DRAFT

VOLUME I

SOUTHEAST URBAN

CENTER SPECIFIC

PLAN

ENVIRONMENTAL

IMPACT REPORT



prepared for:

CITY OF CLOVIS

Contact:
David Fey, AICP, Senior
Planner, Planning and
Development Services

prepared by:

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THE PLANNING CENTER

Contact: Dwayne S: Mears, AICP, Principal

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CLO-11.0G

DECEMBER 2002

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1. Executive Summary

1.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that local government agencies, prior to taking action on projects over which they have discretionary approval authority, consider the environmental consequences of such projects. An Environmental Impact Report (EIR) is a public document designed to provide local and state governmental agency decision makers with an analysis of potential environmental consequences to support informed decision-making. This EIR has been prepared to evaluate the environmental consequences of the proposed Southeast Urban Center Specific Plan. This document focuses on those issues determined to be potentially significant as discussed in the Initial Study completed for this project (see Appendix A).

This Executive Summary has been prepared for the Southeast Urban Center Specific Plan Draft Environmental Impact Report (DEIR) in accordance with Section 15123 of the CEQA Guidelines. Section 15123 of the CEQA Guidelines directs an EIR to contain a brief summary of the proposed actions and consequences by identifying: (1) each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect; (2) areas of controversy known to the lead agency including issues raised by agencies and the public; and (3) issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

1.2 PROJECT OVERVIEW

This DEIR has been prepared by the City of Clovis to analyze the proposed Specific Plan's potential impacts on the environment, to discuss alternatives, and to propose mitigation measures that will offset, lessen or avoid significant environmental impacts. For a detailed description of the project, its impacts/recommended mitigation, and alternatives, the reader is referred to Chapters 2 through 10 of the DEIR.



The Southeast Urban Center Specific Plan is the implementation of the City of Clovis 1993 General Plan. The Southeast Urban Center (project area) is located in the greater Fresno-Clovis Metropolitan Area, immediately east of the City of Clovis in unincorporated Fresno County but within the City of Clovis' 2000 sphere-of-influence. The Fresno/Clovis metropolitan area is experiencing a rapid rate of growth. In order to avoid haphazard development yet still accommodate growth, the Southeast Urban Center Specific Plan establishes the planning concept, design and development guidelines, administrative procedures, and implementation measures for the future development of the project area.

The project area encompasses approximately 3,307 acres, and at its ultimate buildout, approximately 10,829 residential units and 29,238 persons would be added to the project area. The concept for the development for the Southeast Urban Center is that of a high quality residential community focused around two community centers, a separate business campus, and the Reagan Education Center. The project area also includes a site for a surface water treatment facility with 45 million gallons per day (MGD) ultimate buildout capacity.

Paralleling the development of the Specific Plan is the development of a wastewater treatment/water reuse facility within the project area to provide adequate wastewater services for the projected growth within, as well as outside of, the project area. A further discussion of this wastewater treatment/water reuse facility is provided in Section 5.10, Public Services and Utilities. A separate CEQA environmental document will be prepared for the wastewater treatment/water reuse facility at a later time.

1.3 ISSUES TO BE RESOLVED

There are no specific development plans included in this EIR. Subsequent approvals of specific development plans are anticipated. Development assumptions regarding this portion of the project area, as well as other areas, can be considered somewhat speculative and subject to change over the build-

1. Executive Summary

out of the project within the parameters established by city regulations. Since detailed plans showing such information as the precise plotting of structures, building elevations, structural heights, setbacks, landscape and lighting features are not available, detailed evaluation of site specific issues is not possible.

This EIR defines the maximum development potential and evaluates corresponding impacts throughout, with mitigation recommended where determined necessary. Should development be subsequently proposed which is determined to have the potential to generate significant impacts not anticipated in this EIR, additional environmental evaluation would be required, and additional mitigation could be determined necessary in compliance with Section 15162 of CEQA Guidelines.

1.4 AREAS OF CONTROVERSY

Areas of controversy associated with the Specific Plan are those typical of urban growth into an agricultural/rural residential area. The city has performed substantial public outreach to the property owners, residents, and various stakeholder groups in and around the Specific Plan area. Clovis staff have held seven Specific Plan Advisory Committee meetings, three property owner meetings, and three joint Planning Commission/City Council workshops. All of these meetings have been noticed by mailers to area property owners and interested parties and by publication of legal notices in the *Clovis Independent*.

This Draft EIR has taken into consideration the comments received from various agencies and jurisdictions received in response to the Notice of Preparation. Included among these are comments from:

- County of Fresno
- City of Fresno
- Fresno Metropolitan Flood Control District (FMFCD)
- San Joaquin Valley Air Pollution Control District (SJVAPCD)
- California Department of Transportation (Caltrans)
- Fresno Irrigation District (FID)
- Clovis Unified School District (CUSD)
- Sanger Unified School District (SUSD)
- Building Industry Association (BIA)
- Clovis Chamber of Commerce
- SBC, Inc.
- Regional Water Quality Control Board (RWQCB)
- Local Agency Formation Commission (LAFCO)
- Kings River Conservation District
- Fresno County Fire Protection District

A scoping meeting was held with City representatives on October 4, 2002, as noted in Section 2.2, *Notice of Preparation and Initial Study*. A summary of issues raised in the scoping meeting is contained in Appendix B to this document.

1.5 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES, AND LEVELS OF SIGNIFICANCE AFTER MITIGATION

Table 1.2-1 (beginning on the following page) summarizes the conclusions of the environmental analysis contained in this EIR. Impacts are identified as significant or less than significant and for all significant impacts mitigation measures are identified. The level of significance after imposition of the mitigation measures is also presented.

SUMMARY OF ENVIRON	MENTAL IMPACTS, MIT	TABLE 1.2-1 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	MITIGATION
Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
5.1 AESTHETICS	· 是是在一个人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的人的		
VISTA	Less than significant	No mitigation measures are necessary.	Not applicable
POTENTIALLY DEGRADE EXISTING VISUAL CHARACTER OR QUALITY OF THE PROJECT AREA AND ITS SURROUNDINGS	Less than significant	No mitigation measures are necessary.	Not applicable
OF LIGHT AND GLARE	Potentially significant	No additional mitigation measures are feasible.	Significant
5.2 AGRICULTURAL RESOURCES			
CONVERT PRIME FARMLAND, UNIQUE FARMLAND, Potentially significant OR FARMLAND OF STATEWIDE IMPORTANCE (FARMLAND) TO NON-AGRICULTURAL USE	Potentially significant	There are no feasible measures to mitigate the direct loss of the agricultural lands.	Significant
	Less than significant	No mitigation measures are necessary.	Less than significant
INVOLVE OTHER CHANGES IN THE EXISTING ENVIRONMENT THAT, DUE TO THEIR LOCATION OR NATURE, COULD RESULT IN CONVERSION OF FARMLAND, TO NON-AGRICULTURAL USE	Potentially significant	There are no feasible measures to mitigate the direct loss of the agricultural lands.	Significant
OTTO CONTRACT INCIDENT			
TEMPORARY CONSTRUCTION EMISSIONS	Potentially significant	 5.3-1 Limit traffic speeds on unpaved roads to 15 mph. 5.3-2 Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent. 5.3-3 The following measures are encouraged for construction located near sensitive receptors: Install wheel washers for all exiting trucks, to wash off all trucks and equipment leaving the site. Install wind breaks at windward side(s) of construction areas. Suspend excavation and grading activity when winds exceed 20 mph, Limit areas subject to excavation, grading, and other construction activity at any one time. 	Less than significant

SUMMARY OF ENVIRON	IMENTAL IMPACTS, MIT	SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	MITIGATION
Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
LONG TERM REGIONAL IMPACTS DUE TO EMISSIONS ATTRIBUTABLE TO THE CHANGE IN LAND USE	Potentially significant	No additional mitigation measures are feasible.	Significant
CONSISTENCY WITH AIR QUALITY PLAN	Potentially significant	No additional mitigation measures are feasible.	Significant
5.4 BIOLOGICAL RESOURCES			· · · · · · · · · · · · · · · · · · ·
	Potentially significant	5.4-1 Development areas with potential special status species, as identified in the Cass than significant General Plan, Specific Plan, or by other substantive evidence, shall be subject to an appropriate level of biological reconnaissance, and mitigation measures to comply with state and federal regulations shall be made conditions of development.	Less than significant
CREATE A SUBSTANTIAL ADVERSE EFFECT ON RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY	Potentially significant	5.4-2 Setbacks from canals or creeks for the purposes of habitat protection along recreational trails shall be determined by site specific reconnaissance studies in consultation with the appropriate resource management agency(ies).	Less than significant
ECT ON	Potentially significant	5.4-3 Developments with potential jurisdictional waters shall comply with the permit program of the appropriate resource management agency.	Less than significant
INTERFERE SUBSTANTIALLY WITH THE MOVEMENT OF ANY WILDLIFE SPECIES OR CORRIDORS	Less than significant	No mitigation measures are necessary.	Not applicable
5.5 CULTURAL RESOURCES			A COMPANY OF THE PARTY OF THE P
CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE Less than significant SIGNIFICANCE OF A HISTORICAL RESOURCE	Less than significant	No mitigation measures are necessary.	Not applicable
CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE OR SITE	Potentially significant	5.5-1 Should site preparation, grading or excavation activities uncover a previously Less than significant unidentified archaeological resource, work shall be stopped and a qualified archaeological consultant shall be retained to assess the find(s).	Less than significant

SUMMARY OF ENVIRO	NMENTAL IMPACTS, MI	SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	SANCE AFTER	MITIGATION
Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures		Level of Significance After Mitigation
CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE SIGNIFICANCE OF A PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGICAL FEATURE	Potentially significant	5.5-2 In the event that site preparation, grading or excavation activities uncover a previously unidentified geological deposit identified as fossil bearing, work shall be stopped and a qualified paleontological consultant shall be retained to assess the find(s) and appropriate steps shall be instinated.	activities uncover a ssil bearing, work int shall be retained pared.	Less than significant
		5.5-3 For all areas of the Paleontological Sensitive Areas map marked as "undetermined," the following steps should be performed:	marked as d:	
		Monitoring of excavation in areas identified as likely to contain paleontologic resource by a qualified paleontology monitor. The monitor should be equipped to salvane fossils as they are inegatived to	/ to contain monitor. The	
		avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil vertebrates. In addition, the monitor must be empowered to temporarily halt or divert equipment	of sediments which ebrates. In addition, t or divert equipment	
		Preparation of recovered specimens to a point of identification, including washing of sediments to recover small vertebrates;	lentification, artebrates;	
		 Identification and curation of specimens into a museum repository with retrievable storage; and 	eum repository with	
		Preparation of a report of findings with an appended itemized inventory of specimens. The report and inventory, when submitted to the appropriate Lead Agency, signifies completion of the program to mitigate impacts to paleotrologic resources.	d itemized inventory mitted to the ne program to	
DISTURBANCE OF HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES	Potentially significant	5.5-4 Should site preparation, grading or excavation activities uncover previously unidentified human remains, work shall be stopped and a qualified paleontological consultant shall be retained to assess the find(s).	uncover previously a qualified e find(s).	Less than significant
5.6 HYDROLOGY AND WATER QUALITY	在 日本		1880	
INCREASED STORM WATER RUNOFF AND EROSION ASSOCIATED WITH SHORT-TERM CONSTRUCTION ACTIVITIES	Less than significant	No mitigation measures are necessary.	E	Not applicable
				The second secon

SUMMARY OF ENVIRC	NMENTAL IMPACTS, MIT Level of Significance	SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION Level of Significance Level of Significance	MITIGATION Level of Significance
Environmental Impact	Before Mitigation	Mitigation Measures	After Mitigation
POTENTIAL NOISE-RELATED IMPACTS TO OFF- SITE SENSITIVE RECEPTORS DUE TO PROJECT- GENERATED TRAFFIC	Potentially significant	 5.8-3 Table 5.8-7 shall be used to determine the potential for noise impacts from Specific Plan development at off-site sensitive land uses. The developer shall evaluate sensitive land uses situated along roadways subject to significant noise increase described in the table. Specific measures shall be incorporated into each project as determined in an acoustical analysis to be prepared as a condition of approval of any Tentative Tract Map or site plan. 5.8-4 Where the exterior noise standards are exceeded and berms and/or sound walls are not feasible, an acoustic study shall identify structural modifications to ensure that interior noise levels are reduced to the extent reasonably feasible or other modifications shall be made in the plan to ensure that acceptable noise levels are achieved. 	Potentially significant
POTENTIAL VIBRATION-RELATED IMPACTS DUE TO PROJECT CONSTRUCTION	Less than significant	No mitigation measures are necessary.	Not applicable
5.9 PUBLIC SAFETY AND HEALTH DOTENTIAL IMPACTS EDOM DEMOLITION	I non than significant		
II DEMOCITION	Less titali significatit	No minganon measures are necessary.	Not applicable
POTENTIAL IMPACTS FROM UNKNOWN BURIED HAZARDOUS MATERIALS ON-SITE; SOILS CONTAMINATED BY PESTICIDES	Potentially significant	5.9-1 As a condition of development evaluation a Phase I Environmental Site Assessment shall be performed for projects which have the potential to have been sites for chemical storage, batching or mixing using methodology acceptable to the Fresno County Health Service Agency.	Less than significant
GROUNDWATER CONTAMINATION DUE TO IMPROPERLY ABANDONED WELLS	Less than significant	No mitigation measures are necessary.	Not applicable
POTENTIAL IMPACTS FROM ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS DURING TRANSPORT OF PRODUCTS OR WASTE	Less than significant	No mitigation measures are necessary.	Not applicable
POTENTIAL IMPACTS FROM ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS DUE TO UPSET OR ACCIDENT CONDITIONS	Less than significant	No mitigation measures are necessary.	Not applicable
EMIT HAZARDOUS EMISSIONS OF HANDLE HAZARDOUS MATERIALS WITH 1/4 MILE OF AN EXISTING OR PROPOSED SCHOOL	Less than significant	No mitigation measures are necessary,	Not applicable

SUMMARY OF ENVIRON	IMENTAL IMPACTS, MIT	TABLE 1.2-1 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	MITIGATION
Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
SAN JOAQUIN VALLEY FEVER	Less than significant	No mitigation measures are necessary.	Not applicable
5.10 PUBLIC SERVICES AND UTILITIES	東 語のとうと を は という		是是是一种,在1000年的,他们就是一种的一种。 1000年,1000
INCREASED DEMAND FOR FIRE PROTECTION SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
INCREASED DEMAND FOR POLICE PROTECTION SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
INCREASED DEMAND FOR SCHOOL SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
	Less than significant	No mitigation measures are necessary.	Not applicable
INCREASED DEMAND FOR WASTEWATER SERVICES	Potentially significant	whenever possible to allow optimal use of surface water supplies and maximum recharge of the aquifer. 5.10-2 Reclaimed water will be used whenever feasible to achieve a water balance. 5.10-3 Continue to recharge the aquifer through deliveries to flood control basins whenever possible. 5.10-4 Continue water conservation and enforcement actions. 5.10-5 The City shall select an alternative in their Wastewater Master Plan to provide Less than significant the necessary wastewater facilities to serve the project area. 5.10-6 The City shall ensure the project area. 5.10-7 The City shall ensure that adequate trunk sewer capacity exists or can be provided to serve proposed development prior to the approval of any	Less than significant
		discretionary approvals, so that capacities of wastewater facilities are not exceeded.	
POTENTIALLY DISRUPT DELIVERY OF SURFACE IL WATER FOR IRRIGATION	Less than significant	No mitigation measures are necessary.	Not applicable

SUMMARY OF ENVIRON	MENTAL IMPACTS, MIT	TABLE 1.2-1 SUMMARY OF ENVIRONMENTAL IMPACTS, MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	MITIGATION
Environmental Impact	Level of Significance Before Mitigation	Mitigation Measures	Level of Significance After Mitigation
INCREASED DEMAND FOR NEW STORM WATER DRAINAGE FACILITIES OR EXPANSION OF EXISTING FACILITIES	Potentially significant	 5.10-8 Development in drainage areas DO and 3G that may result in storm water runoff in excess of designed or constructed drainage facilities may be approved subject to the following conditions: 1. Construction of on-site detention ponds to reduce the peak flows from the development to that anticipated in the design of the FMFCD Master Plan for Storm Drainage; 2. Implementation of landscaping and open space areas of sufficient size to make the runoff characteristics of the project area equivalent to those anticipated by the design of the FMFCD Master Plan for Storm Drainage facilities; 3. Construction of non-Master Plan facilities to increase the system capacity of the FMFCD system; or 4. Other as approved by FMFCD. 	Less tha
INCREASED DEMAND FOR SOLID WASTE SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
INCREASED DEMAND FOR ELECTRICITY AND NATURAL GAS SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
INCREASED DEMAND FOR TELECOMMUNICATION SERVICES	Less than significant	No mitigation measures are necessary.	Not applicable
5.11 RECREATION			
INCREASE THE USE OF EXISTING NEIGHBORHOOD Less than significant AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES, SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED	Less than significant	No mitigation measures are necessary.	Not applicable
REQUIRE THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES, WHICH MIGHT HAVE AN ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT	Less than significant	No mitigation measures are necessary.	Not applicable

SUMMARY OF ENVIRONMENTAL IMPACTS,	NMENTAL IMPACTS, MIT	TABLE 1.2-1 MITIGATION MEASURES AND LEVELS OF SIGNIFICANCE AFTER MITIGATION	R MITIGATION
Fnvironmental Imnact	Level of Significance Refore Willington	Withority Massirgo	Level of Significance
5.12 SOCIOECONOMICS	perore minganon	muganon measures	Aller miligation
EMPLOYMENT GENERATION	Less than significant	No mitigation measures are necessary.	Not applicable
HOUSING DEMAND AND JOBS/HOUSING BALANCE Less than significant		No mitigation measures are necessary.	Not applicable
5.13 SOILS AND GEOLOGY			展示 2000 Man (1990 Man 1990 M
EROSION	Less than significant	No mitigation measures are necessary.	Not applicable
5.14 TRAFFIC AND CIRCULATION			
SOUTHEAST URBAN CENTER SPECIFIC PLAN	Less than significant	No mitigation measures are necessary.	Not applicable
TRAFFIC GENERATION (EXISTING PLUS PROJECT)	X-0		
TRANSPORTATION DEMAND MANAGEMENT	Less than significant	No mitigation measures are necessary.	Not applicable

2.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The California Environmental Quality Act requires that all state and local governmental agencies consider the environmental consequences of projects over which they have discretionary authority prior to taking action on those projects. This Draft EIR has been prepared to satisfy CEQA, as set forth in the Public Resources Code Section 21000, et.seq., and the State CEQA Guidelines, 14 California Code of Regulations, Section 15000, et.seq. The EIR is the public document designed to provide decision makers and the public with an analysis of the environmental effects of the proposed project, to indicate possible ways to reduce or avoid environmental damage, and to identify alternatives to the project. The EIR must also disclose significant environmental impacts that cannot be avoided; growth inducing impacts; effects not found to be significant; and significant cumulative impacts of all past, present and reasonably foreseeable future projects.

Pursuant to CEQA Section 21067, the Lead Agency means "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment." The City of Clovis has the principal responsibility for approval of the Southeast Urban Center Specific Plan project. For this reason, the City of Clovis is the CEQA Lead Agency for this project.

The intent of the EIR is to provide sufficient information on the potential environmental impacts of the proposed Southeast Urban Center Specific Plan to allow the City of Clovis to make an informed decision regarding approval of the project. Specific discretionary actions to be reviewed by the City are described later in Section 4.3.3 (Project Approvals).

This EIR has been prepared in accordance with requirements of the:

- California Environmental Quality Act (CEQA) of 1970, as amended (Public Resources Code Section 21000 et seq.)
- State Guidelines for the Implementation of the CEQA of 1970 (herein referenced as CEQA Guidelines), as amended (California Code of Regulations Sections 15000 et seq.)

The overall purpose of this EIR is to inform the lead agency, responsible agencies, decision makers and the general public of the environmental effects of the development and operation of the proposed Southeast Urban Center Specific Plan. This EIR addresses the potential environmental effects of the project, including effects that may be significant and adverse, evaluates a number of alternatives to the project, and identifies mitigation measures to reduce or avoid adverse effects.

2.2 NOTICE OF PREPARATION AND INITIAL STUDY

The City of Clovis determined that an EIR would be required for this project and issued a Notice of Preparation (NOP) and Initial Study on September 13, 2002 (see Appendix A). Comments received during the public review period, which extended from September 13, 2002 to October 14, 2002 are contained in Appendix B.

The NOP process is used to help determine the scope of the environmental issues to be addressed in the EIR. Based on this process and the Initial Study for the project, certain environmental categories were identified as having the potential to result in significant impacts. Issues considered potentially significant are addressed in this EIR. Issues identified as less than significant or no impact are not addressed beyond the discussion contained in the Initial Study. Refer to the Initial Study in Appendix A for discussion of how these initial determinations have been made.



A scoping meeting was held by the City of Clovis on October 4, 2002. A summary of the issues raised is provided in Appendix B.

2.3 SCOPE OF THIS EIR

Based on the results of the Initial Study and consideration of the comments received during the scoping process, a number of environmental issues were identified as requiring more detailed review in this EIR. The following is a list of these broad categories.

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Hydrology and Water Quality
- Land Use and Relevant Planning
- Noise
- Public Safety and Health
- Public Services and Utilities
- Recreation
- Socioeconomics
- Soils and Geology
- Transportation and Circulation

Refer to the Initial Study in Appendix A for the specific issues within each of these categories that were determined to require further review. Other specific issues within these categories were dismissed in the Initial Study and have not been reviewed in this EIR.

2.4 INCORPORATION BY REFERENCE

The following documents are incorporated by reference in this EIR, consistent with Section 15150 of the State CEQA Guidelines, and are available for review at the City of Clovis.

• City of Clovis Water Master Plan, Phase 1 (April 1995; Kenneth D. Schmidt & Associates; and Provost & Pritchard Engineering Group). This report was prepared to support the 1993 Clovis General Plan, and the development plans therein. The primary purpose for this report was to examine the feasibility of continued growth in the greater Clovis area from a water resource standpoint. This included a review of the then existing and future demands for water and availability of supplies to meet those demands.

- City of Clovis Water Master Plan, Phase 2 (July 1999; Kenneth D. Schmidt & Associates; and Provost & Pritchard Engineering Group). This phase identified a conjunctive-use strategy utilizing both groundwater and treated surface water to provide a secure, drought-resistant water supply. It developed a strategy that was conducive to phase development, allowing the City to provide the needed facilities just in time to serve the increasing demands of growth.
- City of Clovis Wastewater Master Plan Update, Phase 1-B (November 1996; Blair, Church & Flynn; and NBS/Lowry). The purpose of the Update was to develop a course of action for the City with respect to wastewater service needs through the year 2030.
- Groundwater Report (January 2002; Fresno Irrigation District). This report presents
 groundwater conditions within the Fresno Irrigation District as they were found in January 2002,
 and to compare with previous years. This report includes tables and figures showing
 groundwater elevation, depth to groundwater, changes in depth, and changes in storage. The
 report also identifies important groundwater trends within the District.
- Storm Drainage and Flood Control Master Plan (Fresno Metropolitan Flood Control District).
- Fresno County Flood Plain Management Ordinance.
- Fresno County Drainage and Flood Control Design Standards, Improvement Standards for Fresno County.
- City of Clovis General Plan and associated EIR (April 1993; The Planning Center).

