will be removed from the Draft General Plan Policy Document.

Responses to Comments 19-19:

The significant and unavoidable impact resulting from increased transit use references the fact that increased transit use, while beneficial in a number of important ways, also increases the cost to the public without a corresponding funding source. Transit systems, even heavily used systems, are highly subsidized. The level of public support required to provide transit is indicated by the minimum fairbox requirement used by the State to determine system efficiency. Rural services are required to recoup 10 percent of operating costs from fares to be considered efficient, and urban systems are required to achieve 20 percent recovery. The remainder of costs (up to 90 percent for rural systems and up to 80 percent for urban systems) is tax-supported, and is therefore an impact to local transit providers.

Response to Comment 19-20:

See Responses to Comments 19-4, 19-9, and 19-10. At the direction of the Planning Commission and Board of Supervisors, the State Route 41 Transit Corridor was extended to the San Joaquin River in TR-3. Bus service is currently available to Valley Children's Hospital in Madera, through contract with FAX.

Response to Comment 19-21:

Local agencies may not legally delegate their land use decision-making powers. The County may encourage but cannot force another jurisdiction to adopt any given policy.

Response to Comment 19-22:

See Response to Comment 18-24.

Response to Comment 19-23:

See Responses to Comments 18-24 and 18-26.

Response to Comment 19-24:

See Response to Comment 18-27.

Response to Comment 19-25:

See Response to Comment 18-5.

Response to Comment 19-26:

See Response to Comment 18-28.

Response to Comment 19-27:

See Response to Comment 18-29.

Response to Comment 19-28:

See Response to Comment 18-31.

Response to Comment 19-29:

See Response to Comment 18-32.

Response to Comment 19-30:

See Response to Comment 18-33.

Response to Comment 19-31:

See Response to Comment 18-34.

Response to Comment 19-32:

See Response to Comment 18-1.

Response to Comment 19-33:

See Responses to Comments 19-34 through 19-38.

Response to Comment 19-34:

See Response to Comment 18-6.

Response to Comment 19-35:

See Response to Comment 18-7.

Response to Comment 19-36:

See Response to Comment 18-9.

Response to Comment 19-37:

See Response to Comment 18-25.

Response to Comment 19-38:

See Response to Comment 18-17.

COMMENT LETTER 20: Gregory Kirkpatrick, American Farmland Trust (April 21, 2000)**Response to Comment 20-1:**

Impacts 4.3-1 through 4.3-4 on pages 4.3-10 through 4.3-16 in Section 4.3, Agriculture, in the Draft EIR fully disclose the magnitude of project-specific and cumulative impacts related to loss of productive farmland as a result of conversion of land to urban uses and non-renewal and cancellation of Williamson Act contracts. Each impact discussion provides adequate evidence to support the conclusions that such impacts would be significant and unavoidable. Draft General Plan policies reflected in Mitigation Measures 4.3-1 through 4.3-4 provide a range of mitigation measures to reduce the effects related to the loss of agricultural land. The Draft EIR identified three alternatives to the project, which represent a reasonable range of alternatives to the proposed project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, as required by CEQA Guidelines Section 15126. The basis for the selection of alternatives is stated on page 6-2 in Chapter 6, Alternatives. Chapter 6 provides an analysis of each of the three alternatives to determine whether potential environmental effects would be greater or less than the proposed project. Chapter 6 also considers other alternatives (page 6-7) and explains the reasons they were not considered for detailed analysis in the Draft EIR.

Response to Comment 20-2:

New and revised policies and programs addressing the protection and conversion of agricultural land have been added to Sections LU-A and LU-G of the General Plan Policy Document to supplement the agricultural land protection policies found in Policy LU-A.15. See Response to Comment 7-56.

Response to Comment 20-3:

See Response to Comment 20-2.

Response to Comment 20-4:

Section 15126.4 of the CEQA Guidelines specifies the requirements pertaining to mitigation measures. Specifically, 15126.4(D)(2) states “mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. In the case of the *adoption of a Plan, policy*, [emphasis added] regulation, or other public project, mitigation measures can be incorporated into the Plan, policy, regulation, or policy design.” As stated on page 2-15 in Chapter 2, Project Description and Demographic Information, in the Draft EIR, impacts identified in the EIR would be mitigated through adopted laws and regulations and identified General Plan policies and programs or some combination thereof, such that the General Plan Update is self-mitigating. Mitigation measures, which reflect specific policies such as LU-A.15 (see Mitigation Measure 4.3-1), have not been deferred to a later date, as suggested by the commentor. The mitigation measures would be implemented and enforced through a mitigation monitoring program (MMP). As described on page 1-7 in Chapter 1, Introduction, of the Draft EIR, the mitigation reporting or monitoring program must be designed to ensure compliance during project implementation.

The commentor's recommendation regarding establishment of an agricultural preservation program and criteria for providing environmental review is noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 20-5:

The Draft EIR does not "imply" there is nothing the County can do to reduce impacts within the incorporated areas. The general approach and assumptions used to reach a significance conclusion, as it relates to policies and mitigation within the County's jurisdiction to control is explicitly stated in several places in the Draft EIR (e.g., pages 1-3 and 1-5 in Chapter 1, Introduction, page 2-24 in Chapter 2, Project Description, and on pages 3-3 and 3-5 in Chapter 3, Summary of Impacts and Mitigation Measures). For example, as noted on page 1-3, "the County General Plan does not apply to the incorporated areas, which are subject to city general plans."

As a public agency, the County's role as a Responsible Agency under CEQA is described in Section 15096 of the CEQA Guidelines. As stated in section 15096 of the Guidelines, "a responsible agency complies with CEQA by considering the EIR or Negative Declaration prepared by the lead agency and by reaching its own conclusions on whether and how to approve the project involved." The Guidelines continue to describe the special duties a public agency will have when acting as a responsible agency.