This General Plan, adopted on April 26, 1993 by the City of Clovis City Council, includes the following elements:

- Land Use Element. This element establishes land use goals and policies, supported by implementation programs, for the manner in which new development will occur and existing uses and resources will be preserved in the Clovis Project Area. The Land Use Element promotes the achievement of goals by establishing clear direction for future land use, largely through the implementation of the Land Use Plan Map, which depicts the location of the permitted type and density/intensity of all land uses within the City of Clovis Project Area. The land use policies contained in the Land Use Plan establish order and focus for the City's land use pattern and provide the framework for future land use planning and decision-making in the City. Discussion is also provided on the regional transportation system, community character, and proposed urban center specific plan areas (of which the Southeast Urban Center is one). Additional information with respect to the Land Use Element is contained in Section 5.7, Land Use and Relevant Planning.
- Circulation Element. This element presents goals and policies that coordinate the
 transportation and circulation system with planned land uses, and promote the efficient
 movement of people, goods and services within the City of Clovis Project Area. It contains a
 discussion on the roadway circulation plan, future projects impacting future development
 and capacity, and multi-modal transportation.
- Housing Element. The 2002 Housing Element Update is a comprehensive statement by the City of Clovis to facilitate development of housing that meets the needs of existing and future residents.



The element update evaluates the 1991 Housing Element and the appropriateness of its housing goals, objectives, and policies in contributing to the attainment of the State Housing Goal; the effectiveness of the 1991 Housing Element in attainment of the community's housing goals and objectives; and the progress of the City in the implementation of the 1985 Housing Element. The current element also includes housing needs and constraints assessments, and develops a new Housing Action Plan.

- Public Facilities Element. This element defines policy for public facilities, services and activities in the City of Clovis including infrastructure (water, wastewater, and storm water drainage), educational facilities, and civic institutions.
- Open Space/Conservation Element. This element establishes goals, policies, and actions
 that relate to the preservation of open space and the conservation of resources. The City
 integrated the mandated Open Space and Conservation Element and the City's 1986 Parks
 and Recreation Element (non-mandated).
- Safety Element. This element generally describes earthquakes and provides information on active and potentially active faults in the City; risks associated with those faults; and information on earthquake shaking and secondary hazards associated with ground shaking, such as subsidence, settlement, liquefaction, and slope stability. The element also analyzes fire hazards, including wildland and urban fires hazards; flooding hazards; and risks associated with hazardous materials.
- Noise Element. This element describes the environmental setting for noise in the City; federal, state and local regulations governing noise; and identifies sensitive land uses in the City. The element also includes a noise contour map showing the noise contours in various parts of the City, and a land use compatibility matrix identifying incompatible land uses from a noise-generating perspective.
- Air Quality Element. This element addresses air quality in the context of local land use
 planning. The element discusses local attainment of air pollutants; addresses indirect,
 transportation and area-wide control measures; identifies goals to assist in attaining air
 quality standards; and specifies policies that lead to top achievement of these goals.

2.5 EIR FORMAT

This Draft EIR has been formatted as described below.

Volume I

Section 1. Executive Summary - This section summarizes the background and description of the proposed Southeast Urban Center Specific Plan, and the potential environmental impacts and mitigation measures for the project.

Section 2. Introduction - This section describes the purpose of the EIR; the Notice of Preparation/Initial Study; the scope of this EIR; the documents incorporated by reference; the format of the Draft EIR; the intended use of this EIR; the Final EIR certification process; and the mitigation monitoring requirement.

Section 3. Environmental Setting - The purpose of this section is to provide a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and regional perspective. The environmental setting provides

a set of baseline physical conditions from which the lead agency determines the significance of environmental impacts resulting from the proposed project.

Section 4. Project Description - This section provides a detailed description of the project; the objectives of the Southeast Urban Center Specific Plan; the project area and location; approvals anticipated to be included as part of the project; the necessary environmental clearances for the project; and the alternatives to the project considered in the EIR.

Section 5. Environmental Analysis - This section provides a description of the thresholds used to determine if a significant impact would occur; the methodology to identify and evaluate the potential impacts of the project; the existing environmental setting; the potential adverse and beneficial effects of the project; the level of impact significance before mitigation; the mitigation measures for the proposed project; and the level of significance of the adverse impacts of the project after mitigation for each environmental parameter analyzed.

Section 6. Impacts Found Not to be Significant - This section describes impacts of the project that will not be significant and adverse.

Section 7. Significant Irreversible Environmental Changes - This section describes the irreversible and irretrievable commitment of resources associated with the construction and long-term operation of the proposed project.

Section 8. Growth-Inducing Impacts of the Project - This section describes the potential growth inducing impacts associated with the proposed project.

Section 9. Cumulative Impacts - This section describes the potential cumulative impacts associated with the proposed project and other existing, approved and proposed development in the area.

Section 10. Alternatives - This section describes the impacts of the alternatives to the proposed project, including a No Project Alternative and alternative use for the project.

Section 11. Organizations and Individuals Contacted - This section lists the people and organizations that were contacted during the preparation of the Draft EIR for the proposed project.

Section 12. Report Preparation Personnel - This section lists the people who prepared the Draft EIR for the proposed project.

Section 13. Bibliography - This section is a bibliography of the technical reports and other documentation used in the preparation of the Draft EIR for the proposed Southeast Urban Center Specific Plan.

Appendices - The appendices in this document contain supporting documents and other material too detailed and voluminous to be included in the body of the EIR. The following appendices are contained in this EIR:

Volume II

- Appendix A: Notice of Preparation and Initial Study
- Appendix B: Comments on Notice of Preparation and Service Correspondence
- Appendix C: Southeast Urban Center Design Guidelines
- Appendix D: Air Quality Modeling
- Appendix E: Biology Report



- Appendix F: Cultural Resources Survey (Available at City Planning Department)
- Appendix G: Noise Modeling
- Appendix H: Traffic Study (Available at City Planning Department)
- Appendix I: Land Use Categories and Development Standards

2.6 INTENDED USES OF THIS EIR

The City of Clovis, as Lead Agency for the proposed Specific Plan, will use this EIR in consideration of the discretionary actions presently before it, as listed in Section 4.3.3. This document has been prepared as a program EIR with the objective of streamlining the review of anticipated subsequent discretionary actions under the jurisdiction of the City of Clovis to the extent consistent with provisions set forth in the California Environmental Quality Act. If the proposed project is approved, subsequent actions must be consistent with the overall parameters established in the Southeast Urban Center Specific Plan, and the potential impacts generated by subsequent actions must have been adequately considered in this EIR. In addition, subsequent actions must comply with the Mitigation Monitoring Program established as part of the Final EIR. The City of Clovis, as Lead Agency for subsequent permit submittals, will review such actions to determine whether any additional analysis is required under applicable provisions of CEQA. The form and extent of any additional environmental analysis will be determined on the basis of conditions and circumstances at the time.

This EIR would allow City decision-makers and the public to understand what, if any, significant environmental impacts would be associated with the proposed project. This EIR may also serve as environmental documentation for approvals by any responsible agencies listed in Section 4.3.3.

2.7 FINAL EIR CERTIFICATION

This Draft EIR is being circulated for public review for a period of 45 days. Interested agencies and members of the public are invited to provide written comments on the Draft EIR to the City address shown on the title page of this document. Upon completion of the 45-day review period, the City of Clovis will review all written comments received and prepare written responses for each comment. A final EIR will then be prepared incorporating all of the comments received, responses to the comments and any changes to the Draft EIR that result from the comments received. This Final EIR will then be presented to the City of Clovis for potential certification as the environmental document for the project. All persons who commented on the Draft EIR will be notified of the availability of the Final EIR and the date of the public hearing before the City.

2.8 MITIGATION MONITORING

Public Resources Code Section 21081.6 requires that agencies adopt a monitoring or reporting program for any project for which it has made findings pursuant to Public Resources Code 21081 or adopted a Negative Declaration pursuant to 21080(c). Such a program is intended to ensure the implementation of all mitigation measures adopted through the preparation of an EIR or Negative Declaration.

The Mitigation Monitoring Program for the Southeast Urban Center Specific Plan will be completed as part of the Final EIR and will be completed prior to consideration of the project by the City Council.

3.1 INTRODUCTION

The purpose of this section is to provide, pursuant to provisions of the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a "description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, from both a local and a regional perspective." The environmental setting will provide a set of baseline physical conditions that will serve as a tool from which the lead agency will determine the significance of environmental impacts resulting from the proposed project.

3.2 REGIONAL ENVIRONMENTAL SETTING

The Southeast Urban Center Specific Plan Project Area (project area) is located within northern Fresno County, approximately 7 miles southeast of Madera County (see Figure 3.2-1, *Regional Location*). Fresno County is locates 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. The County is bordered by San Benito, Merced, Madera, Mono, Inyo, Tulare, Kings, and Monterey Counties. There are 15 incorporated cities in the County, and the City of Clovis is located in the most urbanized area of the County. The County occupies an area of approximately 6,000 square miles and incorporated cities occupy approximately 3 percent of the County's total land area. Interstate 5 (I-5) State Route (SR) 99, and SR 41 provide major north-south transportation access to the region. Major east-west routes include SR 168 and SR 180, located approximately one and a half miles to the north and two miles to the south from the project area, respectively.

The single largest category of land use in Fresno County is agriculture, and the County is one of the leading crop producing counties in the nation. In 2000, the California Department of Finance (DOF) estimated the County's population at 799,407 people and projected that the County's population would increase approximately 38 percent to over 1.1 million by the year 2020. Currently, over 60% of the County's total population and about 80% of the incorporated population resides in the Counties two largest cities, Clovis and Fresno. A further description of the population trend is provided in Section 5.12, Socioeconomics.

3.3 LOCAL ENVIRONMENTAL SETTING

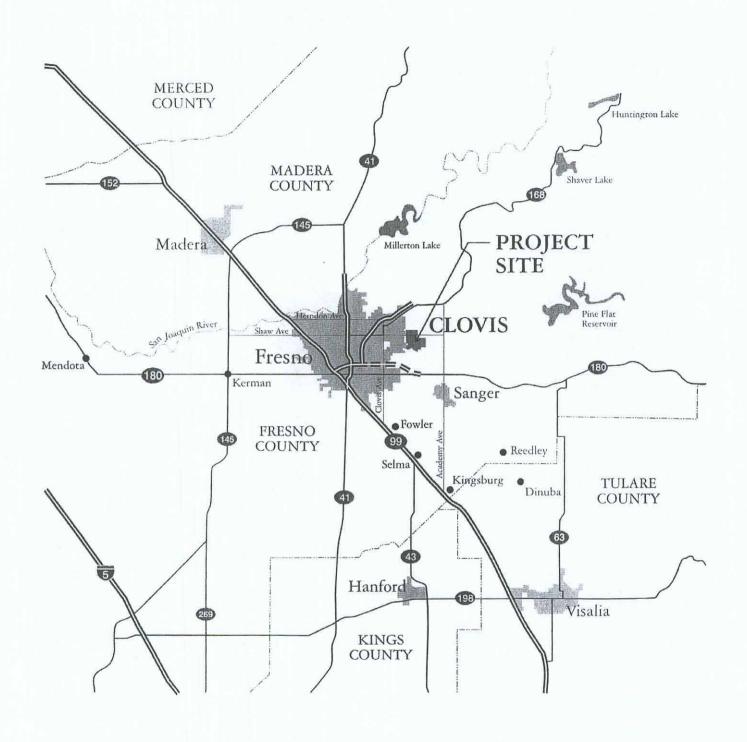
The project area is located immediately east of the City of Clovis in unincorporated Fresno County, but within the City's sphere-of-influence (SOI) per 2000 update to the City's SOI areas.

Clovis was historically a lumber milling and agricultural community. The discovery of gold, the advent of sheep and cattle ranching, the lumber industry, the building of railroads and the construction of irrigation systems transformed the project area and the surrounding area from its Indian pastoral ways in the late 1800s. A major factor in the development of the land was the building of canals, which revolutionized Fresno County's economy. Before irrigation transformed the land, the plains were green only in winter and spring, and desert-like in winter and fall. In the late 1800s the increase in farming prompted the expansion of some irrigation systems and the creation of others. The Enterprise Canal, which touches the project area at the corner of Bullard and Leonard Avenues, was constructed during this period. The Gould Canal, which provides the southern boundary for this area, was constructed in the early 1870s.



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Regional Location



Source: The Planning Center

Southeast Urban Center
Specific Plan



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Presently, Clovis' commercial development is concentrated downtown along the Clovis Avenue corridor that includes Old Town, and along the Shaw Avenue and Herndon Avenue Corridors. Clovis' open space and parklands include 12 park sites, as well as 182 acres of pond and associated water retention/flood control facilities. As of 2002, the population of the City of Clovis was 72,808, with over 18 square miles within its incorporated City limits.

State Route (SR) 168, which runs through the heart of the City of Clovis in southwest/northeast direction, is located approximately 1½ miles north of the project area and SR 180 is located approximately two miles south of the project area. SR 180 is currently being improved from Chestnut to Frankwood Avenues (20 miles). Its construction began in the year 2002, and is anticipated to last until year 2006. Local access is provided by numerous streets that connect Clovis with the City of Fresno and to rural areas to the north and east. The largest of these streets are Clovis Avenue, Shaw Avenue and Herndon Avenue.

The City of Fresno is located along the Clovis' southern and western boundary and the City has been developed largely with urban uses. One of the major land use feature for the City of Fresno would be the Fresno Air Terminal, located near the southern boundary of the City of Clovis and provides commercial airline service.

3.4 PROJECT AREA SETTING

The project area is located immediately east of the City of Clovis in unincorporated Fresno County, but within the City's sphere-of-influence (SOI) per 2000 additions to the City's SOI areas. The project area encompasses approximately 3,307 acres bound by Locan Avenue to the west, McCall Avenue to the east, portions of Bullard Avenue and Shaw Avenue to the north, and the Gould Canal and Dakota Avenue to the south (see Figure 3.3-1, *Local Vicinity*). Currently, a large percentage of the project area consists of rural residential, agricultural and vacant land. Low-density residential land use dominates the developed area.

The project area is relatively free from development constraints. The land is mostly level and is a mixture of agricultural and rural residential areas, as shown on Figure 3.4-1, *Existing Land Use*, and as such, has been continually disturbed and cultivated for years.

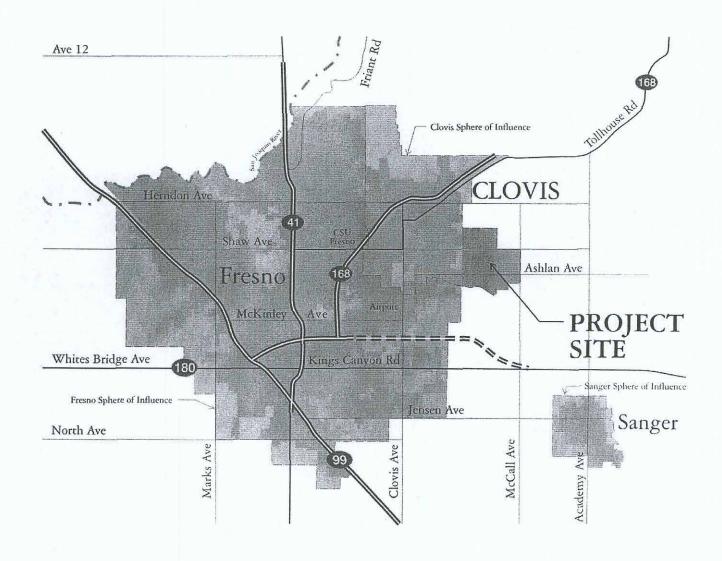
Near the center of the project area is the Ronald W. Reagan Educational Center. This 145-acre educational complex is bound by Gettysburg Avenue on the north, Ashlan Avenue on the south, DeWolf Avenue on the west and Leonard Avenue on the east and houses Clovis East High School, Reyburn Intermediate School, and the proposed Reagan Primary School. The facility also includes an agricultural farm for educational purposes located along Gettysburg Avenue. Clovis Unified School District and Sanger Unified School District serve the area and the district boundaries are denoted on Figure 3.4-2, School District Boundaries.

There are several irrigation channels located within the project area. The Gould Canal forms the southern boundary of the project area. Dog Creek runs north to south through the central portion of the project area. Jefferson Canal and Enterprise Canal are located in the northern portion of the project area, while Redbank Ditch is located in the southeastern corner of the site. Several other privately owned irrigation canals, such as McFarlane Ditch, are interspersed throughout the project area. In addition, a total of six streams¹ exist in the project area, including Dog Creek and Redbank Creek. Dog Creek terminates into Redbank Creek that subsequently terminates into the Mill Ditch, a man-made irrigation canal.



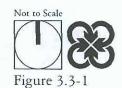
¹ Dan Gilbert, FMFCD, Nov. 2002

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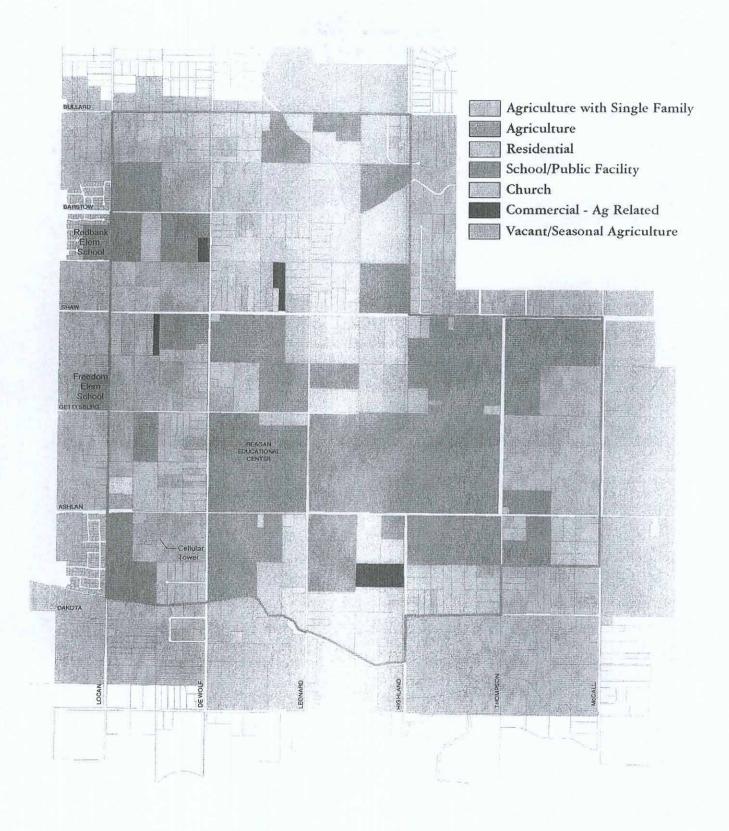
Source: The Planning Center

Southeast Urban Center
Specific Plan



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Existing Land Use



Source: City of Clovis

City of Clovis

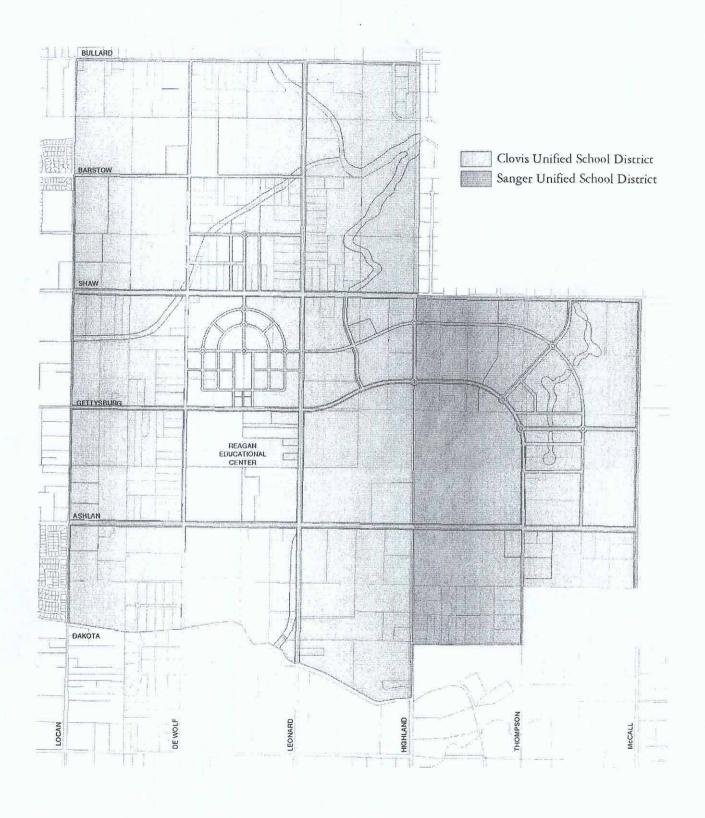
Southeast Urban Center

Specific Plan



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School District Boudaries

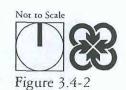


Source: CUSD, SUSD

City of Clovis

Southeast Urban Center

Specific Plan



As shown in Figure 3.4-3, *Flood Zone Map*, portions of the project area are classified within Federal Emergency Management Agency (FEMA) Zone A, defined as an area susceptible to flooding during a 100-year flood event, where base floods elevations and flood hazard factors have not yet been determined.

The project area is divided into over 300 legal parcels. Smaller parcels with multiple ownerships are generally concentrated in the area west of Leonard Avenue. The larger parcels are generally concentrated east of Leonard Avenue. The smaller parcels under multiple ownerships present a challenge to coordinating development and in phasing a project over time. Larger parcels, especially those under a single ownership, provide greater flexibility for unified development.

The land uses to the west of the project area are a mixture of new urban development, primarily single family residential, vacant land and agricultural uses. Also located immediately west of Locan Avenue are Redbank Elementary School (located within the City of Clovis limits) and Freedom Elementary school at the northwest corner of Gettysburg Avenue and Locan Avenue (located in unincorporated Fresno County). Land uses further to the west, in the City of Clovis are primarily residential, commercial, and community and public facilities. To the north, east, and south of the project area is agricultural land in Fresno County, with limited rural residential. However, a master planned community such as Quail Lake residential development is also located approximately ½ mile to the east of the project area.