Response to Comment 20-6:

The commentor reiterates the conclusion of Impact 4.3-1 on pages 4.3-11 through 4.3-12 in Section 4.3, Agriculture, in the Draft EIR. The conclusion that the loss of agricultural land would be a significant and unavoidable impact is stated on page 4.3-12 in the Draft EIR. As indicated in the discussion, impacts would remain significant even with General Plan policies and mitigation identified in the Draft EIR because the County cannot compel the cities, where most of the growth with or without the project would occur, to implement policies or mitigation measures protecting agricultural land. This general approach and assumptions used to reach a significance conclusion for the Draft EIR impact analyses is set forth in several places in the Draft EIR (e.g., pages 1-3 and 1-5 in Chapter 1, Introduction, page 2-24 in Chapter 2, Project Description, and on page 3-3 in Chapter 3, Summary of Impacts and Mitigation Measures).

The specific requirements pertaining to a Statement of Overriding Considerations and Findings for significant environmental effects are set forth in Section 15093 of the CEQA Guidelines, as noted by the commentor. However, the commentor's summary differs somewhat from the precise wording, which is presented below for completeness:

Section 15093 of the CEQA Guidelines requires the public 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 the project. If the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable adverse environmental effects, the adverse environmental effects may be considered 'acceptable'". This is known as a Statement of Overriding Considerations. The Statement of Overriding Considerations may be made where changes or alterations in the project which would avoid or substantially lessen the significant environmental effects, are within the responsibility and jurisdiction of another public agency, or where specific economic, legal, social, technological or other considerations, including

provision of employment opportunities for highly trained workers, make mitigation measures or project alternatives infeasible.

Section 15091 of the CEQA Guidelines states that “no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings for each of those significant effects, accompanied by a brief explanation of the rationale for each finding. The possible findings are:

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

The term “feasible” as defined in Section 15364 of the CEQA Guidelines means “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”

The County has prepared Findings of Fact and a Statement of Overriding Considerations for those impacts that were unmitigable and were considered significant and unavoidable.

COMMENT LETTER 21: Deborah North, River Parkway Trust (April 21, 2000)

Response to Comment 21-1:

Comment noted. Please see Chapter 2, Changes to the Draft EIR, in this Final EIR for a complete list of all text changes made to the Draft EIR.

Response to Comment 21-2:

The Draft EIR is a program level EIR that addresses impacts of development proposed under the Draft General Plan. Detailed analysis of specific projects will be evaluated under separate, appropriate environmental review.

Response to Comment 21-3:

The last sentence in the paragraph under the bulletin items in Impact 4.2-1 on page 4.2-6 of the Draft EIR discussed by the commentor has been revised as follows:

Policies LU-C.2 and LU-C.5 ensure consistency with the San Joaquin River Parkway Plan policies. The County conducted a thorough review of the policies in the San Joaquin River Parkway Master Plan and has included all the policies that Fresno County can implement through the exercise of its land use authority. Other policies, such as those dealing with the management of the Parkway and acquisitions which are within the scope of the San Joaquin River Conservancy are not included in the General Plan Policy Document.

COMMENT LETTER 22: Harold Tokmakian (April 21, 2000)**Response to Comment 22-1:**

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Input from the focus group has been considered throughout the General Plan Update process, along with input from public agencies and the general public through written comments, open houses, and public hearings.

Response to Comment 22-2:

The resulting level of significance (after mitigation) for land use, agriculture, transportation and circulation, water resources, and air quality does not imply that policies or goals have been omitted and additional policies need to be developed, as suggested by the commentor. Please see Response to Comment 20-5, which notes that impacts in these areas would remain significant even with General Plan policies and mitigation identified in the Draft EIR because the County cannot compel the cities, where most of the growth with or without the project would occur, to implement the policies or mitigation measures.

Response to Comment 22-3:

Please see Response to Comment 22-2.

Response to Comment 22-4:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Policies LU-A.1 and LU-G.11 and Response to Comment 19-11.

Response to Comment 22-5:

The Planning Commission and Board of Supervisors reviewed draft plan provisions and recommended revisions or additions to existing policies and programs in the following areas: residential-agricultural conflicts in Section LU-A; loss of agricultural lands in Section LU-A; traffic congestion and transit in Sections TR-A, TR-B, and TR-C; water supply and delivery in Section PF-C; water quality and groundwater recharge in Section OS-A; and air quality in Section OS-G.

Response to Comment 22-6:

The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. A statement is being added to the General Plan Policy Document acknowledging the significance of planning issues in the FCMA. A new policy and implementation program are also being incorporated into the General Plan to address regional cooperation.

Response to Comment 22-7:

The Fresno County Planning Commission debated at length this “no net loss” policy recommendation but could not achieve consensus to add the policy. Revised Policy LU-A.15 and a new program under LU-A require the County to periodically review agricultural land protection measures, including conservation easements, for possible adoption.

COMMENT LETTER 23: The Growth Alternatives Alliance (May 3, 2000)

Response to Comments 23-1 and 23-2:

See Response to Comment 11-1.

Response to Comment 23-3:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-4:

See Response to Comment 23-3.

Response to Comment 23-5:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The growth assumptions used by the County in the General Plan Update did not indicate a need to open up additional unincorporated land for urban development within the 20-year timeframe (2020). However, Policy LU-H.8 acknowledges that the Friant-Millerton area “in the long-term...may be suitable for urban development as the unincorporated county’s largest remaining area without productive agricultural soils near the Fresno-Clovis Metropolitan Area and recreational and scenic resources.”

Response to Comment 23-6:

See Response to Comment 23-3.

Response to Comment 23-7:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-8:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy LU-E.15 gives direction not to designate additional areas for Rural Residential development. Redesignation of undeveloped rural residential areas is addressed in Policy LU-E.17, and the following additional policy was added to Section LU-G during the public hearing process:

Policy LU-G.____	The County shall, during the update of its community plans pursuant to Policy LU-G.7, evaluate the alternative of re-designating undeveloped rural-residential areas to the Reserve designation to support the efforts of the affected city to achieve more efficient use of land within its existing sphere of influence.
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Response to Comment 23-9:

This is not a comment on the Draft EIR. However, it should be noted that the Board of Supervisors in June 2000, directed that agriculture be given more emphasis in the General Plan consistent with this comment.

Response to Comment 23-10:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. It should be noted that additional policies and text changes have been made to the Draft General Plan Policy Document as directed by the Board of Supervisors in June 2000.

Response to Comment 23-11:

See Response to Comment 23-3.

Response to Comments 23-12:

See Response to Comment 23-3.

Response to Comment 23-13:

See Response to Comment 23-3.

Response to Comment 23-14:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. This refers to California Land Conservation Act contracts, better known as the Williamson Act contracts.

Response to Comment 23-15:

See Response to Comment 23-10.

Response to Comment 23-16:

See Response to Comment 7-42.

Response to Comment 23-17:

See Response to Comment 23-10.

Response to Comment 23-18:

See Response to Comment 23-10.

Response to Comment 23-19:

See Response to Comment 23-3.

Response to Comment 23-20:

See Response to Comment 23-3.

Response to Comment 23-21:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-22:

See Response to Comment 23-10.

Response to Comment 23-23:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. All areas will be evaluated for water supply, see policy PF-C.17.

Response to Comment 23-24:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. It should be noted that during the hearing process, Policy LU-G.12 was revised to indicate that the County will “consider” instead of “accept” contracts under the California Land Conservation Program “after consultation with the cities.”

Response to Comment 23-25

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-26:

See Response to Comment 23-10.

Response to Comment 23-27:

See Responses to Comments 23-10 and 23-14.

Response to Comment 23-28:

See Responses to Comments 18-5 and 23-10.

Response to Comment 23-29:

This comment is confusing and appears to be out of place. In any event, it is not a comment on the Draft EIR.

Response to Comment 23-30:

See Response to Comment 23-10.

Response to Comment 23-31:

The policy noted by the commentor (Policy LU-F.12) is carried forward from the existing General Plan. Rather than encouraging “sprawl,” the policy limits this type of low-density development to the three specified communities. Each of the referenced communities is covered by a community plan.

Responses to Comments 23-32 through 23-41:

See Response to Comment 23-10.

Response to Comment 23-42:

See Responses to Comments 12-8 and 23-10.

Response to Comment 23-43:

See Response to Comment 23-10.

Responses to Comments 23-44 through 23-51:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-52:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 23-53:

See Response to Comment 12-35.

Response to Comment 23-54:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. This policy continues the existing County policy of minimizing the proliferation of small water systems.

Response to Comment 23-55:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The policy is intended to apply to all new wells.

Response to Comment 23-56:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Artificial lakes used for recharge of surface water may be appropriate. The referenced policy applies to use of groundwater to sustain artificial lakes which is not appropriate.

Response to Comment 23-57:

See Response to Comment 23-54.

Response to Comment 23-58:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The County has not made a commitment to urbanizing the Friant-Millerton area in the General Plan Update. The General Plan Update does call for preparation of a Friant-Millerton Regional Plan (Policy LU-H.8 and Program LU-H.A). The plan preparation process will consider the “suitability of the area for long-term urbanization” but will focus in the near-to mid-term on expanding and enhancing the area’s recreational activities and resources. The issue of wetlands protection will be revisited as a part of the planning effort for the Regional Plan.

COMMENT LETTER 24: Joni Johnson, Fresno Neighborhood Alliance (May 7, 2000)**Response to Comment 24-1:**

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. See Response to Comment 12-9.

Response to Comment 24-2:

See Responses to Comments 12-9 and 24-1.

Response to Comment 24-3:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policies in Section LU-G of the Land Use Element address the issue of referring development to the cities within their respective spheres of influence.

Response to Comment 24-4:

Please see Response to Comment 12-8.

Response to Comment 24-5:

Response to Comment 12-2.

Response to Comment 24-6:

This is not a comment on the Draft EIR. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process. The concern noted by the commentor is addressed in Policies OS-A.8, OS-A.17, and OS-A.21.

Response to Comment 24-7:

See Response to Comment 6-1.

Response to Comment 24-8:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. The comment is addressed in Policies PF-C.25, OS-A.15, and OS-A.20 covering the following issues: water conservation, aquifer recharge, and septic system requirements.

Response to Comment 24-9:

See revised Policy HS-C.1. See Response to Comment 19-7.

Response to Comment 24-10:

See Response to Comment 24-1 and Policies OS-A.21 through OS-A.25

Response to Comment 24-11:

Comment noted. The comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 24-12:

See Figure TR-3 in the Draft General Plan Policy Document. The County funds both urban and rural transit through the City of Fresno's Fresno Area Express (FAX) and the Fresno County Rural Transit Agency (FCRTA), as well as various social service transit services. The County's contribution is based on unincorporated area population, and operational decisions such as installation of bus shelters, etc., are managed through the respective transit agencies. The County has supported use of ISTEA and TEA-21 regional transportation funds to fund park-and-ride lots where needed. See also Response to Comment 19-4.

As stated on page 4.12-2 in Section 4.12, Air Quality, in the Draft EIR, the San Joaquin Valley Unified Air Pollution Control District is responsible for regional air quality management. The district establishes rules and regulations that apply to sources of air emissions. The district also participates in coordinating regional transportation planning and congestion management effects that affect air quality. The General Plan contains numerous policies that address mobile emissions sources related to development. However, it is not within the jurisdiction of Fresno County to develop and implement a secondary source rule to charge and impact fee to projects based on their distance from urban centers. The comment letter was distributed to the Planning Commission and Board of Supervisors for their consideration during the public hearing process.

Response to Comment 24-13:

See Response to Comment 12-40.