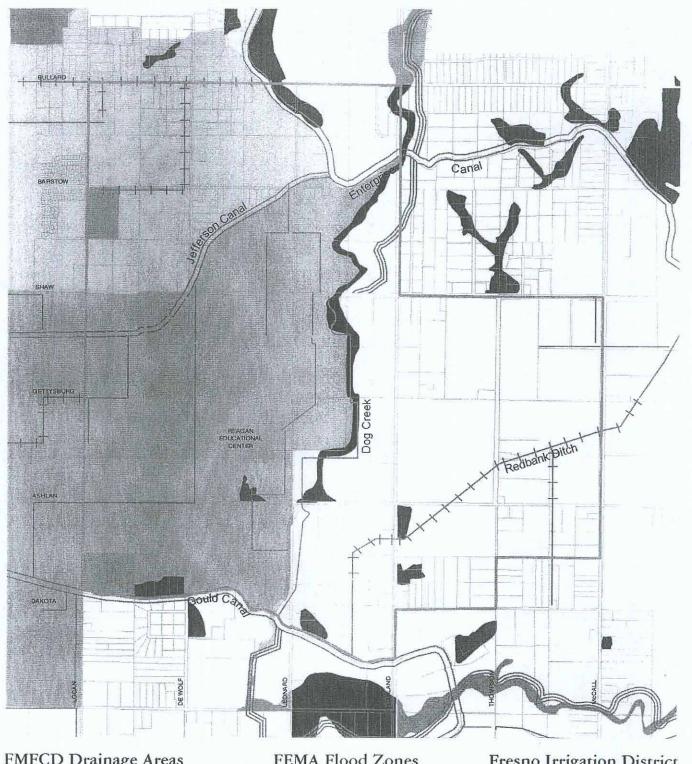
Approximately ½ mile south of the project area is an area known as "Southeast Growth Area," bound by the Gould Canal and McCall, McKinley, Highland, Jensen, Temperance and Locan Avenues, extending approximately 11 square miles. Development of this area may proceed subject to approval of a detailed community and/or specific plan to accommodate a total population of 55,000 people. For further detail, please Figure 3.4-4, Aerial Photograph.



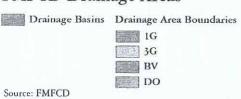
3.5 BASELINE CONDITIONS

Pursuant to Section 15125(a) of the CEQA Guidelines, "An EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time the notice of preparation is published, or if no notice of preparation if published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives." Baseline conditions will be discussed by environmental topic in Section 5, *Environmental Analysis*.

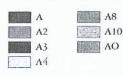
Flood Zone Map



FMFCD Drainage Areas



FEMA Flood Zones



Fresno Irrigation District

// Canals/Waterways

City of Clovis

Southeast Urban Center Specific Plan



Aerial Photograph



Source: The Planning Center

City of Clovis

Southeast Urban Center

Specific Plan



4.1 PROJECT LOCATION

As shown in Figure 3.2-1, Regional Location, Southeast Urban Center (project area) is located in the heart of the San Joaquin Valley, an agriculturally rich area. Due to its location, Clovis is known as the "Gateway to the Sierra" and is an ideal stop on the way to or from the Sierra National Forest.

As shown in Figure 3.3-1, Local Vicinity, the project area is located immediately east of the City of Clovis in unincorporated Fresno County, but within the Clovis sphere of influence. The project area encompasses approximately 3,307 acres and is bounded by Locan Avenue to the west, McCall Avenue to the east, portions of Bullard Avenue and Shaw Avenue to the north, and the Gould Canal to the south. The City of Fresno is located approximately one-half mile southwest of the project area. Interstate 5 (I-5) State Route (SR) 99 and SR 41 provide north-south regional access to the project area and major east-west routes include SR 168 and SR 180, located approximately one-and-a-half miles north and two miles south of the project area, respectively.

4.2 PROJECT BACKGROUND

The Fresno/Clovis metropolitan area is experiencing a rapid rate of growth. This growth rate is anticipated to continue for the next 20 years, resulting in increased development pressures. These pressures often result in development that occurs on a parcel-by-parcel basis in an unplanned manner. The City of Clovis desires to avoid haphazard development yet still accommodate growth in a responsible fashion so that the small town atmosphere of the City is maintained.

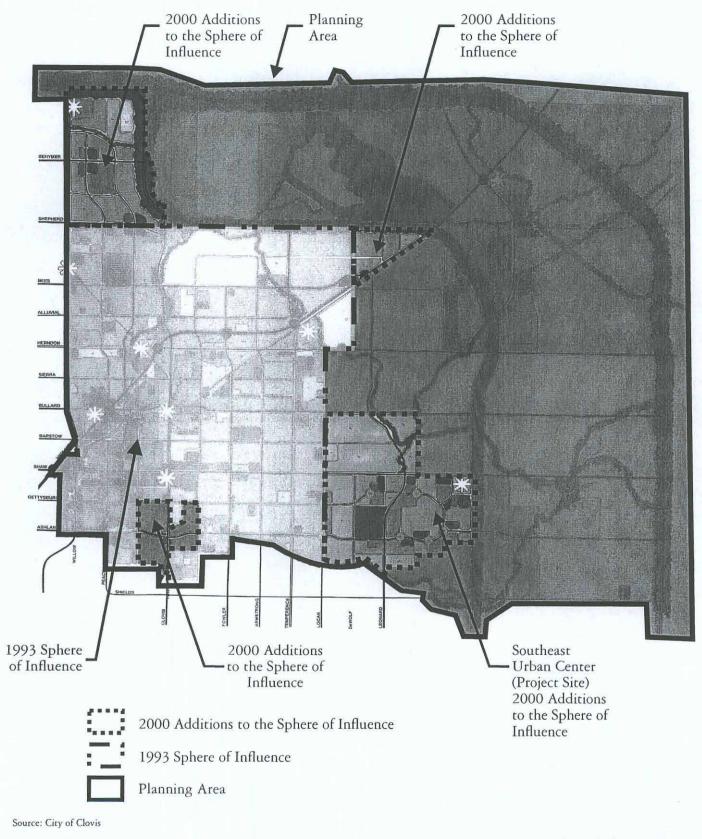
To accomplish this objective, the City of Clovis adopted a forward thinking General Plan in 1993. The City's General Plan includes the concept of "Urban Centers." The Urban Center concept identified locations to focus future growth in a manner that builds upon and integrates with the existing community of Clovis. Three Urban Centers are defined in the General Plan and shown in Figure 4.2-1, City General Plan: the Northwest, the Northeast, and Southeast Urban Centers. Prior to annexation and development of these three Urban Centers, the preparation of a specific plan is required. A specific plan is a regulatory document that provides standards and criteria for the development of a specific area (California Government Code Section 65450). The Southeast Urban Center Specific Plan establishes the planning concept, design and development guidelines, administrative procedures, and implementation measures necessary to achieve an orderly and compatible development of the project area.

Each Urban Center is intended to help the City, as a whole, achieve a balance of open space, recreation, and productive agricultural lands with urban uses while maintaining Old Town Clovis as the focal point for the community. The 3,307-acre project area is the first Urban Center anticipated by the 1993 General Plan to receive detailed planning provided through the specific plan process.

The emphasis of the Specific Plan is on standards and development criteria that implement the broad goals of the General Plan. The Specific Plan is to be adopted by City Council resolution and must be consistent with the General Plan. To facilitate such consistency, General Plan policies should support the standards and development criteria of the Specific Plan. Thus, the Specific Plan refines the policies of the General Plan as they apply to a smaller area and is implemented by local ordinances such as those regulating land use and subdivision. All projects that are found to be consistent with this Specific Plan will likewise be deemed consistent with General Plan.

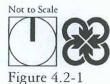


City General Plan



City of Clovis

Southeast Urban Center Specific Plan



As has been the pattern with other schools, the opening of the Reagan Educational Center has brought to a focus development interest in the surrounding properties. In order to ensure that development occurs in an orderly and coordinated manner, the City has taken the proactive stance of planning for the future of this area.

The boundaries of the project area were defined with the approval of the updated sphere of influence (SOI) in 2000, where the entire project area lies within the Clovis SOI. The original boundaries of the project area identified in the 1993 General Plan (Urban Center Specific Plan #3) were not part of the 1993 SOI and did not extend north of Shaw Avenue, and extended south of Dakota Avenue to the Gould Canal. The boundaries of the project area now extend north of Shaw Avenue to Bullard Avenue to include the area that is identified in the 1993 General Plan as a special study area and retracted from roughly the Gould Canal to Dakota Avenue.

4.3 PROJECT CHARACTERISTICS

4.3.1 Project Objectives

The following are goals and policies from the City of Clovis General Plan that provide guidance for the use and development of the project area.

LAND USE ELE	EMENT							
Goal 1: A self	i-sustaining community which provides a full range of land uses and related amenities.							
Policy 1.1	Concentrate growth around Urban Centers.							
Policy 1.2	Promote neighborhoods that provide a balanced mix of land uses and development types that are supportive of community lifestyle and "small town" character.							
Policy 1.3	Encourage creative mixed-use development through zoning and development standards.							
Policy 1.4	Provide flexibility in land use planning to be responsive to market demands.							
Policy 1.5	Provide opportunities for neighborhood interaction.							
Goal 2: Future natural resource	e land uses of high quality design that are compatible with existing development and are sensitive to existing es.							
Policy 2.1	Emphasize quality development designed as part of the City's neighborhood concept.							
Policy 2.2	Promote a diversity of land use densities and intensities.							
Policy 2.3	Encourage higher density residential development as a component of mixed use activities.							
Policy 2.4	Require new urban development to be designed around Urban Village neighborhood concept.							
Policy 2.5	Provide for the permanent preservation of open space lands that contain important natural resources and water features.							
Policy 2.6	Place the major responsibility of achieving land use compatibility and buffering on the higher density/intensified land use.							
Policy 2.8	Continue to mandate the use of the Specific Plan for new areas of urban development.							
Goal 3: A vari	iety of residential uses that accommodate a range of household needs and styles.							
Policy 3.1	Conserve areas for lower density semi-rural residential character as well as providing for further development pf variable lot size subdivisions to meet the continuing demand for housing in Clovis.							
Policy 3.3	Require residential development to contribute to and become part of a neighborhood defined by a central; park feature, a school complex, a hierarchy of streets, pedestrian pathways, and other neighborhood amenities.							
Policy 3.4	Maintain a mix of residential uses consistent with capabilities of the City and other agencies to provide public facilities and services.							



	l-balanced and diversified economy that provides a variety of economic and employment opportunities.								
Policy 5.3	development.								
maintained devi									
Policy 6.1	Assist in and promote the development of vacant infill and underutilized parcels in the City.								
Policy 6.5	Promote parcel consolidation or coordinate planning of adjacent parcels through incentive programs and planning assistance.								
	rderly conversion of agricultural lands to urbanized land uses.								
Policy 8.1	Allow agricultural lands within Project Area to be converted to planned urban uses in a gradual, phased and orderly manner.								
Goal 9: Contr	ol in the development of lands within Clovis' project area.								
Policy 9.1	The City of Clovis shall take a leadership role in the land use planning for the entire Project Area.								
Policy 9.2	Ensure development is well-planned and well-developed.								
Policy 9.3	Plan for the conservation and development of designated urban areas in and around Clovis.								
Goal 10: Sound	city fiscal conditioning underlying growth conditions.								
Policy 10.1	Require that new development is funded so as to not have a negative fiscal impact on the City's General Fund.								
Policy 10.2	Require a fiscal impact analysis of all specific plans and major development proposals.								
Policy 10.3	If a project supplies housing that meets very low or low income housing needs, significant open space, job creation, and other public benefits, they may be used in calculating fiscal impact.								
CIRCULATION	ELEMENT								
Goal 1: Provid	le for the development of a street system to adequately address the needs of the community.								
Policy 1.1	Create a hierarchical street system of freeways, expressways, arterial, collector and local streets in which each roadway serves a specific primary function from property access for local streets to through travel for expressways.								
Policy 1.2	Allow for future construction of a beltway system to accommodate all development potential within the Project Area, and provide a regional link.								
Policy 1.3	Levels of Service should meet the City standard on major streets and intersections within the Project Area.								
Goal 2: Provide residential, and	le adequate, safe, well-maintained, and efficient access to employment, educational, commercial, recreational uses throughout the community, including the Downtown Core Area.								
Policy 2.1	Maximize traffic safety for automobile, transit, bicycles and pedestrians.								
Policy 2.2	The City shall promote an active policy of eliminating/consolidating driveways, access points and curb cuts along developed arterials when development or change or intensity of development or land use occurs or when traffic operation of safety warrants.								
Policy 2.3	Protect residential areas from through traffic and high travel speeds.								
Policy 2.4	Stress landscaping, monuments and sign controls on streets serving as gateways to the City, and other streets which are important in terms of size, location and access.								
Goal 3: Promo private automob	ote all modes of transportation, including transit, bicycle, walking, for the development of alternatives to the ile throughout the community, including the Downtown Core Area.								
Policy 3.1	Achieve a balanced multi-modal transportation system, including multi-modal corridors and transit centers.								
Policy 3.2	Sidewalks, paths, and appropriate crosswalks should be located to facilitate access to all schools and other areas with significant pedestrian traffic.								
Policy 3.3	Promote the long-term shifting of peak hour commute trips from the single occupancy automobile to ridesharing, buses, pedestrian, bicycles and other strategies that may emerge.								
Goal 4: Provid	e for the development and maintenance of the community's transportation infrastructure.								
Policy 4.1	The City shall maintain a high level of inter-governmental coordination and citizen participation in the circulation and transportation planning process and work with other agencies to assure that regional transportation plans are consistent with the City's General Plan.								

	APPLICABLE GOALS AND POLICIES							
Policy 4.2	All infrastructure costs required to implement the Circulation Plan shall be borne by the available funding sources, including new development impact fees provided ion the Clovis Major Facility Ordinance.							
HOUSING ELE	MENT							
Goal 1: A dive	ersity of housing opportunities that satisfy the physical, social, and economic needs of existing and future vis.							
Policy 1.1	Maintain a sufficient inventory of developable land at varying densities to accommodate the existing and projected needed housing supplies.							
Policy 1.2	Support mixed-use projects that promote and enhance the adopted goals and policies of the Clovis General Plan.							
Policy 1.3	Encourage and participate in efforts designed to achieve economies and efficiencies that will facilitate production of quality, affordable housing.							
Policy 1.4	Promote balanced, orderly growth to minimize unnecessary development costs adding to the cost of housing.							
Policy 1.5	Encourage residential development that provides a range of housing types, cost, density, and occupancy status.							
Goal 2: Balan	ce growth between housing production, employment, and provision of services.							
Policy 2.1:	Direct new housing development to viable communities where essential public facilities can be provided and employment opportunities, educational facilities, and commercial support are available.							
Policy 2.2:	Provide for adequate infrastructure and services to meet demands generated by residential development.							
Policy 2.3:	Encourage a diversity of housing types in mixed-use areas, village centers, and other areas in the City to support the Clovis community values.							
Goal 3: Afford	able housing for all economic segments of Clovis.							
Policy 3.1:	Promote a variety of housing opportunities that accommodate the needs of all income levels of the population, and provide opportunities to meet the City's fair share of low- and moderate-income housing.							
Policy 3.2:	Develop and implement regulatory actions that will advance the production of units affordable to low- and moderate-income households.							
Policy 3.3:	Support innovative public, private, and nonprofit efforts in the development of affordable housing, particularly for the special needs groups.							
Policy 3.4:	Pursue all available forms of private, local, state, and federal assistance to support development or purchase/rental of affordable housing.							
Policy 3.5:	Develop programs addressing the loss of assisted units because of conversion to market rate units or physical deterioration.							
Goal 4: To ma	intain and improve the quality of the existing housing stock and the neighborhoods in which it is located.							
Policy 4.1:	Every five years monitor the quality of the housing stock to maintain an inventory of all substandard housing units.							
Policy 4.2:	Provide for removal of all unsafe and substandard dwellings that could not be economically repaired.							
Policy 4.3:	Encourage development of sound new housing on vacant land within existing neighborhoods that have the necessary service infrastructure.							
Policy 4.4:	Support and encourage all public and private efforts to rehabilitate and improve the existing stock, including use of federal, state, and local programs for this purpose.							
Policy 4.5:	Promote public awareness of the need for housing and neighborhood conservation.							
Policy 4.6:	Support actions that foster and maintain high levels of owner occupancy, particularly in those neighborhoods where housing quality is declining.							
Policy 4.7:	Promote development of public policies and regulations that provide incentives for proper maintenance of owner-occupied and rental housing.							
Policy 4.8:	Maintain essential public services and facilities in residential areas of low/moderate income housing units							
Policy 4.9:	Encourage available public and private housing rehabilitation assistance programs in neighborhoods where such action is needed to ensure preservation of the living environment.							
Policy 4.10:	Manage neighborhood environmental factors to focus on neighborhood preservation and stabilization.							



Goal 5: Equal	housing opportunity for all residents of Clovis.						
Policy 5.1:	Encourage and support the enforcement of laws and regulations prohibiting discrimination in lending practices and in the sale or rental of housing.						
Policy 5.2:	Assist in the provision of housing for residents with special needs.						
Policy 5.3:	Encourage housing design standards that promote the accessibility of housing for the elderly and disabled.						
Policy 5.4:	Support groups that address the housing needs of the homeless and other disadvantaged groups.						
Goal 6: To pro	omote energy conservation activities in all neighborhoods.						
Policy 6.1:	Comply with all adopted federal and state actions to promote energy conservation.						
Policy 6.2:	Promote public awareness of the need for energy conservation.						
Policy 6.3:	Promote development of public policies and regulations that achieve a high level of energy conservation in all new and rehabilitated housing units.						
Policy 6.4:	Encourage maximum utilization of federal and state programs and programs and services from energy providers that assist homeowners in providing energy conservation measures.						
	lination among agencies that address housing issues.						
Policy 7.1:	Coordinate with governmental agencies responsible for the administration of state and federal housing programs.						
Policy 7.2:	Comply with all adopted federal and state actions that will create a positive, stable climate for housing production.						
Policy 7.3	Pursue state and federal funding and assistance to fulfill Housing Element policies and projects.						
PUBLIC FACIL	ITIES ELEMENT						
Goal 1: Maint	ain and improve Clovis' infrastructure to protect Clovis' health and safety.						
Policy 1.1	Provide adequate public infrastructure and services to meet the needs of existing and future development.						
Policy 1.2	Utilize existing infrastructure and public service capacities to the maximum extent possible and provide for the logical, timely and economically efficient extension of infrastructure and services where necessary.						
Policy 1.3	Optimize use of Project Area resources for efficient siting of public facilities.						
	levelopment which includes a full compliment of infrastructure and public facilities.						
Policy 2.1	New development will provide or pay for its fair share of public facility and infrastructure improvements.						
	prehensive wastewater infrastructure system in Clovis.						
Policy 3.1	Provide adequate wastewater collection and treatment capacity for planned development in Clovis.						
Policy 3.2	As new water facilities are developed and operated by the City, use reclaimed water to reduce non-potable water demands wherever possible.						
Policy 3.3	Create market opportunities for reclaimed water.						
	prehensive water source, distribution and treatment infrastructure system in Clovis						
Policy 4.1	Ensure that adequate water supply can be provided within the City's service area, concurrent with service expansion and population growth.						
Policy 4.2	Provide better water quality for City residents while increasing water system reliability and protecting the groundwater basin from overdraft.						
	prehensive drainage system in Clovis.						
Policy 5.1	Provide effective storm drainage facilities for planned development in accordance with existing design standards.						
Policy 5.2	Integrate drainage facilities with bike paths, sidewalks, recreation facilities, agricultural activities and landscaping.						
Policy 5.3	Reduce or eliminate the effect that development will have ion natural watercourses.						
	rate school facilities for all students in Project Area.						
Policy 6.1	Provide elementary, intermediate, and high school facilities that are centrally located to the populations they serve and adequate to serve community growth.						

Goal 7: Cultur	APPLICABLE GOALS AND POLICIES ral and public community services that improve and maintain the quality of life for the residents of the Clovis							
community.								
Policy 7.1	The City will meet the cultural, spiritual and health-related needs of the community by incorporating such facilities and services in development and redevelopment proposals.							
Policy 7.2	The City shall promote consolidation of complimentary or support services to avoid duplication of programs offered in various Urban Villages, the City core, and adjacent jurisdictions.							
Policy 7.3	Provide for adequate library facilities and services consistent with the County of Fresno; and provide a focus for community activity and cultural development.							
OPEN SPACE/	CONSERVATION ELEMENT							
	ment and maintenance of ambient surface and groundwater quality standards.							
Policy 1.1	The City shall control the amount and quality of non-point source collection.							
Policy 1.2	Protect Clovis' Water Quality.							
Goal 2: Const	erved and effective use of water resources.							
Policy 2.1	Promote the conservation of water.							
Policy 2.2	Promote the use of reclaimed water.							
Policy 2.3	Direct both public and private efforts toward improvement and water quality.							
Goal 3: Conse	erve natural resources through protection and enhancement of permanently observed open space.							
Policy 3.1	Preserve vegetation and associated wildlife habitat in Project Area.							
Policy 3.2	Recognize the Friant/Kern Canal, the Enterprise Canal, the Dry Creek Canal, the Dog Creek Canal, Pup Creek Canal, Gould Canal and other major waterways as important open space corridors for flood control, trail systems, water quality control, and visual amenities.							
Goal 4: Open	space lands for the future expansion of city facilities and amenities.							
Policy 4.1	Designate Multi-Use Open Space Areas on the Land Use Plan that preserve and enhance open space and water features and provide for a variety of open space uses designed to meet local needs, including: Stormwater runoff detention water basins with joint-use park facilities; managed wildlife habitat; agriculture; regional open space with recreational opportunities, community edges and natural amenities; and a beltway trail system.							
Policy 4.2	Designate Multi-Use Open Space Areas on the Land Use Plan that preserve and enhance open space and water features and provide for a variety of open space uses designed to meet local needs, including: Stormwater runoff detention water basins with joint-use park facilities; managed wildlife habitat; agriculture; regional open space with recreational opportunities, community edges and natural amenities; and a beltway trail system.							
Policy 4.3	Preserve visual resources along existing expressways, the designated entries to the City and the proposed inner and outer beltway system, and other roadways within the Project Area.							
Goal 5: Prese	rvation of productive agricultural lands to facilitate orderly conversion of lands to development.							
Policy 5.1	Limit encroachment of urban uses into agricultural areas, unless consistent with General plan policies.							
Goal 6: An en	vironment in Clovis where energy resources are efficiently utilized.							
Policy 6.1	Promote the use of bicycles as an alternative transportation mode.							
Policy 6.2	Energy efficient development as a result of design and construction.							
Goal 7: Prese	rved and enhanced prehistoric, historic and cultural resources in and around the Clovis project area.							
Policy 7.1	Retain and maintain historic structures.							
Policy 7.2	Preserve known archaeological resources and seek to identify additional archaeological sites within the Project Area.							
	le park facilities to meet the needs of existing and future residents, including acreage to offset the current de for the projected population growth.							
Policy 8.1	A variety of park facilities shall be provided in a timely manner in accordance with the pace of development.							
Goal 9: A bala	nced system of public and private parks and recreation facilities achieved in cooperation with the Clovis District, the Fresno Metropolitan Flood Control District, the Memorial District, and other agencies.							
Policy 9.2	Parks and recreation facilities should be accessible to all members of the community, regardless of age, physical limitation, sex or income level.							