Response to Comment 24-14:

The Fresno Neighborhood Alliance (FNA) appeared at the June 12, 2000 Hearing and presented testimony on both the General Plan Update and Draft EIR from a letter dated May 7, 2000. The FNA comments on the Draft EIR are incorporated into the administrative record. Please see Comment Letter 25 and responses to those comments.

Response to Comment 24-15:

Comment noted. The Fresno Neighborhood Alliance has been placed on the County's mailing list to receive future mailings and notices concerning the General Plan Update.

COMMENT LETTER 25: Joni Johnson, Fresno Neighborhood Alliance (June 22, 2000)**Response to Comment 25-1:**

Please see Responses to Comments 18-2 and 18-58 through 18-65 regarding air quality.

Response to Comment 25-2:

Please see Response to Comment 24-12 regarding secondary source impact fees.

Response to Comment 25-3:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. This concern is addressed in Policy PF-C.17 that requires the County to undertake comprehensive water supply evaluations prior to consideration of any discretionary project related to land use.

Response to Comment 25-4:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. See Response to Comment 12-35.

Response to Comment 25-5:

CEQA requires lead agencies to respond to significant environmental issues, including comments which identify impacts or mitigation measures that provide better ways to avoid or mitigate significant environmental effects. This comment focuses on policy matters, or on whether certain aspects of the General Plan Update (GPU) should be approved and is not directed to the contents of the Draft EIR. As such, the Final EIR will not respond to the comment. Please note that the comment letter was distributed to the Planning Commission and Board of Supervisors for consideration during the public hearing process.

Response to Comment 25-6:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor.

The comment relates generally to the State ownership of the beds of navigable rivers and the related doctrine of public trust of available tidelands and submerged lands. The public trust doctrine is rooted in the common law or the State Constitution, or both. The state legislature has enacted statutes to implement the Constitutional protection for the public in access to public streams and other bodies of water. For example, Government Code Section 66478.1 - 66478.10 require a subdivider to allow public access to adjacent public waterway or stream. The County is bound by these statutory protections, as well as the decisional law of the state, including *Circle K Ranch Corporation v. County of Santa Barbara* (2000) 9 Cal. App. 4th 194, which bears on the commentor's concern about the creation of legal lots. The recommendation of the commentor has been forwarded to the decision makers for consideration.

Please see also Response to Comment 6-1.

Response to Comment 25-7:

This is not a comment on the Draft EIR; however, the following information has been provided to clarify the issue noted by the commentor. Policy LU-C.2 indicates the types of land uses to be accommodated within the San Joaquin River Corridor Overlay consistent with Goal LU.C which seeks to preserve and enhance the river environment. The uses to be accommodated include agricultural activities with incidental homesites, recreational uses, sand and gravel extraction, and wildlife habitat and open space uses.

Response to Comment 25-8:

Please see Response to Comment 24-14.

Response to Comment 25-9:

Please see Response to Comment 25-8.

Response to Comment 25-10:

Please see Response to Comment 24-5.

Response to Comment 25-11:

Please see Response to Comment 24-6.

Response to Comment 25-12:

Please see Response to Comment 24-7.

4. PUBLIC HEARING COMMENTS

Introduction

This section includes a list of people who provided oral comments at the public meetings on the Draft EIR held April 6, 2000 and April 20, 2000. Each person has also provided written comments responded to in Chapter 3. The deadline for oral comments was the April 20, 2000 Planning Commission hearing.

It should be noted that none of the comments received during the public hearings or responses provided result in a change to the substantive conclusions of the Draft EIR.

Planning Commission Hearing, April 6, 2000

Jim Douty, Huron
Jerry Boren, rep. Donovan Harris
Scott Cochran, Coalinga
Dirk Poeschel, Bigalow-Silkwood
Brian Wagner, Bigalow-Silkwood.
Mary Savala, League of Women Voters
Deborah North, San Joaquin River Parkway Trust
Mary Biscup

Planning Commission Hearing, April 20, 2000

Jerry Boren, rep. Donovan Harris
Jim Logan, rep. Freeson
Dirk Poeschel, rep. Corndobbler
Edward Petrie, City of Mendota
Knox Blasingame
Jerry Schmidt
Virgil Brewster
John Gray
Mary Savala, League of Women Voters
Sharon Weaver, San Joaquin River Trust
Ed Petrie
Gil Harrow, City of Fresno
Keith Woodcock, Contract Planner for Firebaugh and Mendota
Dennis Hardgrave, Southern California Edison

TABLE 3-1
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (AUGUST 2000)

Impact(s)		Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation		
		County	Non-County ¹		County	Non-County	
4.2 Land Use							
4.2-1	Development under the Draft General Plan would not conflict with adopted environmental plans and community goals.	LS	LS	4.2-1	None required beyond Draft General Plan Policies LU-G.1, LU-G.2, LU-G.3, LU-G.5, LU-G.7 through LU-G.12, LU-G.16 through LU-G.2, LU-G.19, LU-C.2 through LU-C.6, and LU-H.8, LU-H.9, and LU-H.11.	NA	NA
4.2-2	Development under the Draft General Plan would likely increase the potential for residential-agricultural and urban residential-rural residential conflicts.	LS	S	4.2-2	No mitigation is required beyond Draft General Plan Policies LU-A.1, LU-A.12 through LU-A.15, LU-G.6, LU-E.16, LU-E.18, LU-E.19, and Program LU-A.C for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities’ jurisdiction.	NA	SU
4.2-3	The proposed Draft General Plan would not divide the physical arrangement of an established community.	LS	LS	4.2-3	None required.	NA	NA
4.3 Agriculture							
4.3-1	Development under the Draft General Plan would result in the permanent loss of important farmland.	S	S	4.3-1	None available beyond Draft General Plan Policies LU-A.1 through LU-A.21, Programs LU-A.B and LU-A.D, and Policies LU-B.1 through LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities’ jurisdiction.	SU	SU
4.3-2	Development under the Draft General Plan would result in a significant reduction in agricultural production.	S	S	4.3-2	None available beyond Draft General Plan Policies LU-A.4, LU-A.6, LU-A.7, LU-A.10, LU-A.11, LU-A.19 through LU-A.21, Programs LU-A.B and LU-A.D, and Policies LU-B.5 through LU-B.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities’ jurisdiction.	SU	SU