	TABLE 4.3-1 CITY OF CLOVIS GENERAL PLAN APPLICABLE GOALS AND POLICIES							
Policy 9.3	Provide high quality existing and new facilities which are compatible with adjacent land uses through							
	establishment of a Master Planning process that is responsive to community input.							
	Is system that meets the needs of residents.							
Policy 10.1	Ensure the City's trail objectives are met by all development.							
Policy 10.2	Utilize the Bikeways Master Plan in the review of all development proposals.							
SAFETY ELEM	ENT CONTROL OF THE CO							
Goal 1: Prote	ct the Clovis community from hazards associated with the natural environment.							
Policy 1.1	Minimize the risks of personal injury and property damage associated with natural hazards.							
Policy 1.2	Provide flood protection for existing development and for areas planned for new development.							
Policy 1.3	Utilize the unprotected 100-year floodplain for low density uses such as agriculture, open space, recreating and for reclaiming water and wetlands.							
Policy 1.4	Mitigate potential adverse impacts of geologic and seismic hazards.							
Policy 1.5	Minimize fire hazards within the Project Area.							
Policy 1.6	Protect the community from loss of life, serious injuries, and major social and economic disruption caused by the collapse or severe damage to hazardous structures.							
Goal 2: Protec	ction of the public and environment from exposure to hazardous materials and hazardous waste.							
Policy 2.1	Assess any risks involving the disposal, transport, manufacture, storage and handling of hazardous materials at all levels of planning in the City of Clovis.							
Goal 3: Protections	ct the safety of life and property throughout the Clovis community by providing high quality emergency							
Policy 3.1	Protect the safety of life and property throughout the Clovis community by providing high quality emergency services.							
Policy 3.3	Promote the community order by preventing criminal activity, enforcing laws, and meeting community police service demands.							
NOISE ELEMEI								
	use planning that provides for the separation of significant noise generators from sensitive receptor areas.							
Policy 1.1	Discourage noise sensitive land uses in noisy exterior environments unless measures can be implemented to reduce exterior and interior noise to acceptable levels. Alternatively, encourage less sensitive uses in areas adjacent to major noise generators but require interior working environments.							
Policy 1.4	Required proposed industrial or commercial projects locating near existing or planned residential areas to demonstrate that the projects when constructed, will comply with the City noise requirements.							
Policy 1.5	Ensure that the current noise hazard areas in the City are identified, quantified, and mapped in a form that is available to decision makers.							
Policy 1.6	Utilize the information from the noise contour map in the General Plan in the development review process to ensure that noise sensitive land uses are not located near major noise sources.							
Policy 1.7	Minimize noise conflicts between land uses and the circulation network.							
Goal 2: The co	ontrol of noise between land uses.							
Policy 2.1	Limit the maximum permitted noise levels which cross property lines and impact adjacent land uses.							
Policy 2.3	Work with the County of Fresno and the City of Fresno in minimizing or avoiding conflicts, between land uses along the Project Area boundary and noise, prior to individual project approvals.							
Policy 2.4	Evaluate potential noise conflicts for individual sites and projects.							
Policy 2.5	Require mitigation of all significant noise impacts as a condition of project approval.							
Goal 3: Minim	ize noise impacts from transportation noise sources.							
Policy 3.1	Ensure the effective enforcement of City, State, and Federal noise standards by all appropriate City Divisions.							
Policy 3.2	Enforce the speed limit on arterials and local roads to reduce noise impacts from vehicles, particularly in residential areas.							
Policy 3.4	Proactively participate in the planning and impact assessment activities of the Airport Land Use Commission and other regional or state agencies relative to any proposed expansion of the Fresno Air Terminal to change in flight patterns.							

	TABLE 4.3-1 CITY OF CLOVIS GENERAL PLAN APPLICABLE GOALS AND POLICIES							
Policy 3.5	Encourage only the location of compatible land uses in proximity to existing transportation facilities that generate significant noise levels (i.e., Fresno Air Terminal).							
Goal 4: Redu	ce existing and future excessive noise to a level that eliminates annoyance and hazards to the people.							
Policy 4.1	For new and existing structures, encourage the use of abatement devices where there exists high and enduring noise levels.							
Policy 4.2	Encourage the use of site design and building design techniques, including the use of landscape setbacks berms, building orientation, and buffering of noise sensitive areas, as a means to minimize noise impacts.							
AIR QUALITY	ELEMENT							
Goal 1: Impro	ovement of air quality through proper land use planning in Clovis.							
Policy 1.1	Encourage new development that provides employment opportunities for residents of Clovis to improve the balance of jobs relative to housing.							
Policy 1.3	Minimize land use conflicts between emission sources and sensitive receptors.							
Policy 1.4	Reduce air pollutant emissions by mitigating air quality impacts associated with new development projects in to the greatest extent feasible.							
Goal 2: Enha	nced mobility to minimize air pollutant emissions.							
Policy 2.1	Implement transportation demand management techniques to reduce motor vehicle trips, including walking, bicycling, ridesharing, local transit support, compressed work schedules and telecommunications.							
Policy 2.2	Maintain an orderly flow of traffic and improve mobility through the use of transportation systems management techniques.							
Policy 2.3	Pursue development of a public transit system including local shuttle and bus routes that are linked to regional light rail.							
Policy 2.4	Promote alternatives to motorized transportation by establishing a convenient and efficient system of bicycle routes and pedestrian walkways linked to multi-modal stations.							
Policy 2.5	Promote the use of alternative clean fueled and/or electric powered vehicles for personal and business use.							
Policy 2.6	Encourage programs that reduce local traffic congestion at peak hours and during special events.							
Goal 3: Incor	porate energy conservation practices and recycling to reduce emissions.							
Policy 3.1	Encourage community-wide reductions in energy consumption through conservations practices.							
Policy 3.2	Promote local recycling of wastes and the use of recycled materials.							
Source: City of Cl	ovis General Plan (1993)							

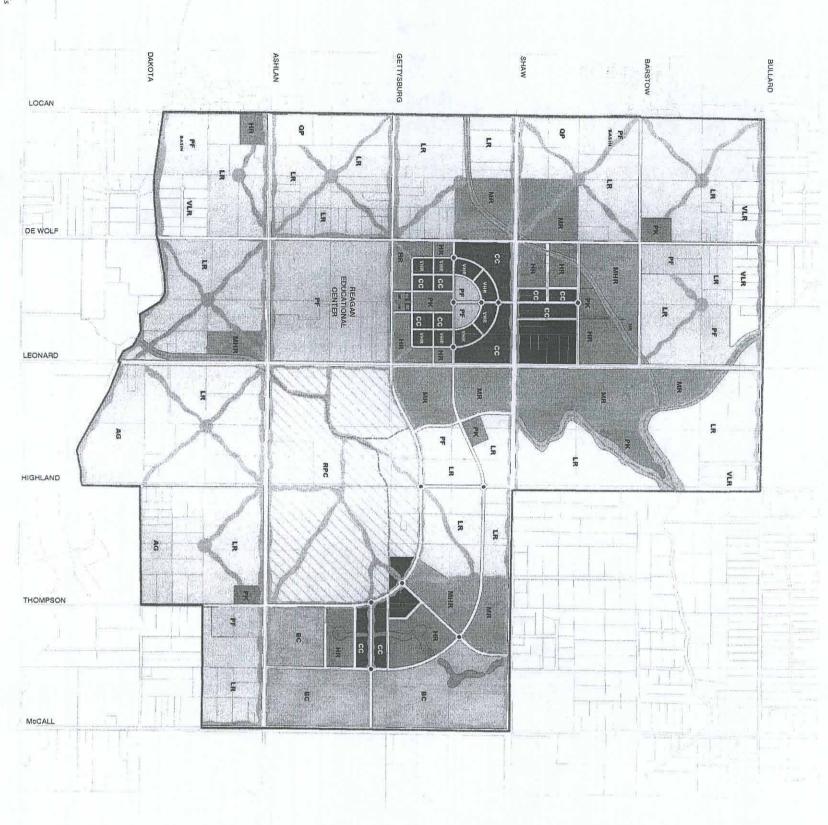
The City Council adopted principles to guide the development of the project area. As the foundation for this plan, these principles build upon and expand the desires to develop a focused community that is environmentally sensitive and economically sound. For the purposes of the CEQA document, these principles will serve as the objectives for the project. These project objectives are presented in Table 4.3-2 below.



	TABLE 4.3-2 PROJECT OBJECTIVES							
Number	Objective							
1 11=8	Base the future development and use of the Southeast Urban Center (project area) on the concepts and vision of the City's General Plan.							
2	Design the project area to foster family values and maintain the small-town feel of Clovis by promoting a lifestyle that is socially and culturally enriching, aesthetically pleasing, and environmentally responsible.							
3	Design a series of diverse residential neighborhoods planned around compact pedestrian-oriented mixed-use cores and accompanied by a full mix of employment opportunities, recreational activities, shops, and services.							
4	Plan for land uses and supporting infrastructure that maintain and enhance, rather than detract from, existing educational facilities, agricultural operations, and surrounding uses.							
5	Approve development predicated on the ability to provide water supply, sewer and storm water infrastructure, public services, and transportation system connections in a comprehensive timely manner.							
6	Ensure the integrity of the plan and safeguard its long-term stability and continuity by assuring an adequate economic return for the project.							
7	Provide a wide variety of housing types, densities, and designs that accommodate a broad range of income levels and lifestyles and respond to both local and regional housing needs.							
8	Provide for a broad range of employment and career opportunities.							
9	Achieve a reasonable balance of jobs and housing to provide future residents the opportunity to live and work within the project area.							
10	Organize land uses in a manner that promotes pedestrian-oriented circulation patterns and reduces the number and length of vehicular trips.							
11	Organize land use patterns to facilitate cost –effective local and regional transit service.							
12	Consider the effect of development on the quality of air, water, and open space resources.							
13	Provide active and passive recreational opportunities to serve the needs of the project area.							
14	Design and develop the project to assure that tax revenues and fees received by the City, school districts, and other entities from the project cover the related costs of providing and maintaining facilities and services.							
15	Control storm runoff to protect life and property and to help control of runoff to areas downstream.							
16	Identify and consider significant environmental and hazard constraints in the land use plan.							
17	Accommodate cost-effective, energy-efficient infrastructure systems that employ active and passive solar design techniques, water conservation, and waste-recycling systems.							
18	Plan for sequential or phased development of the project area to preserve agricultural and related uses as long as practical.							

4.3.2 Description of the Project

The Southeast Urban Center Specific Plan (the Specific Plan) presents the land use plan and implementation measures for the future development of the project area. The concept for the development of the 3,307-acre project area is that of a high quality residential community focused around two core areas, called community centers, a business campus, and the Reagan Educational Center (see Figure 4.3-1, *Land Use Plan*, and Table 4.3-3, *Land Use Plan Statistics*).



Land Use Plan

Agriculture
Very Low Density Residential (0.5-2 du/ac)

Gettysburg/Ashlan Master Planned Community

Low Density Residential (2-4 du/ac)

Medium Density Residential (4-7 du/ac)

High Density Residential (15-25 du/ac) Medium High Density Residential (7-15 du/ac)

Very High Density Residential (25-43 du/ac)

Community Center (7-25 du/ac)

Commercial

Business Campus

Public Facilities

Quasi-Public

Water

Ореп Ѕрасе

Open Space - Recreation

Drainage Course Parkway/Trail System

Source: City of Clovis

Southeast Urban Center Specific Plan City of Clovis



TABLE 4.3-3 LAND USE PLAN STATISTICS

			Residential*			Non-Residential					
Land Use	Gross Acres	Target Density	Dwelling Units	Population	Min FAR	Max FAR	Min Non- Res.Sq. Ft.	Max Non- Res.Sq. Ft.	Workers ⁵	Jobs ⁴	
Agriculture (1 du/20 ac)	105	0.05	5	14					6		
Rural (0.5 du/ac)	0	0.5	0	0					0		
Very Low (0.5-2 du/ac)	87	2.0	174	469					211		
Low (2-4 du/ac)	1284	2.7	3,467	9,360					4,199		
Residential Planned Community	341		CH IN								
-Residential 6	330	4.8	1,584	4,277					1,919		
-Commercial	6				0.25	0.30	60,984	73,181		146	
-Neighborhood Commercial	5				0.30	0.50	65,340	108,900		218	
Medium (4-7 du/ac)	247	4.1	1,013	2,734	Later U.				1,227	Name of	
Medium-High (7-15 du/ac)	77	10.2	781	2,110					946		
High (15-25 du/ac)	129	15.0	1,938	5,233					2,347		
Very High (25-43 du/ac)	27	25.0	680	1,836					824		
Community Center ¹ (7-25 du/ac, 0.25-1.0 FAR)	84					_					
-Residential	84	14.1	1,187	3,205					1,438		
-Commercial	42				0.50	0.75	916,938	1,375,407		2,751	
-Office	17	33.			0.50	0.75	366,775			1,834	
-Open Space/Public	17	H								*	
Public Facilities	236										
Quasi-Public Facilities	28										
Commercial (0.30 FAR)	34				0.25	0.3	370,260	444,312		889	
Business Campus (0.50 FAR)	183				0.35	0.50	2,783,920	3,977,028		6,628	
Open Space ²	64										
Open Space-Rec ²	46										
Parkway	46										
Drainage Basin	54										
Water	14										
ROW	223										
Totals	3,307		10,829	29,238				6,528,991	13,116	12,466	

¹Community Center assumptions:

-Residential density is applied to the entire Community Center area.

-10% devoted to residential-only uses.

-50% devoted to commercial retail uses.

-20% devoted to office uses.

-20% devoted to civic/parking/open space uses

² Assumption that Open Space is publicly owned and funded by developer fees, CDBG, grants, etc.

*Household size = 2.7 persons per household

**Park acreage factor = 4.9 acres/1,000 persons

6 Includes areas for open sapce and residential ameniteis.

⁴ Employment Assumptions

-Commercial: 500 s.f. per employee

-Office: 300 s.f. per employee

-Bus. Campus: 600 s.f. per employee

⁵ Worker Participation Rate: 0.4486

Park Acres Required:** Job-Housing Ratio:



143

1.15

The City is exploring the development of a wastewater treatment plant/water reuse facility, which could be located within the project area. The exact location has not yet been determined. The wastewater-sewage treatment plant/water reuse facility is intended to be a regional serving facility that would not only serve the project area, but other growth areas of the City as well. A separate CEQA environmental document will examine the wastewater-sewage treatment plant/water reuse facility. This facility is discussed further in Specific Plan Section 3.5 and Section 5.10, *Public Services and Utilities* of this EIR. It is also possible that the plant could be located outside of the plan area. This decision will be made at the conclusion of discussions with the city of Fresno.

The community centers are intended to be a dynamic pedestrian-oriented environment with a compact The community centers are intended to provide a dynamic pedestrian-oriented environment with a compact and intimately scaled mix of uses. The community centers are intended to act as the social, retail, service, and entertainment hubs of the community. In community centers, the pedestrian is the focus of the design and orientation of development. Pedestrian amenities, such as benches, street trees, fountains, outdoor dining, public art, newspaper racks, covered walkways, and specially treated sidewalks, invite the public to stroll. Streets are narrow and "calmed" to allow convenient and safe pedestrian crossing and reduce the dominance of the automobile. The community centers contain ample open space features, such as pocket parks, plazas, and paseos, which promote human interaction and provide visual relief.

The first and largest community center is located north of the Reagan Education Center, extending north to Barstow Avenue. This community center is approximately four to six blocks in length. A large commercial center, which is located north of Shaw Avenue and west of Leonard Avenue, contains a traditional mixture of retail uses and is integrated with the adjacent community center. This community center is surrounded by a concentration of residential uses, which provide convenient support for the core uses.

The Jefferson Canal open space corridor extends through this community center, providing a pedestrian link as well as a recreational and visual amenity. In addition, a portion of the community center south of Shaw is focused around a village green, an exciting open space amenity that accommodates sports fields and an amphitheater.

The second community center is located in the eastern portion of the plan area, between Highland and McCall Avenues. This community center provides a focal point for the adjacent business campus and residential community.

The plan contains a variety of residential neighborhoods with a range of housing densities. The residential density ranges from two-acre single-family lots within the Very Low Residential designated areas to apartments and/or condominiums at a density of up to 43 dwelling units per acre within the Very High Residential designated areas. The higher residential densities are focused near the community centers and employment generating uses. Pockets of Very Low Residential designated areas adjacent to Gould Canal and Bullard Avenue accommodate the existing developed rural residential areas. The Agricultural and Very Low Residential land use designations provide a transition between the project area and development that may occur south of the Gould Canal.

Planned Communities

Key features of the Specific Plan are the four Master Planned Communities: Community Center South, Community Center North, Gettysburg/Ashlan, and the Eastern Village (see Figure 4.3-2, *Master Plan Communities*). The Master Planned Communities identify distinct areas that are unified around a central amenity, such as a golf course, mixed-use urban village, community center, recreational feature, and/or

lake. While, the precise land use boundaries and street alignments within the planned communities are flexible; the general character and maximum number of units and non-residential square footage have been determined as described below:

Community Center South

This 128-acre Master Planned Community is the heart of the project area. This area contains the greatest concentration of the shopping, entertainment, and social uses in a vibrant and pedestrian oriented setting. It is designed to be anchored by and integrated with the Reagan Education Center. Located immediately north of the Reagan Educational Center, Community Center South is bound by Gettysburg Avenue on the south, Shaw Avenue on the north, DeWolf Avenue on the west, and Leonard Avenue on the east.

Community Center South accommodates a mixture of retail commercial, office, residential, public facility, and recreational uses. These uses are combined both vertically, that is in one building with commercial below offices and residential uses above, and horizontally, that is a single parcel containing multiple uses in separate buildings.

Community Center South is envisioned as a pedestrian oriented, walkable area. To stimulate pedestrian activity, this area contains uses that invite exploration, such as cafes and outdoor dining. Buildings and business are located on and oriented toward the street. The sidewalk is wide and contains pedestrian amenities, such as benches, low planter walls, themed streetlights, public art, textured paving, and tasteful signage. Building massing and height vary and prominent architectural accent buildings identify significant intersections and public spaces. Community Center South is designed around a village green, an expansive open space feature that accommodates features such as an amphitheater and recreational fields. Public facilities, such as a library, post office are located adjacent to the village green, which is also a public park.

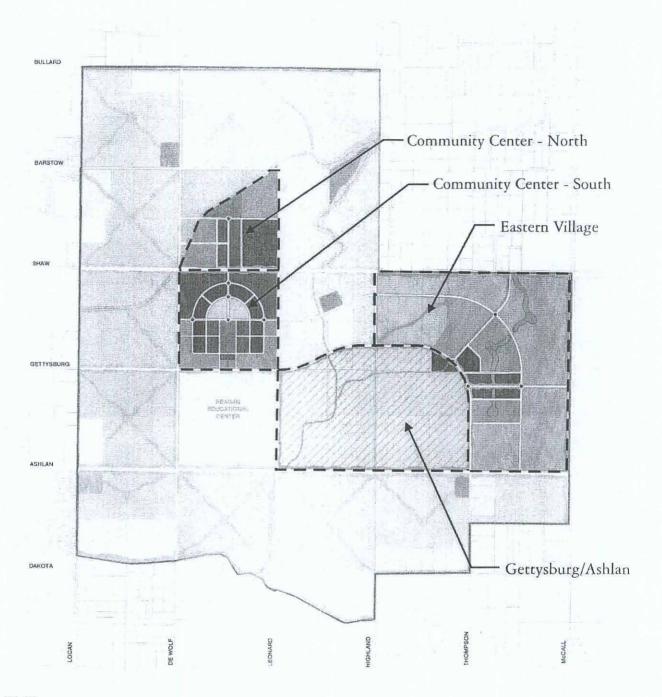


The streets in this area are calmed. Vehicular speeds are reduced by the use of traffic circles, curb bulb-outs, narrow lanes, and textured paving at pedestrian crossings. Vehicular parking is accommodated in shared facilities and located in the rear of the buildings. On-street parking is allowed on the main street but it is not intended to satisfy the parking demand for the area and is instead provided for convenience.

Access to Community Center South from Shaw Avenue is taken from DeWolf and Leonard Avenues. Direct access to and from Shaw Avenue is permitted at two right-in and right-out openings. A pedestrian and vehicular oriented underpass, conceptually represented on Figure 11, connects Community Center South with Community Center North.

1,840 residential units and approximately 1,138,876 square feet of non-residential area are envisioned in this Master Planned Community. Approximately 2,228 jobs are accommodated within this Master Planned Community.

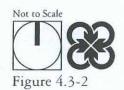
Master Planned Communities



■ Master Planned Communities

Source: City of Clovis

Southeast Urban Center
Specific Plan



Community Center North

Located immediately north of Community Center South, this 100-acre Master Planned Community is bound by Shaw Avenue on the south, the Jefferson Canal on the north, DeWolf Avenue on the west, and Leonard Avenue on the east. Access to Community Center North from Shaw Avenue is taken from DeWolf and Leonard Avenues and at two right-in and right-out openings.

This area is an extension of Community Center South and continues the same character and style as that area. As shown on Figure 11, Community Center North, a multi-modal underpass below Shaw Avenue connects the two areas. Like Community Center South, this area is oriented and designed for the pedestrian experience.

Community Center North accommodates a mixture of retail commercial, office, residential, and recreational uses. The community center is approximately two blocks long and is anchored on the north by a park. The Jefferson Canal, which forms the northern boundary, provides a convenient pedestrian linkage to the park and the shopping areas.

The commercially designated area on the northwestern corner of Leonard and Shaw Avenues contains shopping and retail stores. The uses in this area are integrated and incorporated into the community center through the circulation system and community design features.

806 residential units and approximately 675,942 square feet of non-residential area are shown in Community Center North. Approximately 1,480 jobs are accommodated within this Master Planned Community.

Gettysburg/Ashlan

This 341-acre Master Planned Community is located east of Leonard and west of Thompson Avenues, and north of Ashlan and south of Gettysburg Avenues. This Master Planned Community is envisioned as a residential community designed around an amenity, such as a park, historic site(s), and/or lake(s). Dog Creek is incorporated into the Master Planned Community as an open space amenity that accommodates multi-purpose trails. Approximately six acres of commercial uses, such as a super market or super drug store, and five acres of neighborhood serving commercial uses, such as a market or video store, are envisioned within this area.

The overall character of the area should be one of single family detached residential; however, a mixture of residential densities is permitted. The overall residential density within this area is 4.8 dwelling units per acre for 1,584 units. The overall non-residential intensity is approximately 73,181 square feet of commercial uses and 108,900 square feet of neighborhood serving commercial uses.

Incorporated within the Gettysburg/Ashan is the McFarlane & McFarlane Property's proposal to develop 303 acres of the 341-acre Master Planned Community to a residential planned community. Gettysburg/Ashlan integrates the land use and design concept of the McFarlane proposal into its planning concept.

Eastern Village

The 397-acre Eastern Village stretches east along Shaw Avenue from Highland Avenue to McCall Avenue and then south to Ashlan Avenue.



The Eastern Village contains a broad mixture of uses, from a mixed use Community Center, to retail commercial, office, business campus, and to various densities of residential uses. The centerpiece of the Eastern Village is the community center, an approximately two-block long shopping district that is envisioned as a pedestrian oriented area. Much like Community Centers North and South, this area contains cafes and outdoor dining and other pedestrian amenities, such as benches, low planter walls, themed streetlights, and public art. The buildings are located on and oriented toward the street, parking is located in the rear of the building, and the street is calmed by the use of traffic circles, curb bulb outs, narrow lanes, and textured paving at pedestrian crossings.

The commercial land use designation immediately north of the community center accommodates shopping and convenience needs and is incorporated into the design and fabric of the community center.

East and south of the community center is the 183-acre business campus. The business campus accommodates professional offices, research and development, corporate headquarters, light assembly, and some limited commercial retail uses (e.g. food services, dry cleaners, and gas stations).

An existing swale, which is seasonally filled, is enhanced as a water feature and incorporated into the design of the business campus and community center. Trails and pedestrian paths run along the lake feature.

Residential uses stretch from the community center to Highland Avenue. The residential densities range from high density (15-25 units per acre) surrounding the community center, to medium high density (7-15 units per acre), to low density (2-4 units per acre).

1,390 residential units and approximately 4,388,888 square feet of non-residential area are envisioned in the Eastern Village. Approximately 7,594 jobs are accommodated in this Master Planned Community.

Public Facilities

In addition to the existing Reagan Educational Center, three new elementary school sites, identified by the school districts are accommodated in the plan area and identified as Public Facilities on the land use plan. The school facilities are located on the southeast corner of Thompson and Ashlan Avenues, the northeast corner of DeWolf and Barstow Avenues, and north of Gettysburg between Leonard and Highland Avenues (see Figure 5.10-2, Educational Facilities).

The Plan also accommodates a surface water treatment facility, which is designated as Public Facilities on the land use plan, west of Leonard Avenue and south of Bullard Avenue. The surface water treatment plant would provide potable water for the project area and the growth areas of the City.

The City is currently in the process of determining the appropriate location of a wastewater-sewage treatment plant/water reuse facility. Using the adopted site selection criteria three quarter-sections east of the Reagan Educational Center, have been identified for the facility; however, specific site studies have not been performed. These general areas are located between Leonard and McCall Avenues, north of Ashlan, and south of Gettysburg Avenues. The wastewater-sewage treatment plant/water reuse facility is a regional facility that would serve the Plan area as well as other growth areas of the City. It is intended that open space and landscaping features identified in the land use plan would accept the tertiary treated water.

The wastewater-sewer treatment plant/water reuse facility is currently being analyzed in a separate study. The facility is projected to treat 8.4 million gallons per day at the ultimate buildout and serve not only the Specific Plan area but eventually the future Northwest and Northeast Specific Plan area as well. The facility is not shown in the Specific Plan at this time because site selection is not complete. Though the facility will be an important part of long-term growth of Clovis, it is only part of the City's service delivery system. The Specific Plan evaluates a range of land uses (residential, commercial, open space, schools, and parks) and urban services (domestic water, sewer collection and treatment, police and fire, public buildings, schools, and streets) over a large geographic area, and establishes standards for development of these areas. Another reason it is not identified at this time in the Specific Plan process is its size. The facility is approximately 60 acres, or less than 2% of the overall plan acreage. Therefore, placing it in the plan area is a relatively minor aspect of the overall specific plan public facility planning process. The general operational activity generated by this facility is expected to be considerably less than that generated by a comparable acreage of single-family residential uses. A design for the facility has not been identified, which bears on the size of the plant, its relationship with surrounding land uses, and its specific location.

An extensive trail system ties the project area together. Dog Creek, Jefferson Canal, Enterprise Canal, and Gould Canal are the centerpieces of this trail system. Dog Creek, which is currently channelized, is proposed to be realigned to mimic its original channel and is utilized as a community recreational and open space amenity. The Jefferson, Gould, and Enterprise canals maintain their existing alignments and the banks are utilized for trails. Adding to this trail system are the parkways, which are landscaped buffer areas, provided along some arterial roadways and within some residential quarter-sections. A 20-foot wide landscaped parkway is located along properties surrounding the Reagan Educational Center and a 30-foot parkway is located along McCall Avenue.

In addition to the perimeter trails, convenient pedestrian connections from the interior of the residential quarter-sections to signalized intersections are required. These are identified as diagonal Parkway/Trail System on the land use map; however, the exact alignment will be determined at the tract map level.

4.3.3 Project Approvals

As previously described, City Council approval of the Specific Plan, and certification of the Specific Plan EIR, is necessary prior to the development of the project area.

In addition, the following agencies may be responsible for post-Specific Plan adoption approvals:

- San Joaquin Valley Unified Air Quality District
- County of Fresno
- Fresno Council of Governments
- Fresno Metropolitan Flood Control District
- Fresno Irrigation District
- Clovis Unified School District
- Sanger Unified School District
- California Regional Water Quality Control Board
- California Department of Fish and Game
- U.S. Army Corps of Engineers
- California Department of Transportation (CalTrans)
- Central Valley Regional Water Resources Control Board
- Local Agency Formation Commission (LAFCO)

The purpose of this EIR is to analyze the activities described herein to provide decision-makers with information to assist in making the discretionary decisions under their jurisdiction, and to inform the



general public as well as other interested parties of the potential consequences of project approval. This EIR may also be utilized by any "Responsible" agencies in their review of the project in granting a wide variety of specialized approvals that may be necessary for project implementation.

4.4 PROPOSED ALTERNATIVES

Three alternatives have been established to provide a 'reasonable range of alternatives" to the Southeast Urban Center Specific Plan, as required by Section 15126.6 of the CEQA Guidelines.

No project/no development alternative:

Implementation of this alternative assumes that no urban development would occur and therefore, the community would retain its rural character. The area is predominately agricultural and rural residential, with limited agriculture-related commercial. This alternative would require a General Plan Amendment to remove the project area as a future specific plan area under the goals and policies of the City of Clovis General Plan. In addition, it may require LAFCO action to remove it from the City's sphere of influence.

The No project/no development alternative, although it would not significantly alter the environment from what currently exists, would not achieve the objectives that constitute the City's vision outlined in the City of Clovis General Plan. Implementation of the No project/no development alternative would leave the area open for future development, which may not be comparable in quality with the development under the proposed Specific Plan. Hence, if development did not occur in the project area, it would likely occur elsewhere in the region. Development in other areas could result in a greater impact on the environment.

No project/general plan alternative:

This alternative assumes a Specific Plan is approved at some point that mirrors the previously adopted proposed land uses, density, and intensity of the area as outlined in the 1993 City of Clovis General Plan.

Implementation of the General Plan alternative would result in a decrease in development than the proposed Specific Plan. This alternative would result in fewer impacts to traffic, air quality, noise, and hydrology. One other consideration is that the reduced number of provided dwelling units could result in development being pushed into the surrounding areas (i.e., County of Fresno, County of Madera, etc.) causing unforeseen and unanticipated environmental consequences in those jurisdictions.

Increased urban core density alternative:

In this alternative, some of the low density residential located along the northern (Bullard) and southern (Dakota Avenue/Gould Canal) project boundaries would be transferred to the low-density areas immediately west of the Urban Village and the Reagan Educational Center. This would allow for the preservation of additional agricultural land.

Implementation of the Increased Urban Core Density alternative would result in the same amount of overall development, but would concentrate the growth in the Urban Core, thereby preserving additional agricultural land along the northern and southern boundaries of the proposed project area. Ultimately, the alternative would result in fewer impacts to agricultural resources, hydrology, and public safety, but could potentially result in more significant impacts to traffic, air quality, and noise.

5. Environmental Analysis

5.1 AESTHETICS

The assessment of aesthetic impacts is by its nature a subjective exercise. This analysis attempts to identify and objectively examine factors that contribute to aesthetic impacts and to evaluate, at a general level, the potential changes in the visual environment that would occur if the project area were to be converted to urban land uses. It should be noted, however, that there are no defined standards or methodologies for the assessment of aesthetic impacts.

The potential impacts to existing viewsheds and sensitive receptors from the urbanization of the project area that would result from the Southeast Urban Center Specific Plan are analyzed by establishing three basic viewing distance zones described below. Sensitive viewers are generally associated with land uses such as residential, schools, churches, and public recreational uses. In the project area, sensitive viewer locations include existing residential uses to the west, which are in the foreground and middle ground viewsheds of the project area.

Foreground Views. These include elements that can be seen at a close distance (generally 500 feet or less) and which dominate the entire view.

Middle ground Views. These include elements that can be seen at a moderate distance (generally between 500 feet and one mile) and which partially dominate the view.

Background Views. These include elements that are seen at a long distance (greater than one mile) and which typically do not dominate the view, but that are part of the overall composition of the view.

Regional Environmental Setting

The project area is regionally located in northeastern Fresno County, immediately east of the City of Clovis, and approximately seven miles southeast of Madera County. Fresno County extends approximately 138 miles from the Coastal Range to the Sierra Nevada Mountains. The project area is predominately rural in character with agriculture, rural residential, and vacant land use throughout. The project area is relatively flat with little topographic relief. The terrain generally slopes from the northeast to the southeast. Topographic elevations are approximately 350 feet above sea level.

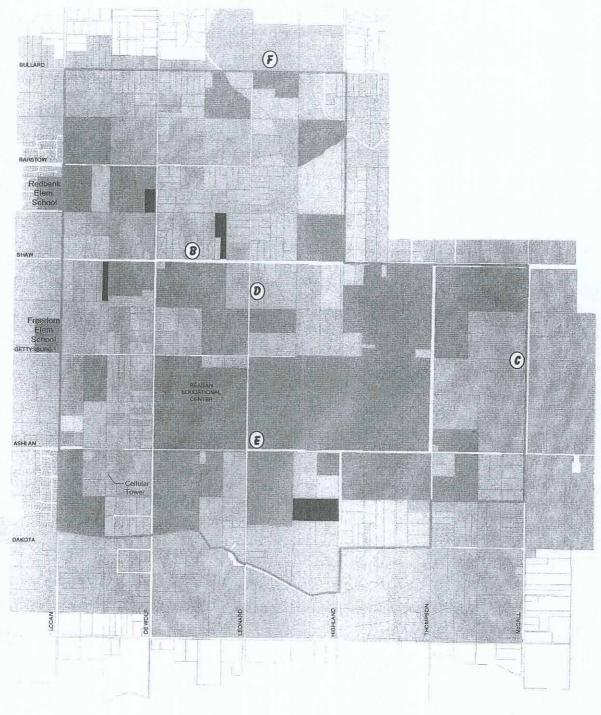
To the northeast are the western foothills of the Sierra Nevada Mountain Range. The foothills extend to an elevation of 2,500 feet above sea level at the United States Forest Service (USFS) Sierra national Forest boundary. Within the Sierra National Forest boundary, the Sierra Nevada Mountains climb to a maximum elevation of 14,000 feet. See Figure 5.1-1, *Photo Location* Map, for an illustration of the project area and the view corridors of the Sierra Nevada Mountain Range foothills to the north and east. The foothills and highest elevations of the Sierra include forests, meadows, lakes, rivers, and wildlife scenic backdrop for the project area. The project area is primarily agricultural in nature, with limited residential and commercial.

The predominant land use pattern in the project vicinity is a mixture of agricultural and rural residential development. Open grasslands, grazing lands and scattered home sites dominate the existing visual character in the area with the foothills of the Sierra Nevada Mountain range in the distance. These agricultural lands provide a sense of open space, and emphasize the area's rural and farming heritage, and allow opportunities for unrestricted panoramic views.



5. Environmental Analysis

Photo Location Map



Group A South Shaw, between Fowler & Armstrong (located off sheet to the west)

Group B North of Shaw, between De wolf & Leonard Group C West of McCall, between Shaw & Ashlan

Group D East of Leonard, between Shaw & Gettysburg

Group E North of Ashlan, approximately 300 feet east of Leonard

Group F North of Bullard, between Leonard & Highland

Source: The Planning Center

City of Clovis

Southeast Urban Center Specific Plan



5. Environmental Analysis

Local Environmental Setting

The vast majority of land within the project area is currently devoted to agricultural uses, such as farming and grazing activities, along with ancillary rural residential and commercially related agricultural uses within the project area. The Reagan Educational Center, a complex consisting of a high school and intermediate school, with a future elementary school, is also located within the project area, and possesses modern architectural design. There are numerous trees in the project area, especially along the local streets.

Several natural and man-made Fresno Irrigation District (FID) drainage ways are located within the area, as well as six stream channels. Pacific Gas and Electrical Company (PG&E) owns and operates gas and electric transmission facilities located throughout the project area. See Figures 5.1-1, *Photo Location Map*, and Figures 5.1-2 through 5.1-7, *Site Photographs*, for additional detail.

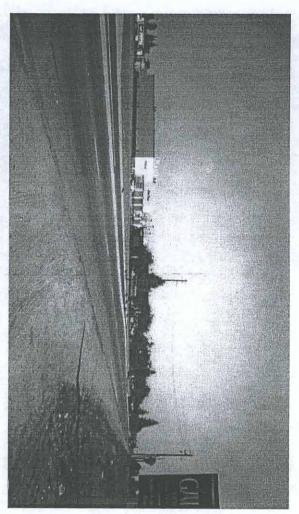
5.1.1 Relevant Plans and Policies Related to Aesthetics

The City of Clovis General Plan includes no designated scenic resources within the project vicinity. However, the General Plan identifies the desire to improve the visual quality of the City through implementation of several goals/policies regarding the aesthetic quality of the City of Clovis. Such measures include:

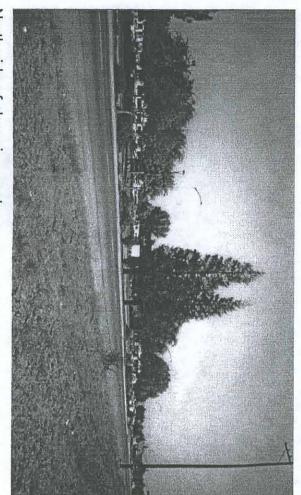
- Emphasize quality development designed as part of the City's neighborhood concept (Land Use Element, Policy 2.1)
- Provide for the permanent preservation of open space lands that contain natural resources and water features (Land Use Element, Policy 2.5).
- Place the major responsibility of achieving land use compatibility and buffering on the higher density/intensified land use (Land Use Element, Policy 2.6)
- Allow flexibility of land use options with quality assured through performance standards and design guidelines (Land Use Element, Policy 2.7)
- Recognize the Friant/Kern Canal, the Enterprise canal, the Dry creek Canal, Pup Creek Canal, Gould Canal and other major waterways as important open space corridors for flood control, trail systems, water quality control, and visual amenities (Open Space/Conservation Element, Policy 3.2)
- The preservation of visual resources along existing expressways, the designated entries to the City and the proposed inner and outer beltway system, and other roadways within the Project Area (Open Space/Conservation Element, Policy 4.3)



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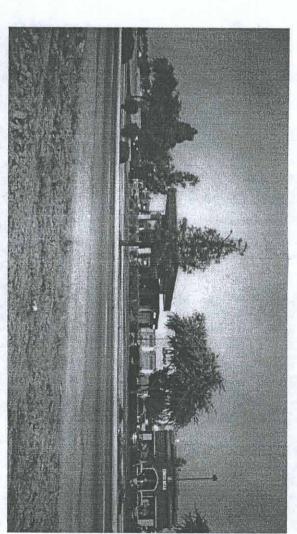
Area near NR1- Looking northeast down Shaw



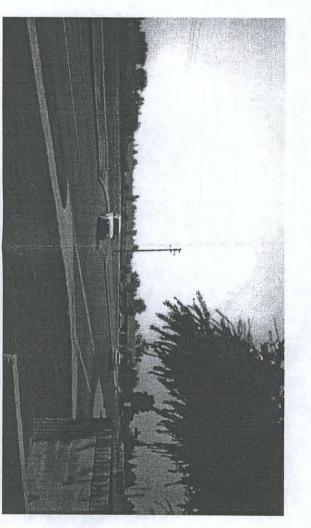
North side of shopping center

Source: The Planning Center
City of Clovis

Southeast Urban Center Specific Plan

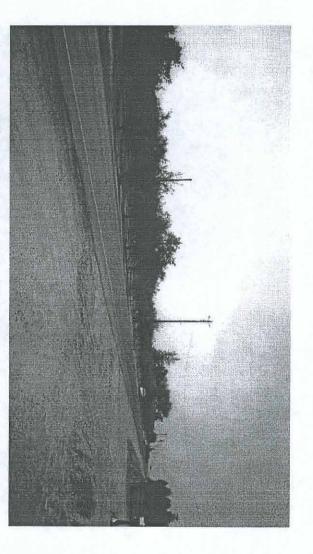


North side of shopping center

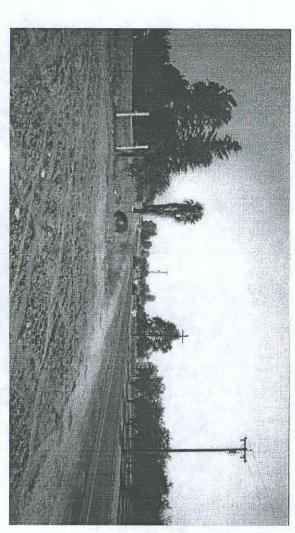


Looking south across Shaw at NR1 (between Fowler and Armstrong)

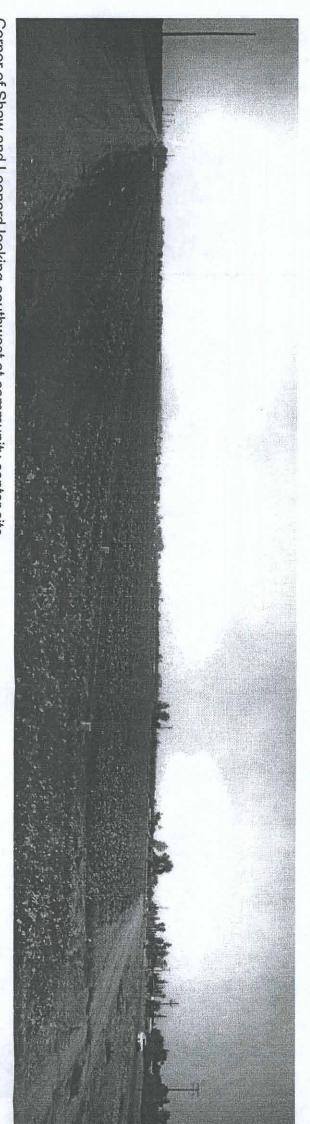




Area near NR2- looking west down Shaw, (proposed community center location)



Area near NR2- looking east along Shaw (between De Wolf and Leonard



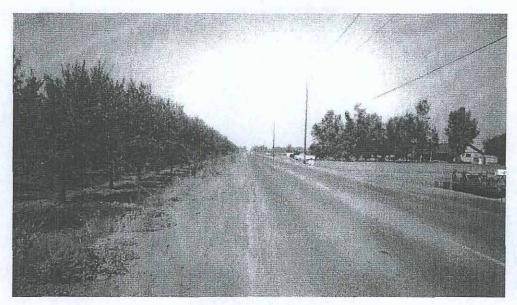
Corner of Shaw and Leonard looking southwest at community center site

Source: The Planning Center
City of Clovis

Southeast Specific Plan Center



Group C Photographs



NR3 location- looking north on McCall



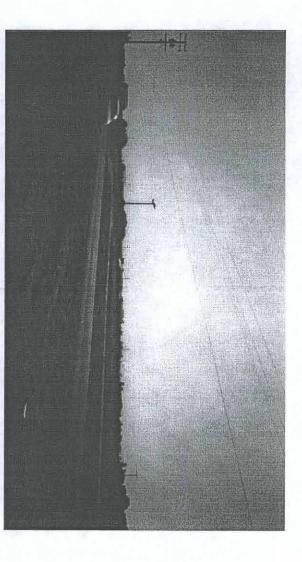
NR3 location- looking south on McCall

Source: The Planning Center City of Clovis

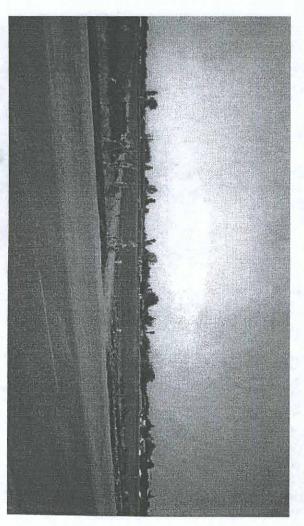
Southeast Urban Center Specific Plan



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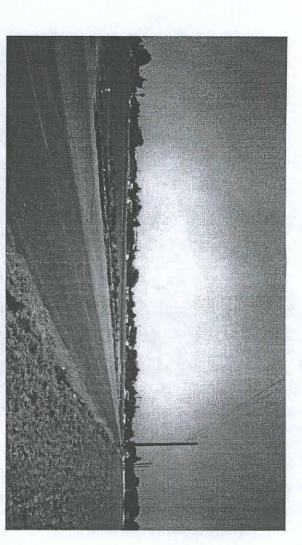
NR4- on Leonard between Shaw and Gettysburg, large buildings in background are Reagan Education Center (proposed commercial/retail/office center



NR4 location- looking west from Leonard

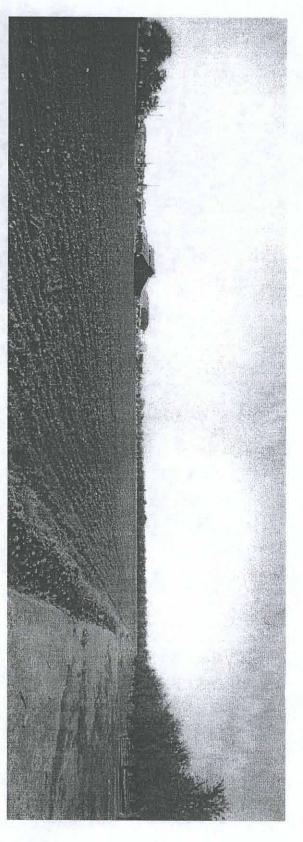
Source: The Planning Center
City of Clovis

Southeast Urban Center Specific Plan



NR4 location- east side of Leonard, looking north towards Shaw

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NR5 location- looking northwest towards Leonard and Reagan Education Center, automobiles parked along Leonard



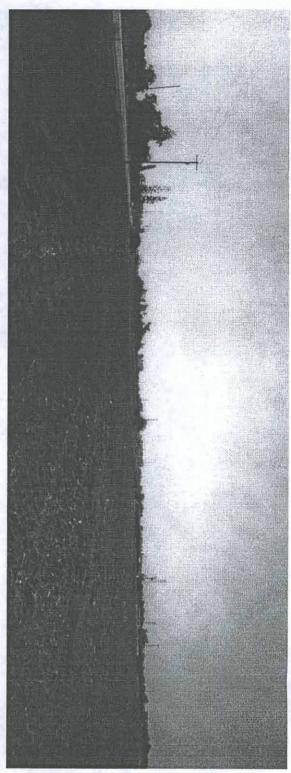
Zoom of previous photograph Looking

Source: The Planning Center
City of Clovis Southeast Urban Center Specific Plan

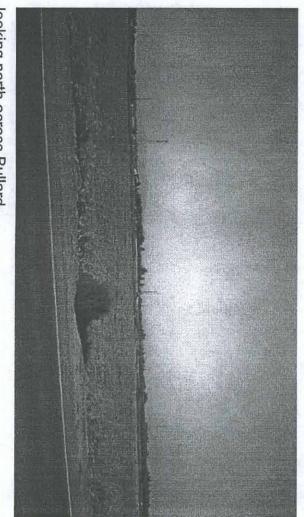


NR6 location- looking south Ashlan and Leonard across Ashlan, intersection on right is



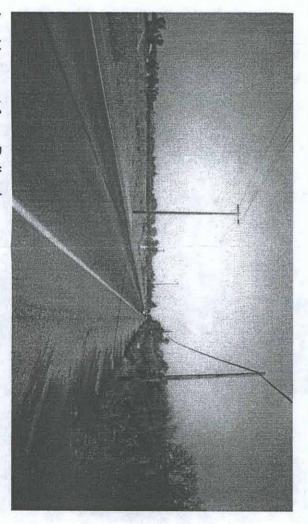


NR6 location- looking west and northwest, Bullard on the left



looking north across Bullard

City of Clovis
Southeast Urban Center
Specific Plan



Looking east from Bullard



5.1,2 Standards of Significance

The following criteria are extracted from the Aesthetics section of the Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA). The project will, at a minimum, be considered to have a significant effect related to aesthetics if any of the following may occur:

- A substantial adverse effect on a scenic vista;
- Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Substantial degradation of the existing visual character or quality of the project area and its surroundings; or
- Creation of a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.