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	County	Non-County ¹		County	Non-County ¹
4.3-3 Development under the Draft General Plan would result in increased non-renewal and cancellation of Williamson Act Contracts.	S	S	4.3-3 None available beyond Draft General Plan Policies LU-A.16, LU-A.17, and LU-B.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.3-4 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the permanent loss of important farmland, a significant reduction in agricultural production, and an increase in the non-renewal and cancellation of Williamson Act Contracts.	S	S	4.3-4 None available beyond Draft General Plan Policies LU-A.1 through LU-A.21, Programs LU-A.B and LU-A.D, and Policies LU-B.1 through LU-B.14.	SU	SU
4.4 Transportation and Circulation					
4.4-1 Development under the Draft General Plan would increase traffic volumes on rural Fresno County roadways outside the spheres of influence of the cities, causing some of these roadway segments to operate at an unacceptable level of service.	S	NA	4.4-1 None available beyond Draft General Plan Policies TR-A.5 through TR-A.7 and TR-A.10.	SU	NA
4.4-2 Development under the Draft General Plan would increase traffic volumes on rural State highways outside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	NA	4.4-2 None available beyond TR-A.9.	SU	NA
4.4-3 Development under the Draft General Plan would increase traffic volumes on local urban roadways inside the spheres of influence of the cities in Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-3 None available beyond Draft General Plan Implementation Program TR-A.B.	SU	SU

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4.4-4 Development under the Draft General Plan would increase traffic volumes on State highways inside the spheres of influence of cities in Fresno County, and cause some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-4 None available beyond Draft General Plan Policy TR-A.9.	SU	SU
4.4-5 Development under the Draft General Plan would increase truck traffic on rural Fresno County roadways outside the spheres of influence of the cities, reducing the County's ability to maintain pavement conditions on the rural roadway system.	S	NA	4.4-5 None available beyond Draft General Plan Policies TR-A.4 and TR-A.5.	SU	NA
4.4-6 Development under the Draft General Plan would increase transit demand throughout Fresno County, especially inside the spheres of influence of cities.	S	S	4.4-6 None available beyond Draft General Plan Policies TR-B.1, TR-B.2, TR-B.3, and TR-B.4.	SU	SU
4.4-7 Development under the Draft General Plan would increase the demand for bicycle facilities throughout Fresno County, especially inside the spheres of influence of cities.	S	S	4.4-7 None available beyond Draft General Plan Policies TR-A.13, TR-D.1, TR-D.2, TR-D.4 and TR-D.5.	SU	SU
4.4-8 Development under the Draft General Plan would increase the number of people and amount of property that could be exposed to aircraft crash hazards.	LS	LS	4.4-8 None required.	NA	NA

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4.4-9 Development under the Draft General Plan, in combination with cumulative development, would increase traffic volumes on State and local roadways within the spheres of influence, on rural Fresno County roadways outside the spheres of influence, including increased truck traffic, and on roadways that provide access to and from Fresno County, causing some of these roadway segments to operate at an unacceptable level of service.	S	S	4.4-9 None available beyond Draft General Plan Policies TR-A.4, TR-A.5, TR-A.7, TR-A.9, TR-A.13, TR-B.1 through TR-B.4, and TR-D.1, TR-D.2, TR-D.4, and TR-D.5, and Implementing Program TR-A.B.	SU	SU
4.5 Wastewater, Storm Drainage, and Flooding					
4.5-1 Increased development intensity in urban areas and added industrial users under the Draft General Plan could increase sewage treatment demand beyond the capacities of existing wastewater treatment facilities. This could result in the construction of new or expanded wastewater collection and treatment facilities.	S	S	4.5-1 No mitigation is available beyond Draft General Plan Policies PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4, PF-D.6, PF-D.7, PF-A.2, PF-A.3, and OS-A.28. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.5-2 Development under the Draft General Plan would increase the number of individual septic systems.	LS	LS	4.5-2 None required.	NA	NA
4.5-3 Development under the Draft General Plan would increase potential downstream flooding through the addition of impervious surfaces and resulting increases in stormwater runoff from development sites, which could require expansion or construction of storm drainage facilities.	S	S	4.5-3 No mitigation is available beyond Draft General Plan Policies PF-E.1 through PF-E.11, PF-E.13, and PF-E.19 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.5-4 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within flood-prone areas associated with 100-year flooding.	LS	S	4.5-4 No mitigation is required beyond Draft General Plan Policies LU-C.8, PF-E.9, HS-C.1 through HS-C.11, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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	County	Non-County ¹		County	Non-County ¹
4.5-5 Incremental development under the Draft General Plan could potentially expose new development to flood hazard, to the extent that development is sited within areas subject to dam failure inundation.	LS	S	4.5-5 No mitigation is required beyond Draft General Plan Policies HS-C.2, HS-C.12, and HS-C.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.5-6 Increased development density, industrial development, and incremental development overall under the Draft General Plan would increase demand for wastewater treatment and conveyance and would increase stormwater runoff from development sites, resulting in increased potential downstream flooding through the addition of impervious surfaces, and could expose new development in flood-prone areas.	S	S	4.5-6 None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.25, PF-C.27, PF-C.29, PF-D.1, PF-D.2, PF-D.4 through PF-D.7, PF-E.1 through PF-E.11, PF-E.13, PF-E.19, LU-A.9, LU-B.7, LU-E.9, LU-E.23, HS-C.1 through HS-C.13, OS-A.22, and OS-A.28.	SU	SU