The Initial Study (IS) prepared for the proposed project (see Appendix A) screened for these criteria and determined that the proposed project could generate potentially significant impacts relative to all criteria. For the purposes of this EIR, these thresholds are further refined for evaluating potential aesthetics and light and glare impacts, as described in the following sections.

Visual impacts are also considered potentially significant where they would have a substantial, demonstrable negative aesthetic impact upon adjacent and surrounding uses. The relationship between the severity of impacts related to specific visual characteristics, the location of the visual impacts relative to sensitive land uses, viewer position and views, length of exposure to these visual impacts and characteristics of the proposed development are key criteria for evaluating the significance of project impacts. Other factors include the extent to which the project is compatible with the character, scale, bulk and form of structures in the surrounding area.

Evaluating the severity of impacts from light and glare is based on the location and intensity of the light source and the sensitivity of potential viewer groups near the proposed project area. Light impacts are considered an annoyance, while impacts from glare can potentially present safety hazards. For the purposes of this EIR, light and glare could be considered to have a significant impact if the project would create substantial glare directed toward surrounding streets or if project lighting would substantially exceed established lighting standards.

Design criteria in the Southeast Urban Center Specific Plan Design Guidelines (see Appendix C) would apply to the final approval of all proposed development to minimize aesthetic impacts and impacts from light and glare to sensitive receptors around the project area.

5.1.3 Impacts and Mitigation Measures

IMPACT: POTENTIAL VISUAL EFFECT ON A SCENIC VISTA OR RESOURCE

Impact Analysis: Scenic vistas are generally considered to be "horizon line" views greater than 1 mile from a receptor. While the project area is primarily undeveloped, and presently offers visual open space, it has no unique physical features, scenery or scenic qualities characteristic of "visual and aesthetic resources" (as defined by the General Plan). Urbanization would not block distant scenic vistas of mountain ranges that exist in the background of all regional views in the area, although the character of



more proximate would be substantially altered. Approximately 730 acres of the project area (or 22%) would be maintained in open space and recreation uses, public facilities, and rights-of-way. (On-site and proximate impacts are fully addressed under "Degradation of the Existing Visual Character or Quality of the project area and Its Surroundings".)

The County designates a system of scenic roadways that includes landscaped drives, scenic drives, and scenic highways. Ashlan Avenue in the Specific Plan area is designated as a scenic drive by the Fresno County General Plan Open Space Element. The Element also identifies landscaped drives and scenic highways. The scenic nature of Ashlan is derived from its agricultural uses. Given that urbanization of this street under the design controls of the Specific Plan may change its character to that of a landscaped drive, a designation already noted as found in the County's General Plan, this street may remain under the County scenic roadway system.

These factors indicate that the urbanization of the project area would not result in substantial degradation of a scenic vista or scenic highway.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: POTENTIALLY DEGRADE EXISTING VISUAL CHARACTER OR QUALITY OF THE PROJECT AREA AND ITS SURROUNDINGS

Impact Analysis: City of Clovis General Plan policies relating to visual and aesthetic resources are described under the preceding impact topic. While the project area is primarily agricultural or rural residential, and offers visual open space, it is not part of, nor in proximity to, any "natural area of significance" described in the General Plan, and has no unique physical features, scenery or scenic qualities characteristic of visual and aesthetic resources. Urbanization would eliminate approximately 2,400 acres of open space and would substantially alter the character of foreground views as well. There are no designated landmarks on-site or in the surrounding area, and no designated scenic highways exist in proximity to the project area.

Aesthetic impacts resulting from the development of the proposed project include changes to the overall visual character of the project area, from rural pasturelands and open space to urban land use. The proposed project assumes the urbanization of the project area consistent with the provisions of the Southeast Urban Center Specific Plan, which include development standards and design guidelines. The Specific Plan includes very low to very high-density residential housing, mixed-use community centers, commercial and office land use, public facilities, and open space uses (see Table 4.3-3, Land Use Plan Statistics). Urbanization of the proposed project would substantially alter the character of foreground views due to land use intensification.

From vantage points of the residences located to the west the project area (within the Clovis City limits), proposed urbanization would change the foreground and middle ground visual character from open space to urban land uses. Broad views of open space and rolling grasslands would be eliminated, which can be considered visual degradation of site and proximate views over the site. Background views of the distant foothills and mountains would not be obstructed.

Evaluation of the visual character of the project area is subjective. Changes to the site may be perceived by some viewers as pleasant since modern architecture and landscaping would be developed. However, other viewers could consider these changes in the visual character of the project area a

substantial negative aesthetic impact. It is not anticipated that subsequent development would result in the creation of offensive views open to the public, which has been considered a criteria under CEQA.

The overall change of the visual character of the project area would be guided by adherence to development standards and design guidelines (see Appendix C) set forth in the Southeast Urban Specific Plan. Implementation of the Southeast Specific Plan has the potential to impact aesthetic resources, as it would allow for development intensification of the project area. However, the implementation of the General Plan policies measures, and the development standards and design guidelines of the Specific Plan would act to reduce the level of impact to a less than significant level.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: CREATE A NEW SOURCE OF LIGHT AND GLARE

Impact Analysis: Light sources to be installed as part of the proposed project would include streetlights, parking lot lights, external and internal security lights, and lighted signage typical to similar commercial and residential developments in the project vicinity.

There are no adopted County policies applicable at this level of review regarding the generation of light and glare and its associated aesthetic impacts. The Southeast Urban Center Specific Plan contains design guidelines and development standards that address lighting. The impact of light and glare should be further evaluated when specific development plans are available, and project specific measures formulated to address any adverse impacts from light and glare on sensitive receptors.

Urbanization of the project area would create substantial new sources of night-time light and glare resulting from sources such as: lighting in parking areas, along streets, and around buildings, for signage and for security purposes. There is currently little night lighting in the project vicinity, associated primarily with adjacent rural residential areas and agricultural lands.

Lighting design evaluation required by the specific plan would direct lighting away from sensitive residential receptors in the Cities of Clovis and Fresno and the County of Fresno. These features would minimize potential light and glare impacts associated with the proposed project. In addition, rooftop fixtures associated with the proposed commercial and office buildings would be designed so as not to produce substantially adverse glare impacts on residential receptors at higher elevations surrounding the project area.

The introduction of light sources to the proposed project area is considered to be a potentially significant impact resulting from the project. However, through mitigation measures proposed for the project area, all light sources, including streetlights, parking lights and security lights would be designed and installed to minimize adverse fugitive light and/or glare impacts to any nearby residential receptors. Nonetheless, the proposed project would substantially increase the amount of artificial light in the area, and would substantially alter the nature of nighttime views on a permanent basis.

Light and Glare Impacts to Motorists

The proposed project would result in the development of street lighting along all of the existing and proposed roads. In addition, there would be external light sources in the parking areas, along streets, around buildings, and for signage and security purposes. While these sources would add to the overall



light and glare for the project area and surrounding streets, these additional light sources would not be a significant impact on motorists due to the relatively low light emissions associated with these types of sources.

In addition, rooftop fixtures associated with the proposed commercial and office buildings would be designed so as not to produce substantially adverse glare impacts on motorists or residential receptors at higher elevations surrounding the project area. Mitigation measures for light and glare can be found in the design guidelines of subsections 4.2 and 4.3 (Section IV of the Specific Plan). These measures will be implemented with development of the Specific Plan area and relate to minimizing impacts to adjoining properties, providing lighting to scale with the surroundings, and enhancing safety.

The design guidelines of the Specific Plan can be expected to reduce potential impacts in an urban area to a less than significant level. However, the transition of this area from an agricultural and rural residential environment to an urbanized area represents a significant change in the increased potential for light and glare impacts.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: No additional mitigation measures are feasible.

Level of Significance After Mitigation: Significant.

5.2 AGRICULTURAL RESOURCES

This section addresses the significance of the impact of converting the existing agricultural land located within the boundary of the Southeast Urban Center Specific Plan Area to urban uses. This section also examines the consistency of the Project with the policies of the City of Clovis General Plan.

5.2.1 Methodology Related to Agricultural Impact Assessment

The following discussion is based on review of the available agricultural data from the California Department of Conservation (DOC), a report titled "City of Clovis Baseline Economic and Market Analysis, Proposed Southeast Urban Center Specific Plan" (October 2001), and the Agricultural Resources Section of the City of Clovis General Plan.

5.2.2 Existing Conditions Related to Agricultural Resources

The Fresno County Department of Agriculture (FCDA), under direction of the California Department of Food and Agriculture, is responsible for conducting regulatory and service functions pertaining to the multi-billion dollar agricultural industry in Fresno County. These functions are mandated by state and federal laws and regulations and by local measures and ordinances by the Fresno County Board of Supervisors. The Fresno County Department of Agriculture is divided into eight geographical Districts, one of which is the Clovis District. The primary purpose and objective of the FCDA is the promotion and protection of the county agricultural industry and the general public.

In 2000, Fresno County was one of the largest producing agricultural counties in California with a gross crop value of \$3,427,400,400. However, in 2001, Tulare County surpassed Fresno County's gross crop value and became the leading producing county with a production value of \$3.49 billion, an increase of 14 percent from the previous year. Fresno County was second in gross crop value with \$3.22 billion, down six percent from the 2000 value. Much of the decrease could be attributed to the lower value for raisin-type grapes. Nonetheless, agriculture continues to be the major industry in Fresno County and continues to be a driving force in the County's economy. Fresno County's 10 leading crops in 2001 were cotton, grapes, poultry, milk, tomatoes, cattle and calves, almonds, oranges, garlic, and nectarines, in that order.

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 Ordinances. 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 landowners.

Federal and State Farmland Classifications

There are two systems used by the United States Soil Conservation Service (SCS) to determine a soil's agricultural productivity. The two systems are the Soil Capability Classification and the Storie Index Rating System. In general, the prime soil classifications of both systems indicate the absence of soil limitations, which, if present, would require the application of management techniques (e.g., drainage, leveling, special fertilizing practices) to enhance production.



The Soil Capability Classification System takes into consideration soil limitations and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils, which are unsuitable for agriculture. Class I soils give top yields with a minimum of management skills, while yields of Class II land can equal those of Class I with implementation of minor management practices. Generally, as the ratings of the capability classification system increase, crop yields and profits are more difficult to obtain.

The Storie Index Rating System ranks soil characteristics according to their suitability for agriculture from Grade I soils (80 to 100 rating), which have few or no limitations for agricultural production to Grade 6 soils (less than 10), which are not suitable for agriculture. Under this system, soils deemed less than prime can operate as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed.

Using Soil Conservation Service soil classifications, discussed above, the California Department of Conservation (DOC) and the California Association of Resource Conservation Districts translate soil survey data into an "Important Farmland Series" of maps for the State's agricultural counties. The purpose of the DOC's Farmland Mapping and Monitoring Program (FMMP), which updates its maps biennially, is to provide land use conversion information for decision makers to use in their planning for the present and future of California's agricultural land resources. Thus, these classifications focus only on those lands that have been recently farmed, and land not recently farmed does not show up on the Important Farmland Series of maps.

The important farmland maps and the Advisory Guidelines for the FMMP identify five agriculture-related categories: prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land. Each is described below.

<u>Prime farmland</u> is land with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. The land must have been used for the production of irrigated crops at some time during the two update cycles prior to the mapping date of 1992 (or since 1988).

<u>Farmland of statewide importance</u> is land similar to prime farmland, but with minor shortcomings, such as greater slopes or with less ability to hold and store moisture. The land must have been used the production of irrigated crops at some time during the two update cycles prior to the mapping date of 1992 (or since 1988).

<u>Unique farmland</u> is land of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. The land must have been cultivated at some time during the two update cycles prior to the mapping date of 1992 (or since 1988).

<u>Farmland of local importance</u> is land of importance to the local agricultural economy, as determined by each County's Board of Supervisors and a local advisory committee. This land includes soils that are listed as prime farmland or farmland of statewide importance that are not irrigated, and soils growing dryland crops.

<u>Grazing Land</u> is land on which the existing vegetation is suited to the grazing of livestock. The minimum mapping unit for this category is 40 acres.

Farmland Conversion

One of the basic underlying premises of agricultural conversions is that the proximity of agricultural land to urban uses increases the value of the land either directly through formal purchase offers, or indirectly from recent sales in the vicinity. This is evidenced by the fact that property values, as measured by the County Assessor's office, are higher adjacent to the urban fringe. Because land normally has greater economic value in urban use than in farm use, land prices in urbanizing areas increase above their value for agricultural production and high land values encourage farmers to view their holdings for their development potential rather than as farmland. Subsequently, the preservation of remaining resources adjacent to and surrounding the urbanizing area becomes increasingly difficult. Furthermore, rising land values also prevent the purchase of land for agricultural consolidation and preservation.

It is not only the market forces that contribute to the farmland conversion. Numerous factors such as pest, climates, and soil types also contribute to the loss of agricultural productivity, resulting in declining economic viability of prime agricultural lands. The DOC has monitored the amount of agricultural land converted to other uses since 1984. According to the DOC, Division of Land Resource Protection, Fresno County lost 3,649 acres of Prime Farmland during 1998 to 2000, from 367,196 acres to 363,758 acres. Of the lost 3,649 acres, approximately 1,367 acres were converted to urban uses and 2,008 acres were re-categorized under different agriculture-related categories. See Table 5.2-1, *Fresno County Acreage Summary*.

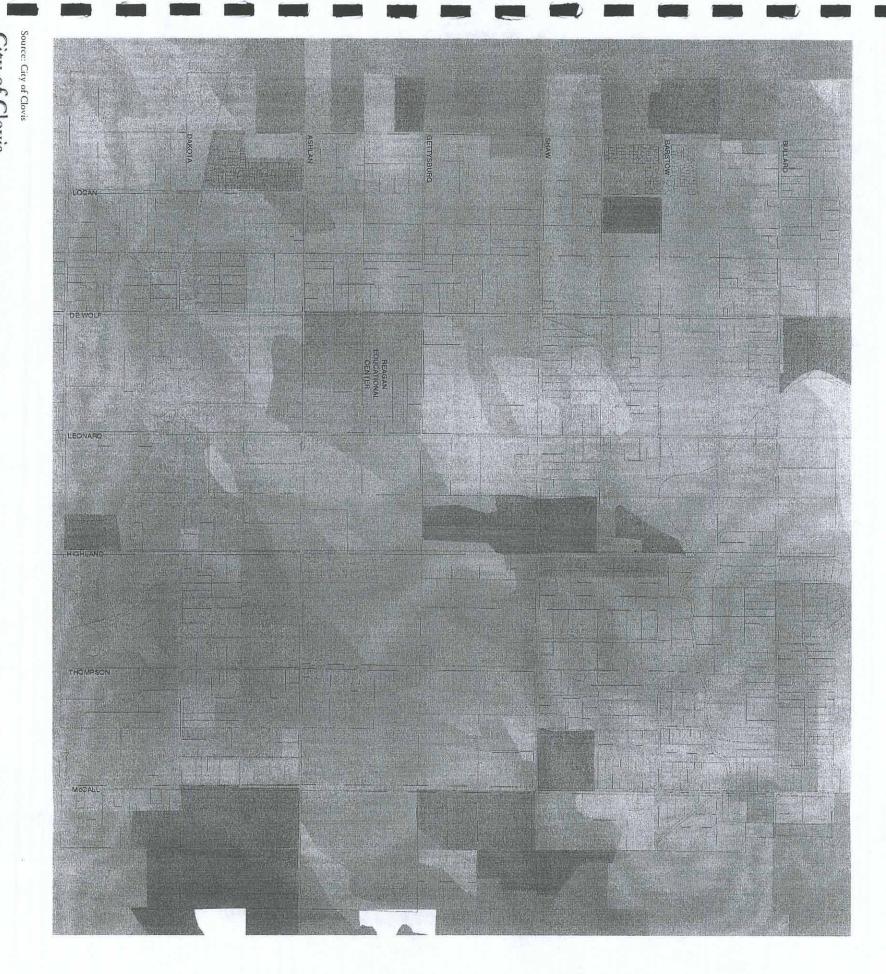
TABLE 5.2-1 FRESNO COUNTY ACREAGE SUMMARY (2000)				
Land Type	Acreage			
Prime Farmland	363,757			
Farmland of Statewide Importance	139,546			
Unique Farmland	93,748			
Farmland of Local Importance	45,113			
Grazing Land	319,691			
Urban and Built-Up Land	97,004			
Other land	60,446			
Water	3,891			
Not Inventoried	2,727,315			
Total	3,850,512			

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For additional detail on the location of Important farmlands within the project area, see Figure 5.2-1, Location of Important Farmlands.

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Location of Important Farmlands



Project Boundary

Prime Farmland
Farmland of Statewide Importance
Unique Farmland
Farmland of Local Importance

Grazing Land
Urban and Built-Up Land
Other Land

Water

Farmland of Local Potential Irrigated Farmland Nonirrigated Farmland Not Surveyed



City of Clovis Southeast Urban Center Specific Plan

Plans and Policies for Agricultural Land

The City of Clovis has consistently administered policies and programs designed to preserve agricultural land in the City's Planning Area (i.e., incorporated & Sphere of Influence areas), while accommodating growth simultaneously. Two of the main goals identified in the Land Use Element and the Open Space/Conservation Element of the General Plan pertaining to agricultural resources are: 1) the conservation and management of productive agricultural lands; and 2) the orderly conversion of agricultural lands under growing development pressure.

Policies relating to the conservation and management of agriculturally productive lands include supporting continued agricultural use of prime agricultural lands where it can be sustained at an operational scale; retaining agricultural land in economically viable sized parcels; and incorporating agricultural uses for greenbelts and buffers between land uses.

In addition, primary policies to encourage orderly conversion of agricultural lands to urbanized land uses are to allow agricultural land within the project area to be converted to planned urban uses in a gradual, phased and orderly manner; and to limit encroachment of urban uses into agricultural areas, unless consistent with General Plan policies.

Some of the necessary steps to allow conversion of agricultural lands to planned urban uses involve development of quality design standards and establishment of growth management program through the Specific Plan process.

The Williamson Act

The California Land Conservation Act, also known as the Williamson Act, adopted in 1965, allows counties and cities to establish agricultural preserves as a mechanism to protect agricultural lands. Under the Williamson Act, the local jurisdiction and landowner agree to continue agricultural activities for at least ten years and the contract is automatically renewed each year. In this manner, each agricultural preserve contract (at any given date) is always operable at least nine years into the future. In return, the local jurisdiction agrees to assess the property at its agricultural rather than market value.

Termination of the contract may be accomplished by one of three methods:

- The landowner or jurisdiction may file a Notice of Non-renewal, which halts the yearly renewal and results in the expiration of the contract at the end of ten years;
- The landowner may also request immediate termination of the contract subject to certain findings and the payment of penalty fees; or
- The contract may be transferred to other properties.

Right to Farm

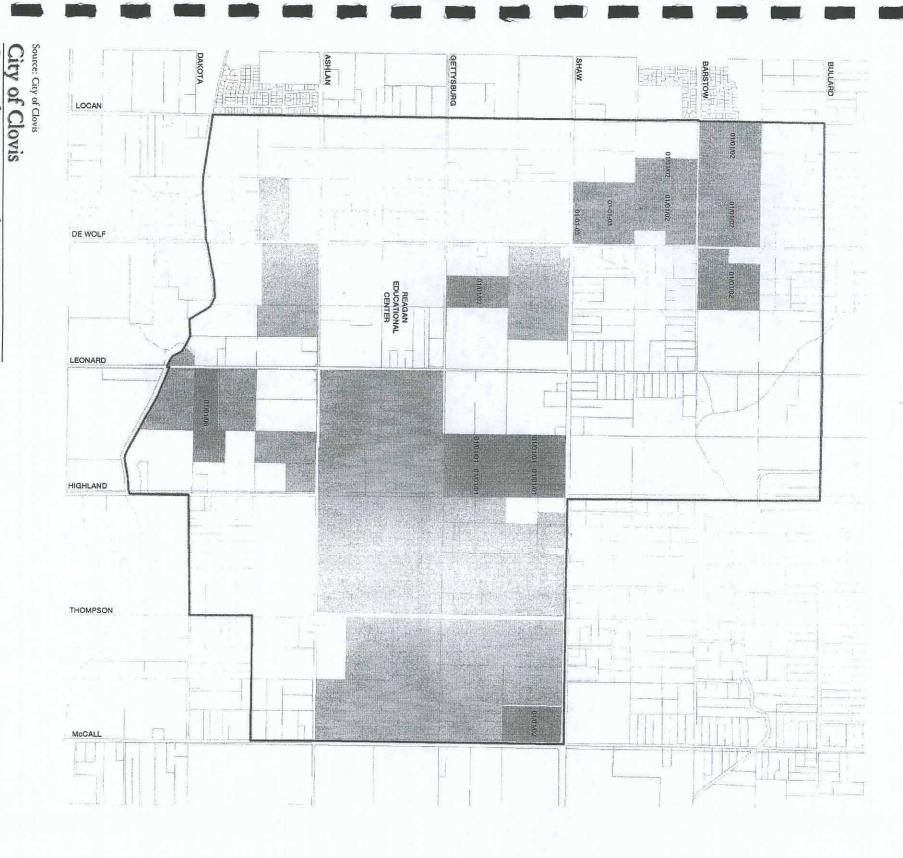
Local right-to-farm ordinances act to preserve existing farms and protect farming operations against land use conflicts and complaints from neighboring urban land uses. To protect farmers from these situations, the California Legislature, along with other states, have passed right-to-farm laws, including the Thurman Act. In response to the Thurman Act, the Legislature reviews actions for their effects on 13 factors, including productivity of agricultural land.



Many California cities, including the City of Clovis, have also adopted local right-to-farm ordinances. Ordinances typically require notification to prospective home buyers of the potential nuisances, such as odors, dust, flies, and noise, which may be associated with nearby agricultural operations. The ordinance would also establish a grievance committee charged with the task of mediating disputes between farmers and non-farm residents. Local right-to-farm ordinances may be successful in relieving some pressures on farmers from their neighbors, but generally do not address issues of trespass, vandalism, or increasing government regulation. More importantly, right-to-farm ordinances do not remove the influence of inflated land values on farmers' expectations and desires to continue farming.

Transfer of Development Rights

Transfer of Development Rights (TDR) programs attempt to preserve agricultural land and to direct urban or non-farm development to specific locations. A typical TDR program establishes both a preservation district and a development district. Development rights are assigned for all properties in the preservation district. Agricultural landowners in the preservation district may not develop their property, but are allowed to sell their development right to landowners in designated development districts. The developer in development districts are encouraged to participate in the program by the offer of a density bonus, which allows development at a higher density than current zoning, and thus increase the developer's profit. The public pays only for the administration of the TDR program.



Williamson Act Contract Properties



Current

Notice of Non-Renewal

01/02/02 Date of Contract Expiration



Southeast Urban Center

Specific Plan

5.2.3 Standards of Significance

The following criteria are extracted from the Agricultural Resources Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA) Guidelines. The project will, at a minimum, be considered to have a significant effect related to agricultural resources if any of the following may occur:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.
- Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

5.2.4 Impacts and Mitigation Measures

IMPACT: CONVERT PRIME FARMLAND, UNIQUE FARMLAND, OR FARMLAND OF STATEWIDE IMPORTANCE (FARMLAND) TO NON-AGRICULTURAL USE

Impact Analysis: Implementation of the proposed Specific Plan would result in the conversion of Prime Farmlands and Farmlands of Statewide Importance, collectively referred to as important farmlands, to a variety of non-agricultural uses (e.g., residential, commercial, public facilities, etc.). The 1993 Clovis General Plan identified a total of 10,743 acres of important farmlands within the City's Planning Area, which extends beyond the City's incorporated and sphere-of-influence limits. Of the total important farmlands, the Clovis General Plan projected that approximately 9,201 acres of important farmlands would be converted to various land uses other than agriculture uses such as open space, rural residential, low and medium residential, and mixed use, representing conversion of nearly 86 percent of the City's total agricultural land resources. The proposed project area is identified in the General Plan as area to be developed as urban uses, therefore, the conversion of important farmlands to urban uses by the Specific Plan is consistent with the Clovis General Plan.

Based on available 2000 data from the California Department of Conservation, Division of Land Resource Protection, the County of Fresno maintains 503,304 acres of important farmlands (i.e., 363,758 acres of Prime Farmland and 139,546 acres of Farmland of Statewide Importance). There are approximately 1,851 acres of agricultural lands (i.e., 1,144 acres of rural residential and 707 acres of farmlands) within the project area that could be considered important farmlands for this analysis. This represents a mere 0.4 percent of the County's total important farmland inventory. Furthermore, the potential impacts to important farmlands would be even smaller, given that not all identified agricultural lands within the project area are designated as either Prime Farmland or Farmland of Statewide Importance.

Only three percent (i.e., 105 acres) of the total project area would be devoted to agricultural use after losing approximately 1,851 acres of important farmland. However, compared to the Fresno County's vast agricultural land base, the impact would be less than significant. While a substantial portion of the project area is comprised of important farmlands, the actual producing large farmlands are located west of Fresno and the project area represents a small scale and marginal agricultural use. In addition, as previously stated, the Clovis General Plan designated the proposed project area for urbanization.

Development of the Southeast Urban Center Specific Plan is consistent with the City of Clovis General Plan as well as Fresno County General Plan's goals and policies that direct urban growth to cities. The



conversion of lands presently designated as agriculture to non-agricultural uses in accordance with the General Plan and the Specific Plan represents an orderly transition from rural to urban uses. The project area is located adjacent to the incorporated Clovis City, within the updated 2000 sphere-of-influence limits, thereby supporting concentrated growth pattern adjacent to the existing urban development. The proposed Specific Plan would guide the conversion of the existing agricultural and rural lands to planned urban uses in a gradual, phased, and orderly manner, therefore alleviating development pressure off of outlying unincorporated lands.

Nonetheless, continuation of incremental losses of the agricultural lands at current rates will have an adverse impact on the County's agricultural land resources. Policies and actions identified in the Clovis General Plan may lessen the magnitude of impacts but not reverse the urban development trends and their effects on agricultural production. Because prime agricultural land is a non-renewable resource, this potential impact is considered unavoidable, significant, and cumulative.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: There are no feasible measures to mitigate the direct loss of the agricultural lands.

Level of Significance After Mitigation: Significant

IMPACT: CONFLICT WITH EXISTING ZONING FOR AGRICULTURAL USE, OR WILLIAMSON ACT CONTRACT

Impact Analysis: As previously discussed in the above existing conditions section, the California Land Conservation Act (Williamson Act) allows counties and cities to establish agricultural preserves as a mechanism to protect agricultural lands. Under the Williamson Act, the local jurisdiction and landowner agree to continue agricultural activities for at least ten years, after which the contract automatically renews itself each year. In return, the local jurisdiction agrees to assess the property at its agricultural rather than market value.

Approximately 60 percent (i.e., 1,886 acres) of the land within the project area is currently devoted to agricultural uses, including farming and grazing activities, ancillary rural residential and agricultural/storage uses, and several commercial and commercially related agricultural uses. Current zoning designation for the project area is AE-20, Agricultural, which mandates 20 minimum acre parcels and exclusive agricultural use. Of a total of 330 parcels in the project area, there are 289 parcels under the 20 acres minimum, 61 of which are under 5 acres in size. The Specific Plan is proposing the conversion of these agricultural and rural lands to more intense land uses, such as commercial, residential, and community and public facilities. Approval of the Specific Plan would rezone the impacted agricultural and rural residential properties, and require cancellation of existing Williamson Contract lands.

As of October 2001, 45 properties within the project area were subject to the Williamson Act, of which fourteen (31%) have filed Notices of Non-Renewal. Figure 5.2-2 shows the Williamson Act contracted properties and its expiration dates. Implementation of the proposed Specific Plan would ultimately result in cancellation or non-renewal of all existing contracts.

The 1993 Clovis General Plan identified a total of 9,040 acres under Williamson Act contract within the General Plan Planning Area, and anticipated that approximately 58 percent (i.e., 7,143 acres) of the total contracted lands would exit the program to accommodate General Plan growth. The project area currently lies within the City of Ciovis Sphere of Influence (SOI) area, adjacent to the existing urban development. The County of Fresno General Plan (February 2000) projected that approximately 13,500

acres of the County land located within a city's SOIs would exit the Williamson Contract to accommodate urban growth by 2020. The County of Fresno General Plan also anticipated that over 90 percent of the County's growth would occur within the limits of existing SOIs, thus preserving other outlying agriculturally productive farmlands within the County.

Implementation of the Southeast Urban Center Specific Plan is consistent with the City of Clovis and the County of Fresno General Plans Cancellation of Williamson Act contracted properties within the project area would allow the City of Clovis and the County of Fresno to meet the anticipated public need for housing and employment without further encroachment of urban uses into agriculturally productive areas, thereby contributing to the change in regional character. In addition, implementation of the Specific Plan would ultimately result in cancellation or non-renewal of all of Williamson Act properties in the manner prescribed by law. Such lawful and orderly removal of agricultural contracts would reduce impacts to a less than significant level.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INVOLVE O

INVOLVE OTHER CHANGES IN THE EXISTING ENVIRONMENT THAT, DUE TO THEIR LOCATION OR NATURE, COULD RESULT IN CONVERSION OF FARMLAND, TO NON-

AGRICULTURAL USE

Impact Analysis: The majority of the project area is comprised of rural residential and agricultural uses. However, it should be noted that most of large, economically productive farming activities occur west of Fresno, whereas agricultural operations within the project area comprise mainly of rural residential and small scale farming activities. As discussed in the previous impacts analysis, the project area has been identified by the City of Clovis and the County of Fresno's General Plans to accommodate urban growth in the region. Furthermore, the proposed Specific Plan provides design standards and growth management programs that allows a gradual, phased, and orderly conversion of agricultural land without undermining policies that facilitate the conservation and management of agriculturally productive lands. The proposed Specific Plan is a project that accommodates the growth in the region to relieve mounting development pressure off the outlying unincorporated Fresno County.

Implementation of the proposed project would create new concentrated urban edges, thereby preventing disjointed and haphazard farmland conversion and limit the further encroachment of the urban uses into the outlying unincorporated farmlands. The proposed Specific Plan would accommodate growth in a responsible manner by allowing continued agricultural activities within the project area until adequate infrastructure is in place to avoid premature conversion.

Agricultural use will be preserved in areas where it is feasible to retain the size and the operational scale of farmlands in an economically viable level. In the areas that are not proposed or planned for urban development would be preserved through techniques such as local right-to-farm ordinances and transfer of development rights (TDR) programs (see Section 5.2.2 Existing Conditions for further discussion). There are no feasible measures to mitigate the conversion of farmland to non-agricultural use in the project area, thus, considered unavoidable, significant and cumulative.



Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: There are no feasible measures to mitigate the direct loss of the agricultural lands.

Level of Significance After Mitigation: Significant.

5.3 AIR QUALITY

The air quality assessment for the proposed project included estimating emissions associated with construction and operation of the proposed project. The methodology used for assessing regional air quality impacts involved estimating stationary and mobile emissions associated with the proposed project. The stationary emissions included those from electric and natural gas usage. Mobile emissions were based on the vehicle trips generated by the proposed project at build-out conditions. A microscale analysis was conducted to estimate the potential localized air quality impact of the proposed project. The impact analysis contained in this section was prepared in accordance with the methodologies provided by the San Joaquin Valley Unified Air Pollution Control District (SJVAPCD).

The analysis of long term operational air quality impacts presented in this chapter is based on the December 2002 Associated Traffic Engineers traffic study, and the projected land use statistics which assume 10,781 dwelling units on approximately 2,381 acres and 6,528,991 square feet of non-residential uses on approximately 276 acres.

5.3.1 Existing Conditions Related to Air Quality

Climate/Meteorology

The SJVAB has an "inland Mediterranean" climate averaging over 260 sunny days per year. The valley floor has warm dry summers and cool winters. Summer temperatures often exceed 100 degrees Fahrenheit with averages in the low 90s. Winters are mild and humid. Temperatures seldom get below freezing. Average winter highs are in the 50s, but highs in the 30s and 40s can occur on days of persistent fog and low cloudiness. In addition to fog and cloudiness, winter also represents the period when the area receives its greatest rainfall. The local area receives approximately 10 inches of rain a year.



A semi-permanent high-pressure area over the northern Pacific Ocean holds storm tracks to the north and away from California during the summer. During the winter, this pressure zone retreats southward and permits storm centers to swing across California.

Temperature inversions often occur in the San Joaquin Valley. A temperature inversion is a layer of warm air trapping cooler air beneath it. This reduces mixing of air in the lower layers and restricts the vertical dispersion of air contaminants. Surface based inversions are present on most mornings throughout the year in the San Joaquin Valley. These inversions "burn off" during warmer daytime temperatures. Elevated inversions that can trap air and exacerbate air pollution problems occur primarily during winter. The San Joaquin Valley experiences calm conditions 31% of the time during the winter contributing to stagnation and build-up of air pollutants.

Air Pollution Constituents

The State of California and the Federal Government have established health-based standards for six air pollutants. As shown in Table 5.3-1, *Ambient Air Quality Standards*, these pollutants include ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulate matter (PM₁₀ and PM_{2.5}) and lead. In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to primary and secondary air pollution standards, the State of California has established a set of episode criteria for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide and particulate matter. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that

actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three.

Ozone (smog) is formed by photochemical reactions between NOx and reactive organic gases rather than being directly emitted. Ozone is a pungent, colorless gas that is typical of the southern California type smog. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly and young children. Ozone levels peak during the summer and early fall months.

TABLE 5.3-1					
AMBIENT AIR QUALITY STANDARDS					

	California	Federal	
Air Pollutant	Concentration	Primary (>)	Secondary (>)
Ozone	0.09 ppm, 1-hr. avg. >	0.12 ppm, 1-hr. avg. 0.08 ppm, 8-hr. avg.	0.12 ppm, 1-hr. avg.
Carbon Monoxide	9.0 ppm, 8-hr. avg. >a	9 ppm, 8-hr. avg. b	9 ppm, 8-hr. avg.
	20 ppm, 1-hr. avg. >	. 35 ppm, 1-hr. avg. >	35 ppm, <u>1</u> -hr. avg. >
Nitrogen Dioxide	0.25 ppm, 1-hr. avg. >c	0.053 ppm, annual avg. d	0.053 ppm, annual avg. e
Suffur Dioxide	0.05 ppm, 24-hr. avg.>=with	0.03 ppm, annual avg.	0.50 ppm, 3-hr. avg.
	ozone>=0.10 ppm, 1-hr. avg. or TSP	0.14 ppm, 24-hr. avg.	1
	>= 100 μg/m3, 24-hr. avg.		
<u></u>	0.25 ppm, 1-hr. avg.>e		
Suspended	30 μg/m3 (PM ₁₀), annual geometric	65 μg/m3 (PM _{2.5}), annual	
Particulate Matter	mean >	geometric mean	
(PM10 PM2.5)	50 μg/m3 (PM ₁₀), 24-hr. avg. >f	50 μg/m3 (PM ₁₀), annual g	
	Ī	arithmetic mean	
	<u> </u>	150 μg/m3 (PM ₁₀) 24-hr. avg. 15 μg/m3 (PM _{2.5})*	
Sulfates	25 μg/m3, 24-hr. avg. >=		
Lead	1.5 μg/m3, 30-day avg. >=	1.5 µg/m3, calendar quarter	1.5 µg/m3, calendar quarter
Hydrogen Sulfide	0.03 ppm., 1-hr. avg. >=	No federal standard.	
Vinyl Chloride	0.010 ppm, 24-hr. avg. >=		
Visibility Reducing	In sufficient amount to reduce the		-
Particles	visual range to less than 10 miles at		
	relative humidity less than 70%, 8-hr.		
	avg. (9 <u>am-5 pm</u>)h	<u></u>	

- a. Effective December 15, 1982. The standards were previously 10 ppm, 12-hour average and 40 ppm, 1-hour average.
- b. Effective September 13, 1985, standard changed from > 10 mg/m3 (> = 9.3 ppm) to > 9 ppm (> = 9.5 ppm).
- c. Effective March 9, 1987, standard changed from >= .25 ppm to > .25 ppm.
- d, Effective July 1, 1985, standard changed from $> 100 \mu g/m3$ (> .0532 ppm) to > .053 ppm (> .0534 ppm).
- e. Effective October 5, 1984. The standard was previously .5 ppm, 1-hour average.
- f. Effective August 19, 1983. The standards were previously 60 µg/m3 TSP, annual geometric mean, and 100 µg/m3 TSP, 24-hour average.
- g. Effective July 1, 1987. The standards were previously: Primary- Annual geometric mean TSP $> 75 \mu g/m3$, and a 24-hour average TSP $> 260 \mu g/m3$. Secondary- Annual geometric mean TSP $> 60 \mu g/m3$, and a 24-hour average TSP $> 150 \mu g/m3$.
- h. Effective October 18, 1989. The standard was previously "In sufficient amount to reduce the prevailing visibility to less than 10 miles at relative humidity less than 70%, 1 observation", and was based on human observation rather than instrumental measurement.

Source: Air Resources Board, 1997.

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the blood stream where it interferes with the transfer of oxygen to body tissues.

Nitrogen oxides (NOx) contribute to other pollution problems, including high concentration of fine particulate matter, poor visibility and acid deposition. Nitrogen dioxide (NO₂) decreases lung function and may reduce resistance to infection. Nitrogen dioxide, a reddish-brown gas, and nitric oxide (NO) a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides or NOx. NOx is a primary component of the photochemical smog reaction.

Sulfur dioxide (SO₂) is a colorless irritating gas formed primarily from the incomplete combustion of sulfur containing fuels. Industrial facilities also contribute to gaseous sulfur dioxide levels in the air basin. Natural gas is low in sulfur and low-sulfur fuels are now available on the market. Sulfur dioxide irritates the respiratory tract and can injure lung tissue when combined with fine particulate matter. Sulfates reduce visibility and therefore, the level of sunlight.

Reactive Organic Gases (ROG) are formed from combustion of fuels and the evaporation of organic solvents. ROG is a prime component of the photochemical smog reaction. Consequently, ROG accumulates in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower. Although ROG is difficult to measure because of the number of compounds, emissions are closely monitored to reduce resultant ozone where possible.

Particulate matter (PM₁₀) refers to small suspended particulate matter with an aerodynamic diameter of 10 microns or less which is not readily filtered by the lungs. Nitrates and sulfates, as well as dust particulates, are major components of PM₁₀. (PM₂₅ particulate matter has also recently been added to this listing; however, the SJVAPCD does not currently have sufficient data as to document ambient conditions or quantify these emissions. Therefore, PM₂₅ impacts are omitted from this analysis.) These small particles can be directly emitted into the atmosphere as a by-product of fuel combustion, through abrasion, such as wear on tires or brake linings, or through fugitive dust (wind erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may carry carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Regional Air Quality

The project area is within the San Joaquin Valley Air Basin (SJVAB), which includes Fresno County and San Joaquin, Stanislaus, Merced, Madera, Kings, Tulare, and Kern Counties. Air quality conditions in the SJVAB are under the jurisdiction of the SJVAPCD. The SJVAB exceeds the state and federal standards for two of the six criteria air pollutants. The entire air basin is non-attainment for ozone and particulate levels (PM₁₀).

With respect to the federal ozone standards, the SJVAB is designated as "severe non-attainment" with a 2005 attainment date. This designation is based on the failure to attain the ambient ozone standard by 1999. In addition to ozone concentrations in excess of the federal one-hour standard, the SJVAB also shows ozone concentrations in excess of the federal eight-hour standard. However, the non-attainment classification system for the eight-hour ozone standard has not yet been designed. The SJVAPCD is currently considering a petition to the United States Environmental Protection Agency (EPA) to revise the one-hour ozone status from "severe" to "extreme." The Basin is also non-attainment of the state ozone standard. State classifications are based on the maximum one-hour concentration of ozone registered at any monitoring station in the air basin during the year, discounting highly irregular or exceptional events.

The SJVAB is designated as "serious" non-attainment for federal PM₁₀ standards and was required to reach attainment of the annual and 24-hour standards by December 31, 2001. The SJVAPCD failed to attain the 24-hour and annual standards by that date, and is required to submit a new plan by December



31, 2002 to demonstrate attainment at the earliest practicable date. EPA has not acted on the PM_{10} Attainment Plan submitted in 1997, but is expected to disapprove the plan. The 1997 plan requested a five-year extension from EPA, but it has also not been approved to date. An extension, if approved, would allow the SJVAB to achieve both the annual and the 24-hour standards by December 31, 2006. The state has no separate classification scheme other than non-attainment or attainment for PM_{10} .

In recent years, the standard for carbon monoxide (CO) has not been exceeded in the SJVAB, however, background concentrations are still high enough for CO hot spots to be potential problems in urban areas with high levels of traffic congestion. The basin is in compliance with the federal sulfur dioxide, lead, carbon monoxide and nitrogen dioxide standards.

Local Air Quality

Ambient air quality is measured at monitoring stations operated by the California Air Resources Boards (ARB) and individual APCDs. A monitoring station is located in the City of Clovis on N. Villa Avenue that measures both gaseous and particulate concentrations. Table 5.3-2, Clovis Ambient Air Quality, shows ambient air quality measurements from the N. Villa Avenue monitoring station. From the ambient air quality data, it can be seen that ozone has exceeded both the state and federal standards on a fairly regular basis and no clear trend is evident. Inhalable particulate levels (PM₁₀) also exceed the state standard several times over the last three years while the federal standard was exceeded once in 1999. The new PM_{2.5} standard was also exceed twice per year in the last three years. Neither CO nor NO₂ have exceed their standards in the last three years.

5.3.2 Regulatory Setting

State and Local Planning Efforts

Unlike many Cities, the Clovis General Plan includes an Air Quality Element. The Element outlines policies and goals to improve air quality. The first goal of the Element is the improvement of air quality through proper land uses planning. The goal is implemented through a balance of jobs to housing, the development of infill near activity centers and along transportation corridors and reducing emissions by "mitigating air quality impacts associated with development projects to the greatest extent feasible."

The second goal relates to air quality improvements through enhanced mobility. Policies include methods and programs to reduce vehicle dependence and promote low/zero emissions vehicles for personal and business use.

While the City's General Plan includes goals, policies and actions, ultimately air quality in California is regulated by the California Air Resources Board (ARB), and single and multi-county Air Pollution Control Districts (APCDs). California state ambient air quality standards shown in Table 5.3-2 are set by the ARB, which also regulates mobile source emissions, research and development, and oversight and coordination of the activities of the APCDs. The ARB is also responsible for classifying air basins as attainment or non-attainment in accordance with the federal and state Clean Air Acts. The regional and local air quality agencies are primarily responsible for regulating stationary and indirect source emissions and for monitoring ambient pollutant concentrations.