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		County	Non-County ¹			County	Non-County
4.6 Public Services							
4.6-1	Development under the Draft General Plan would increase the demand for protection from the Fresno County Sheriff's Department.	LS	NA	4.6-1	None required beyond Draft General Plan Policies PF-G.1 through PF-G.6.	NA	NA
4.6-2	Development under the Draft General Plan would increase the demand for police protection in incorporated jurisdictions of the County.	S	S	4.6-2	No mitigation is available to the County to reduce this impact.	SU	SU
4.6-3	Development under the Draft General Plan would increase the demand for fire protection services from districts serving the unincorporated area of the County.	LS	NA	4.6-3	None required beyond Draft General Plan Policies PF-H.1 through PF-H.6, PF-H.9, and PF-H.10.	NA	NA
4.6-4	Development under the Draft General Plan would increase the demand for fire protection services from the districts serving incorporated areas of the County.	S	S	4.6-4	No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.	SU	SU
4.6-5	Development under the Draft General Plan would increase the demand for emergency response services.	LS	S	4.6-5	None required beyond Draft General Plan Policies HS-A.1 through HS-A.3 for development under the jurisdiction of Fresno County. No mitigation is available to the County to reduce the impact of development within the cities' jurisdiction.	NA	SU
4.6-6	Development under the Draft General Plan would increase the demand for parks and recreational facilities in unincorporated areas of the County.	LS	NA	4.6-6	None required beyond Draft General Plan policies OS-H.2 through OS-H.4.	NA	NA
4.6-7	Development under the Draft General Plan would increase the demand for park and recreational facilities in incorporated jurisdictions of the County.	S	S	4.6-7	None available to the County to reduce the impact of development within the cities' jurisdiction.	SU	SU

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	County	Non-County ¹		County	Non-County ¹
4.6-8 Development under the Draft General Plan would result in an increase in the student enrollment resulting in the need for additional staff and facilities.	LS	LS	4.6-8 None required.	NA	NA
4.6-9 Development under the Draft General Plan would increase the volume of solid waste accepted at the County landfills.	LS	LS	4.6-9 None required.	NA	NA
4.6-10 Development under the Draft General Plan would increase demand for Fresno County Library facilities.	LS	NA	4.6-10 None required beyond Draft General Plan Policies PF-A.1 and PF-I.9.	NA	NA
4.6-11 Development under the Draft General Plan would increase demand for Coalinga Library District services.	S	S	4.6-11 No mitigation is available to the County to reduce the impact of development within the Coalinga Library District.	SU	SU
4.6-12 Development under the Draft General Plan, in combination with other development in the County, would increase the demand for public services.	S	S	4.6-12 None available.	SU	SU
4.7 Cultural Resources					
4.7-1 The Proposed Project could result in disturbance, alteration, or destruction of subsurface archaeological prehistoric resources.	LS	S	4.7-1 No mitigation is required beyond Draft General Plan Policies OS-J.1 through OS-J.3 and OS-J.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.7-2 The Proposed Project could result in devaluation, disturbance, alteration or destruction of historic areas, sites, and structures.	LS	S	4.7-2 No mitigation is required beyond Draft General Plan Policies OS-J.1 and OS-J.4 through OS-J.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

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4.7-3 Development within Fresno County, in conjunction with other development within the San Joaquin Valley, could result in the devaluation, disturbance, alteration or destruction of unidentified subsurface prehistoric resources and historic areas, sites and structures.	S	S	4.7-3 None available beyond Draft General Plan Policies OS-J.1 through OS-J.8.	SU	SU
4.8 Water Resources					
4.8-1 Development under the Draft General Plan could result in the demand for water exceeding available supply, resulting in overdraft conditions and potential adverse effects on groundwater recharge potential.	S	S	4.8-1 No mitigation is available beyond Draft General Plan Policies PF-C.1 through PF-C.9, PF-C.11 through PF-C.13, PF-C.16 through PF-C.18, PF-C.21 through PF-C.24 PF-C.30, PF-E.14, PF-E.17, OS-A.1 through OS-A.10, OS-A.13 through OS-A.17, OS-A.19 through OS-A.21, OS-A.23, and OS-A.30 for Fresno County. No mitigation measures are available to the county to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-2 Development of future water supplies would require additional water treatment and delivery systems.	S	S	4.8-2 No mitigation is available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.10, PF-C.14, PF-C.15, PF-C.19, and PF-C.20 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-3 Development under the Draft General Plan could exacerbate groundwater overdraft conditions, resulting in secondary effects such as subsidence, lowering of water tables, or altering the rate or direction of contaminated groundwater.	S	S	4.8-3 No mitigation is available beyond Draft General Plan Policies PF-C.18, PF-E.14, PF-E.17 through PF-E.20, OS-A.13 through OS-A.17, OS-A.19, OS-A.21, OS-A.23, and OS-A.24 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.8-4 Stormwater runoff from areas under construction could affect receiving water quality.	LS	LS	4.8-4 None required.	NA	NA

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	County	Non-County ¹		County	Non-County ¹
4.8-5 Runoff from new impervious surfaces would contain urban contaminants that could affect receiving water quality.	LS	S	4.8-5 No mitigation is required beyond Draft General Plan Policies PF-A.2, PF-A.3, OS-A.11, OS-A.18, OS-A.24, PF-E.20, and PF-E.21 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.8-6 Development under the Draft General Plan would increase the volume of wastewater treated and discharged by publicly owned facilities, which could affect the quality of waters receiving treated effluent.	LS	LS	4.8-6 None required.	NA	NA
4.8-7 Increased wastewater discharges associated with development under the Draft General Plan could contribute nitrate and other constituents to groundwater through septic system use.	LS	S	4.8-7 No mitigation is required beyond Draft General Plan Policies PF-D.6, OS-A.22, OS-A.29. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.8-8 Continued agricultural practices could affect groundwater or surface water quality.	LS	LS	4.8-8 None required.	NA	NA

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4.8-9 Increased development under the Draft General Plan, in combination with other cumulative development, would increase demand for water exceeding available supply and require additional facilities for water treatment and delivery systems. Secondary effects of long-term groundwater overdraft conditions would increase. Surface and groundwater quality could be affected by increased areas under concurrent construction and increased impervious areas, and from continued agricultural practices. The increase in wastewater treated from increased development intensity and development in new areas could affect the quality of waters receiving treated effluent.	S	S	4.8-9 None available beyond Draft General Plan Policies PF-A.2, PF-A.3, PF-C.1, through PF-C.30, PF-D.1 through PF-D.7, PF-E.1 through PF-E.21, OS-A.1 through OS-A.30, HS-F.4, and HS-F.6.	SU	SU
4.9 Biological Resources					
4.9-1 Development under the Draft General Plan could result in the loss of wetland habitat (e.g., seasonal wetland, vernal pool, riverine, riparian, and wet sierra meadows).	S	S	4.9-1 None available beyond Draft General Plan Policies OS-D.1 through OS-D.8 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.9-2 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, or other various habitats that support special-status animals.	S	S	4.9-2 No mitigation is available beyond Draft General Plan Policies OS-E.1 through OS-E.13, OS-E.15, and OS-E.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.9-3 Development under the Draft General Plan could result in the loss of chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, and other habitats that could support special-status plants.	S	S	4.9-3 None available beyond Draft General Plan Policies OS-F.1 through OS-F.11 and OS-E.9 for Fresno County. No mitigation measures are available to the County to reduce impacts to the cities' jurisdiction.	SU	SU
4.9-4 Development under the Draft General Plan could result in the loss of heritage or landmark oak trees.	S	S	4.9-4(a) Fresno County shall define the specifications for landmark trees identification, based on size and health of the trees.	LS	SU

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			4.9-4(b) Native oak and other landmark trees shall be replaced on an inch-for-inch basis when tree size exceeds 6 inches in diameter.		
			4.9-4(c) A 5-year monitoring plan shall be prepared for all replacement trees, including provisions for maintenance and replacement of trees that do not survive.		
4.9-5 Development under the Draft General Plan could result in riparian and associated aquatic habitat degradation.	S	S	4.9-5 None available beyond Draft General Plan policies OS-D.3, OS-E.1, OS-E.10 through OS-E.13, and OS-E.16 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities jurisdiction.	SU	SU
4.9-6 Development under the Draft General Plan would result in the loss of grassland habitat.	S	S	4.9-6 None available beyond Draft General Policies OS-E.1 through OS-E.7, OS-E.9, OS-E.13, OS-E.17, and OS-E.18 for development in Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the Cities jurisdiction.	SU	SU
4.9-7 Development under the Draft General Plan, in combination with other cumulative development, could result in the loss of heritage or landmark oak trees, riparian, aquatic, or other wetland habitat, chaparral, oak woodland, alkali sink, vernal pools, coniferous forest, grasslands, or other various habitats that support special-status wildlife and plant species in Fresno and other areas within the Central Valley, Coast Range and Sierra Nevada mountains and foothills.	S	S	4.9-7 None available beyond Draft General Plan Policies OS-D.1 through OS-D.8, OS-E.1 through OS-E.13, OS-E.15 through OS-E.18, OS-B.2, and OS-F.1 through OS-F.11.	SU	SU
4.10 Forestry Resources					

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4.10-1 Development under the Draft General Plan could result in the conversion of private forest lands to non-forestry uses or create land use incompatibilities between timber operations and adjacent land uses.	LS	LS	4.10-1 None required.	NA	NA
4.10-2 Development under the Draft General Plan would increase the demand for timber resources.	LS	LS	4.10-2 None required.	NA	NA
4.11 Mineral Resources					
4.11-1 Development under the Draft General Plan could result in the reduction of the amount of land available for mineral resource extraction.	LS	S	4.11-1 No mitigation is required beyond Draft General Plan Policies OS-C.2, OS-C.9, and OS-C.10 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.11-2 Development under the Draft General Plan could result in land use incompatibilities with adjacent mineral extraction operations.	LS	S	4.11-2 No mitigation is required beyond Draft General Plan Policies OS-C.1 through OS-C.7, OS-C.9 through OS-C.20, LU-A.4, LU-B.4, LU-C.5 and LU-C.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.11-3 Development under the Draft General Plan would incrementally contribute to a reduction in aggregate resources, which may be depleted prior to 2020.	LS	LS	4.11-3 None required.	NA	NA
4.11-4 Development under the Draft General Plan, in combination with other cumulative development, could result in the reduction of the amount of land available for mineral resource extraction, land use incompatibilities with adjacent mineral extraction operations, and incremental loss of aggregate resources.	S	S	4.11-4 None available beyond Draft General Plan Policies OS.C-1 through OS.C-7, OS.C-9 through OS.C-20, LU-A.4, LU-B.4, LU-C.5, and LU-C.6.	SU	SU

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4.12 Air Quality							
4.12-1	Construction activities associated with development under the Draft General Plan would result in emissions of PM ₁₀ , ozone precursors, and other pollutants.	LS	S	4.12-1	No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, OS-G.13, and TR-A.17 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.12-2	Development under the Draft General Plan would result in emissions of ozone precursors and other pollutants caused by mobile source activity, area sources, and stationary sources.	S	S	4.12-2	None available beyond Draft General Plan Policies OS-G.3, OS-G.5 through OS-G.10, OS-G.12, and OS-G.14 through OS-G.16 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	SU	SU
4.12-3	Development under the Draft General Plan could result in localized violations of the CO standards.	LS	S	4.12-3	No mitigation is required beyond Draft General Plan Policies OS-G.6 through OS-G.11 and TR-A.2, TR-A.14, and TR-A.15 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.12-4	Development under the Draft General Plan could result in placement of sensitive land uses near potential sources of objectionable odors or in new potential sources of objectionable odors.	LS	S	4.12-4	No mitigation is required beyond Draft General Plan Policies OS-G.1, OS-G.2, OS-G.4, OS-G.5, and OS-G.13 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.12-5	Development allowed under the General Plan could result in placement of sensitive land uses near potential sources of toxic air contaminants or in new potential sources of toxic air contaminants.	LS	LS	4.12-5	None required.	NA	NA
4.12-6	Development under the Draft General Plan, in combination with other cumulative development, would result in emissions of pollutants caused by mobile source activity, area sources, and stationary sources.	S	S	4.12-6	None available beyond Draft General Plan Policies OS-G.1 through OS-G.16, and TR-A.2, TR-A.14, TR-A.15, and TR-A.17.	SU	SU

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4.13 Seismic and Geologic Hazards							
4.13-1	Development under the Draft General Plan would increase the number of people and structures who could be exposed to seismic hazards.	LS	LS	4.13-1	None required.	NA	NA
4.13-2	Future development near Coalinga and Panoche in western Fresno County could expose people and property to hazards associated with surface rupture or fault creep from active faults designated as Alquist-Priolo Earthquake Fault Zones.	LS	LS	4.13-2	None required.	NA	NA
4.13-3	Development under the Draft General Plan could expose an increased number of people to hazards associated with unreinforced masonry buildings.	LS	S	4.13-3	No mitigation is required beyond Draft General Plan Policy HS-D.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.13-4	Development under the Draft General Plan could increase the number of people in areas subject to landslide hazard.	LS	S	4.13-4	No mitigation is required beyond Draft General Plan Policies HS-D.10 through HS-D.12 and LU-B.12 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.13-5	Additional development could occur in areas with expansive soils.	LS	LS	4.13-5	None required.	NA	NA
4.13-6	Additional development could affect the rate or extent of erosion.	LS	S	4.13-6	No mitigation is required beyond Draft General Plan Policies HS-D.9, HS-D.10, HS-D.11, and HS-D.14 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.14 Hazardous Materials							

¹ This column refers to the significance of the projects impacts in the incorporated areas, where the County would not have the jurisdiction to implement Draft General Plan policies or mitigation measures (see Chapter 1 Introduction, in the Draft EIR).

LS = Less Than Significant

S = Significant

SU = Significant and Unavoidable

NA = Not Applicable

TABLE 3-1
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (AUGUST 2000)

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.14-1 Development under the Draft General Plan would increase the use of hazardous materials and the generation of hazardous wastes.	LS	LS	4.14-1 None required.	NA	NA
4.14-2 Development under the Draft General Plan would increase the risk of exposure to existing soil and groundwater contamination.	LS	S	4.14-2 No mitigation is required beyond Draft General Plan Policies HS-F.4 through HS-F.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.14-3 Development under the Draft General Plan, in combination with cumulative development, would increase the use of hazardous materials and the generation of hazardous wastes.	S	S	4.14-3 None available beyond General Plan Policies HS-F.1 through HS-F.8 and OS-G.12.	SU	SU
4.15 Noise					
4.15-1 Development under the Draft General Plan would increase traffic on roadways and railroad activity, which would result in exposure of sensitive receptors to unacceptable noise conditions.	LS	S	4.15-1 No mitigation is required beyond Draft General Plan Policies HS-G.2, HS-G.4, and HS-G.7 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.15-2 Development under the Draft General Plan would result in increased airport activity, which would increase noise levels.	LS	LS	4.15-2 None required.	NA	NA
4.15-3 Development under the Draft General Plan would result in increased fixed noise source activity or new fixed noise sources, which would result in exposure of sensitive receptors to unacceptable noise conditions.	LS	S	4.15-3 No mitigation is required beyond Draft General Plan Policies HS-G.3 and HS-G.6 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU

¹ This column refers to the significance of the projects impacts in the incorporated areas, where the County would not have the jurisdiction to implement General Plan policies or mitigation measures (see Chapter 1, Introduction, in the Draft EIR).

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TABLE 3-1
REVISED SUMMARY OF IMPACTS AND MITIGATION MEASURES (AUGUST 2000)

Impact(s)	Level of Significance Prior to Mitigation		Mitigation Measure(s)	Level of Significance After Mitigation	
	County	Non-County ¹		County	Non-County ¹
4.15-4 Development under the Draft General Plan could result in placement of new sensitive receptors in areas with existing or future unacceptable noise conditions.	LS	S	4.15-4 No mitigation is required beyond Draft General Plan Policies HS-G.3, HS-G.4, HS-G.8, and HS-G.9 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.15-5 The Draft General Plan, in combination with other cumulative development, would result in increases in mobile and fixed noise source levels, resulting in permanent increases in ambient noise levels that could affect sensitive receptors.	S	S	4.15-5 No mitigation is available beyond Draft General Plan Policies HS-G.1 through HS-G.9.	SU	SU
4.16 Visual Quality					
4.16-1 Development under the Draft General Plan could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources.	LS	S	4.16-1 No mitigation is required beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 for Fresno County. No mitigation measures are available to the County to reduce impacts occurring within the cities' jurisdiction.	NA	SU
4.16-2 Development under the Draft General Plan would introduce new sources of light and glare into development areas and surrounding rural areas.	S	S	4.16-2 In approving new development, the County shall require that lighting standards be designed and constructed to minimize the project contribution to ambient light production and to preclude "spillover" of light onto adjacent light-sensitive (e.g., residences, hospitals) properties.	LS	SU
4.16-3 Development under the Draft General Plan, in combination with other development in the County, could create land use patterns that would substantially alter the existing visual character of the region and/or visual access to scenic resources and the introduction of new sources of light and glare into development areas and surrounding rural areas.	S	S	4.16-3 None available beyond Draft General Plan Policies OS-K.1 through OS-K.4, OS-L.4, and LU-B.11 and Mitigation Measure 4.16-2.	SU	SU

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