TABLE 5.3-2			
CLOVIS AM	BIENT AIR QUALITY		
	Number of Days Thresh		

	Number of Days Threshold Were Exceeded and Maximum Levels During Such Violations 1			
Pollutant/Standard	1999	2000	2001	
Ozone				
State 1-Hour > 0.09 ppm	56	49	69	
Federal 1-Hour > 0.12 ppm	5	8	10	
Federal 8-Hour > 0.08 ppm	49	44	56	
Max. 1-Hour Conc. (ppm)	0.142	0.153	0.149	
Max. 8-Hour Conc. (ppm)	0.121	0.131	0.118	
Carbon Monoxide				
State 1-Hour > 20 ppm	0	0	0	
State 8-Hour > 9.0 ppm	0	0	0	
Federal 8-Hour > 9.5 ppm	j 0	0	0	
Max. 8-Hour Conc. (ppm)	2.98	5.68	2.93	
Nitrogen Dioxide		· · · · · · · · · · · · · · · · · · ·		
State 1-Hour > 0.25 ppm	0	0	0	
Max. 1-Hour Conc. (ppm)	0.018	0.017	0.015	
Inhalable Particulates (PM ₁₀) ¹		•		
State 24-Hour > 50 µg/m3	19	10	16	
Federal 24-Hour > 150 µg/m3	0	0	1	
Max. 24-Hour Conc. (µg/m3)	151	114	155	
Inhalable Particulates (PM2.5)				
Federal 24-Hour $> 65 \mu g/m3$	2	2	2	
Max. 24-Hour Conc. (µg/m3)	97.7	75.1	85.6	

¹ The number of days above the standard is not necessarily the number of violations of the standard for the year. ppm: parts per million; μ g/m3: micrograms per cubic meter Source: California Air Resources Board

The Fresno County Air Pollution Control District unified in March 1990 with other Valley APCDs to form the San Joaquin Valley Air Pollution Control District (SJVAPCD). The other counties in the District include San Joaquin, Stanislaus, Merced, Madera, Kings, Tulare and the western portion of Kern. The SJVAB is currently designated non-attainment for the ozone and PM₁₀ standards. (The status and required attainment dates for these non-attainment pollutants was discussed in Section 5.3.1, and are further addressed below.) The area is unclassified for the PM₂₅ standard, but the EPA will redesignate the area when additional data become available. The major metropolitan areas of Fresno, Modesto and Stockton are designated as non-attainment for carbon monoxide.

Under the California Clean Air Act of 1988, districts designated as non-attainment for state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide or nitrogen dioxide must submit a plan for attaining and maintaining state standards for these pollutants. In compliance with this, the SJVAB has developed an Air Quality Attainment Plan (AQAP). The San Joaquin Valley Air Pollution Control District's AQAP was adopted in 1991 and most recently updated in 1994.

5.3.3 Federal Air Quality Regulations

The Clean Air Act of 1970 was the first major piece of federal air quality regulation. Amended in 1977 and 1990, the Clean Air Act requires the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) for several pollutants. These standards (shown in Table 5.3-1) are set by law at a level that protects public health and welfare, with an adequate margin of safety. Areas



exceeding the federal standards more than two times per year can be designated "non-attainment" areas under the Clean Air Act and are then subject to more stringent planning and pollution control requirements.

Under the 1990 amendment to the Clean Air Act, non-attainment areas are divided into five categories. "Marginal" or "moderate" violators only slightly exceed the NAAQS, whereas "serious," "severe" or "extreme" violators are much further above the standards. Marginal areas are required to do little beyond what they are already doing to attain clean air, but areas designated "moderate" through "extreme" must adopt gradually tighter regulations. States with areas designated "moderate" or worse for ozone non-attainment are required to show a 3 percent per year reduction in emissions of volatile organic compounds.

Areas close to meeting CO standards are required to start a wintertime oxygenated fuels program and to correct problems with existing vehicle inspection programs. Areas with higher levels of CO must also start an enhanced vehicle inspection program, and those areas with the highest CO levels must adopt transportation measures.

Areas in violation of PM_{10} standards, and cannot meet the standard in 6 years or less, are classified as moderate violators. Those areas that exceed the standards and require more than 6 years to meet the standard are considered serious. Moderate PM_{10} violators must adopt control measures for sources such as wood stoves, urban road dust and agricultural burning. Serious PM_{10} violators must adopt more stringent measures for controlling particulates and, if they fail to reach attainment by the prescribed date, must achieve 5 percent reduction in PM_{10} emissions per year.

The San Joaquin Valley Air Basin is designated "serious" for PM₁₀ and ozone. Based on the federal requirements of areas considered serious, the SJVAPCD is currently in the process of adopting a PM₁₀ Plan, which demonstrates future attainment through implementation of control measures. Sources targeted by the Plan include wood burning, automotive particulates and fugitive dust. A federal ozone attainment plan will also be required.

5.3.4 Methodology Related to Air Quality

Modeling of long-term air pollutant emissions is based upon a traffic analysis prepared by Associated Transportation Engineers as contained in the transportation analysis for of this EIR. Pollutant generation is derived from emissions factors included in the URBEMIS7G computer model prepared for the SJVAPCD and distributed by the ARB. At the time of the preparation of this air quality analysis, the URBEMIS2001 model has been released for public use. The URBEMIS models use land use projections and emission factors to calculate the daily and/or yearly pollutant production associated with both mobile and stationary sources. The models consider the land use types in determining both trip generation and trip length from each of the proposed land uses. The models also provide default values for vehicle speed based on trip type (e.g., work-related versus non-work-related trips). In this case, trip generation rates are modified to reflect the data included in the transportation analysis. The URBEMIS2001 model uses emission factors generated by the EMFAC2001 computer model, also distributed by the ARB. The EMFAC models predict vehicle emissions on a "per mile" basis at various speeds. These data are subsequently used in the URBEMIS models. However, at this time (October 7, 2002), ARB notes that the EMFAC2001 model is still in draft form with revisions expected in the near future. (As of December 2002, the EMFAC2002 model has now been released. However, URBEMIS2002 is still in testing.) These points were discussed with the SJVAPCD (Personal communication on October 7, 2002 with Mr. Tom Jordan, Senior Air Quality Planner), and the SJVAPCD accepts either version of the model. This analysis then uses the more current URBEMIS2001 model to determine project-generated emissions and compares these values to applicable District, state and

federal air quality standards. Peak hour traffic CO hot spot modeling is performed using the EMFAC7G model, which includes peak-hour traffic CO levels not reported by the newer EMFAC2001 model.

5.3.5 Significance Criteria

In accordance with CEQA, the proposed project would be considered to have a significant effect on air quality if the project would violate any ambient air quality standards, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutant concentrations or conflict with adopted environmental plans and goals of the community where it is located.

Thresholds for Construction Emissions

According to the SJVAPCD, Revised Guide for Assessing and Mitigating Air Quality Impacts, (January 2002), the SJVAPCD's approach to CEQA analyses of construction PM₁₀ impacts is to require implementation of effective and comprehensive control measures rather than to require detailed quantification of emissions. Implementation of all required control measures (Regulation VIII Control Measures) and other appropriate "enhanced control measures" will constitute sufficient mitigation to reduce PM₁₀ impacts to a level considered less than significant. However, the SJVAPCD does set a maximum opacity limitation of 40 percent on construction dust emissions. (Opacity relates to the ability of the emissions to obstruct light.)

The SJVAPCD recognizes that construction equipment also emits carbon monoxide and ozone precursor emissions. However, the District has determined that these emissions may cause a significant air quality impact only in cases of very large or very intense construction projects. The Guidelines note that large-scale construction could be significant if it exceeds yearly limitations of 10 tons for either NOx or ROG.



Thresholds for Operational Emissions

In accordance with the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD, August 20, 1998), ozone precursor emissions (ROG and NOx) that exceed 10 tons per year are considered to have significant air quality impacts. Also, in accordance with the State Ambient Air Quality Standards, estimated CO concentrations exceeding the California Air Quality Standard (CAAQS) of 9 ppm averaged over 8 hours and 20 ppm for 1 hour will be considered a significant impact. The SJVAPCD has not established criteria for PM₁₀ emissions and if the rules included in Regulation VIII are followed, the District considers these emissions to be less than significant. However, because the area is non-attainment for the particulate standard, the criterion set forth in Rule 2201 (New and Modified Stationary Source Review Rule) is used to determine significance. This value is 15 tons per year for PM₁₀. This methodology is also in compliance with ARB methodology, which states that if there is no established CEQA threshold, the analysis shall be based on the limitations set forth in the New Source Review limitations (CEQA Review Handbook for Local Air Pollution Control Agencies, ARB, March 1990). An impact would also be significant if project operations were to result in dust or smoke generation that would meet or exceed 20 percent opacity. However, this latter requirement would apply to industrial development that could produce substantial quantities of dust or smoke. Residential, educational and commercial development such as that proposed would not be expected to result in opacity issues.

5.3.6 Impacts and Mitigation Measures

Air pollutant emissions associated with the project would occur over the short-term for site preparation and construction activities to support the proposed land uses. In addition, emissions would result from the long-term operation of the completed project. Short-term and long-term air quality impacts associated with the project are detailed in the following sections.

IMPACT: TEMPORARY CONSTRUCTION EMISSIONS

Impact Analysis:

City of Clovis Regulatory Policy

The Air Quality Element of the General Plan notes that the City should "Adopt a Dust Control Ordinance to minimize particulate emission during road, parking lot and building construction. The action is carried out through the City's Municipal Code."

The following includes a listing of the ordinance included in 9.3,228, D.3 "Air Quality."

- a. Air pollution. Sources of air pollution shall comply with rules established by the Environmental Protection Agency (Code of Federal Regulations, Title 40) and the California Air Resources Board. No person shall operate a regulated source of air pollution without a valid operation permit issued by the San Joaquin Valley Unified Air Pollution Control District (SJVAPCD). Uses, activities, or processes that require SJVAPCD approval of a permit to operate shall file a copy of the permit with the Department within 30 days of its approval.
- b. Dust and dirt. Land use activities that may create dust emissions (e.g., construction, grading, etc.) shall be conducted to create as little dust or dirt emission beyond the boundary line of the parcel as possible including the following:
- Scheduling. Grading activities shall be scheduled to ensure that repeated grading will
 not be required, and that implementation of the proposed land use will occur as soon as
 possible after grading;
- (2) Operations during high winds. Clearing, earth-moving, excavation operations, or grading activities shall cease when the wind speed exceeds 25 miles per hour averaged over one hour;
- (3) Area of disturbance. The area disturbed by clearing, demolition, earth-moving, excavation operations, or grading shall be the minimum required to Implement the allowed use;
- (4) Dust control. During clearing, demolition, earth-moving, excavation operations, or grading, dust emissions shall be controlled by regular watering, paving of construction roads, or other dust-preventive measures (e.g., hydroseeding, etc.), subject to the approval of the Director.
- (a) Material(s) excavated or graded shall be watered to prevent dust. Watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day.
- (b) Material(s) transported off-site shall be either sufficiently watered or securely covered to prevent dust.
- (5) On-site roads. On-site roads shall be paved as soon as feasible. During construction, roads shall be watered periodically, and/or shall be chemically stabilized; and

- (6) Revegetation. Graded areas shall be revegetated as soon as possible to minimize dust and erosion. Portions of the construction site to remain inactive longer than 90 days shall be seeded and watered until grass cover is grown and maintained, subject to the discretion of the Director.
- c. Exhaust emissions. Construction-related exhaust emissions shall be minimized by maintaining equipment in good running condition and in proper tune in compliance with manufacture's specifications. Construction equipment shall not be left idling for long periods of time.
- d. Odor emissions. Noxious odorous emissions in a matter or quantity that is detrimental to or endangers the public health, safety, comfort, or welfare is declared to be public nuisance and unlawful, and shall be modified to prevent further emissions release.

Additional Regulatory Policy

The SJVAPCD has the primary responsibility for the control of emissions in the County.. Its regulations reflect all pertinent state and federal standards. Like all projects within the SJVAB, the project is subject to various District rules and regulations. While residential development is not subject to the New and Modified Stationary Source Review Rule (i.e., Rule 2201) as would be applicable to a stationary source, such as a factory, there are various rules that do apply. Regulation VIII includes various control measures that reduce fugitive dust associated with construction, and its attendant PM₁₀ and PM_{2.5}. These measures are outlined in Rule 8021 (formerly Rule 8020), included within Regulation VIII, and list the requirements for dust abatement measures associated with construction, demolition, excavation, extraction and other earthmoving activities. These measures, included below, are requisite for small-scale projects and as such do not constitute mitigation under CEQA.



- All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/ suppressant, covered with a tarp or other suitable cover or vegetative ground cover.
- All on-site unpaved roads and off-site unpaved access roads shall be effectively stabilized of dust emissions using water of chemical stabilizer/suppressant.
- All land clearing, grubbing, scraping, excavation, land leveling, grading, cut and fill and demolition activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by presoaking.
- With the demolition of buildings up to six stories in height, all exterior surfaces of the building shall be wetted during demolition.
- When materials are transported off-site, all material shall be covered, or effectively wetted to limit visible dust emissions, and at least six inches of freeboard space from the top of the container shall be maintained.
- All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at the end of each work day. (The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emission. Use of blower devices is expressly forbidden.)

- Following the addition of materials to, or removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water of chemical stabilizer/suppressant.
- Within urban areas, track-out shall be immediately removed when it extends 50 or more feet from the site and at the end of each workday.
- Any construction with 150 or more vehicle trips per day shall prevent carryout and track-out.

Rules also applicable to the project include SJVAPCD Rule 4601 that limits the volatile organic content in paints and coatings, Rule 4641 that limits the volatile organic content in asphalt used in paving, Rule 4901 that sets restrictions on wood-burning heaters and appliances and Rule 4902 that sets parameters for domestic water heaters.

Additional Impact Evaluation

Construction operations are responsible for the emissions of CO, NOx, SOx, ROG and PM₁₀. These emissions are largely generated from construction operations and equipment. The amount of emissions generated is related to the level and type of construction activity. Construction-related emissions are short-term in nature and can generally be mitigated to a level of insignificance. However, it is important to estimate the total air quality impacts of a project by considering both construction-related and operational sources. The major sources of construction-related emissions that should be considered are stationary equipment, construction-related vehicle trips, mobile construction equipment, ROG from the application of asphalt and architectural coatings and fugitive dust.

The SJVAPCD does not set construction emissions limitations per se, but notes that if those measures included in Regulation VIII are not followed, project construction should be regarded as significant. The SJVAPCD Guidelines provide additional measures, required for large-scale projects, to reduce these potential impacts to less than a level of significant. Additionally, the Guidelines note that large-scale construction has the potential to exceed yearly limitations of 10 tons per year for either NOx or ROG.

At this planning stage, phased construction level emissions cannot be accurately estimated. The Specific Plan does not include construction schedules, circulation detours or grading plans that would be needed to accurately quantify air quality impacts. However, a certain level of construction can be assumed and emissions calculated accordingly. The project includes the construction of 6,074 single family and 4,755 multi-family units. The enclosed area for open space element is based on a value of one percent of the acreage allotted to these uses. Therefore, structures on the 46 acre golf course and 81 acres of open space included in the traffic analysis account for approximately 55,321 square feet. The enclosed area for the various schools was based on a value of 10 percent of the land area and approximately 1,149,984 square feet of educational facilities are used in this analysis. Square footages for the remaining land uses are based on the values included in Table 4.3-3, Land Use Plan Statistics, and include 2,001,800 square feet of commercial space and 550,163 square feet of office space and 3,977,028 square feet of business space. The total enclosed, non-residential area is then calculated at 7,723,296 square feet.

The URBEMIS2001 model assumes that, regardless of the project's size, construction lasts for one year (250 actual days). The fiscal analysis indicates that project build-out would take approximately 11 years. As such, the area to be developed was divided over the 11 years and yearly construction emissions were modeled accordingly.

Stationary Equipment Emissions

Stationary equipment sources are classified as point and area sources. Point sources refer to a site that has one or more emission sources at a facility with an identified location (e.g. power plants, refinery boilers). Area sources comprise many small emission sources for which locations are specifically identified, but for which emissions over a given area may be calculated (e.g. water heaters, painting and coatings and fuel use and consumption). To accurately calculate emissions from stationary equipment; the types and numbers of equipment, brake emission factors, rate and quantity of fuel consumption, and phases and hours of operation all must be considered. Stationary equipment is known to generate CO, ROG, NOx and PM₁₀ emissions. The amount of emissions generated from stationary sources is typically not as significant as the emissions generated from mobile equipment and vehicles. However, the emissions do incrementally contribute to the total amount of construction related emissions generated on a given a day.

Mobile Construction Equipment Emissions

NOx, ROG and PM₁₀ are contained in the exhaust fumes emitted from mobile construction equipment, including utility engines and vehicles involved directly in construction and those that are used to transport equipment and materials to and from the site. The amount of exhaust emissions that is generated would depend on the scope of the proposed development and the construction equipment that is required.

Temporary impacts will result from project construction activities within the immediate areas proposed for development. Grading and construction activities will consume diesel fuel and thus, produce combustion by-products. Construction would be phased over a period of years (assumed here at 11) but would ultimately be market-driven. Construction emissions were then based on the URBEMIS2001 model and included in Table 5.3-3.

The project could result in excessive levels of both NOx and ROG above the SJVAPCD 10-ton per year criterion resulting in a potentially significant impact as illustrated in Table 5.3-3. Additionally, PM₁₀ emissions could exceed the 15-ton per year criterion. Mobile construction equipment emissions can be reduced by using construction equipment that has catalytic converters, using methanol or low-sulfur pile drivers, and by preventing trucks and equipment from prolonged idling. PM₁₀ associated with soil disturbance can be reduced through various means such as wetting and reduced speeds across unpaved surfaces.

TABLE 5.3-3 PROJECTED CONSTRUCTION EMISSIONS (TONS/YEAR)					
Source	CO	NOx	ROG	SOx	PM ₁₀
Site Grading		17.2	1.8	1.7	51.5 ¹
Worker Trips	2.1	1.1 1	0.8	0.0	0.2
Mobile Equipment		62.8	4.0	5.0	3.9
Stationary Equipment		0.2	0.2	0.0	0.0
Asphalt			0.1		
Architectural Coatings			47.0		
Yearly Total 2	21	81.3	53 9	67	55.6

¹ Includes PM₁₀ from dust.



² Based on 250 days of grading, 10 days for asphalt application, and 23 days for the release of architectural coating emissions. Vehicle trips based on 1993 emissions projections. Due to more stringent vehicle emissions regulations and the removal of older vehicles from the fleet mix, future years would result in fewer emissions.
Source: The Planning Center, October 7 2002.

Fugitive Dust

Construction and soil disturbance have the potential to generate fugitive dust. When fugitive dust enters the atmosphere, the larger particles of dust quickly fall to the ground. The smaller particles, however, may remain suspended for long periods of time, and are referred to as Total Suspended Particulates (TSP). Within TSP are dust particles that are less than ten microns in diameter that are referred to as PM_{10} . Because PM_{10} is respirable and can damage the lungs, fugitive dust is a matter of concern.

A variety of construction-related sources generate PM₁₀ emissions. These sources include: auto and truck trips on paved and unpaved roads and parking areas, dirt storage piles, dirt pushing and grading activities, truck dumping activities and demolition operations. To accurately calculate PM₁₀ emissions, project specific information is needed. Such information would include, the amount of vehicle miles traveled by autos, trucks and construction equipment on paved and unpaved surfaces, area covered by storage piles per day, tons of truck filling material used per day and acres of area being graded.

At this time, the information needed to accurately calculate PM₁₀ emissions is not available. Therefore, it is not possible to accurately estimate project specific emissions. However, like exhaust emissions, fugitive dust can generally be estimated using the URBEMIS2001 Model. The model estimates that every acre graded produces 10 pounds of PM₁₀ emissions per day associated with fugitive dust. The model sets the area to be graded based on the user selected-land uses. In this case, based on the assumed 11-year construction schedule, the model estimates that 164 acres would be disturbed on a yearly basis and the equipment use and dust generation are allocated in accordance with the area to be graded. With the implementation of Regulation VIII measures, daily PM₁₀ emissions (including combustion emissions) are estimated at 55.6 tons per year. Many of the requirements included in the City Municipal Code (included above) go beyond the requirements of Regulation and the actual volume of dust could be smaller than projected by the URBEMIS2001 Model.

SJVAPCD notes that implementation of the measures included in Regulation VIII would mitigate a small project to a less than significant level, and again, compliance with the Municipal Code would result in even further reductions. As such, most construction would not result in a significant impact. However, the SJVAPCD notes that construction of large projects could result in the production of significant emissions impacts and recommends additional mitigation beyond Regulation VIII. The District does not define what denotes a large project. However, the URBEMIS2001 Model notes that the level of equipment activity is based on the area to be graded on a daily basis. In accordance with the model, a doubling of equipment use is projected if the area to be disturbed exceeds 10 acres on a daily basis. Additional equipment is added for each additional 10 acres to be disturbed. (Note that this is based on the area disturbed on a daily basis and not the total project area.)

The District does not require the detailed quantification of construction emissions or the quantification of the efficiency of the mitigation. In accordance with the *Guide fro Assessing and Mitigating Air Quality Impacts*, the SJVAPCD's recommended approach to mitigating construction emissions focuses on a consideration of whether all feasible control measures are being implemented. The construction requirements currently included in the City of Clovis Municipal Code and SJVAPCD Regulation VIII, and enumerated above, are required for all large-scale construction projects in the City and shall be applied to project development to the extent feasible. Adherence to these requirements shall reduce any potentially significant impacts to less than significant for any project that does not disturb in excess of 10 acres on a daily basis.

In addition, as deemed applicable, the City shall require the following mitigation measures, (as included in Table 6-3 of the SJVAPCD Guide for Assessing and Mitigating Air Quality Impacts), for any project that

is to disturb more than 10 acres on a daily basis to reduce the potential impacts to less than significant level.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

- 5.3-1 Limit traffic speeds on unpaved roads to 15 mph.
- 5.3-2 Install sandbags or other erosion control measures to prevent silt runoff to public roadways from sites with a slope greater than 1 percent.
- 5.3-3 The following measures are encouraged for construction located near sensitive receptors:
 - Install wheel washers for all exiting trucks, to wash off all trucks and equipment leaving the site.
 - Install wind breaks at windward side(s) of construction areas.
 - Suspend excavation and grading activity when winds exceed 20 mph.
 - Limit areas subject to excavation, grading, and other construction activity at any one time.

Level of Significance After Mitigation: Less than significant.

IMPACT: LONG TERM REGIONAL IMPACTS DUE TO EMISSIONS ATTRIBUTABLE TO THE CHANGE IN LAND USE

Impact Analysis:

Regulatory Policy

The City of Clovis General Plan Air Quality Element discusses improvement of air quality through proper land uses planning and methods to reduce the number daily vehicle trips generated. SJVAPCD regulations reflect all pertinent state and federal standards.

Additional Impact Evaluation

Long-term air pollution emissions are those associated which would be associated with the change in permanent use of the project area. Two types of air pollutant sources must be considered with respect to the proposed project: stationary sources and mobile sources. These emissions occur regionally based on the assumed trip-generating characteristics of the project and can build-up locally at intersections in the project area.

Regional Emissions

Stationary source emissions would be generated from on-site activities and natural gas combustion for heating requirements and cooking. The analysis also considers that residential development produces ROG emissions from the use of consumer products, such as aerosols and that 10 percent of the homes



operate fireplaces. Mobile source emissions result from vehicle trips including: commuting employees, residents and visitors accessing the project, deliveries, and maintenance activities.

Emissions projections for both stationary and mobile emissions generated by the assumed land uses were determined utilizing the URBEMIS2001 Model. The model generates motor vehicle emissions as a function of the number of trips associated with a given land use and the vehicle miles traveled for each particular type of trip taken.

The marketing analysis assumes an 11-year build-out schedule. If construction were to begin in 2003, build-out could occur as soon as 2014. However, the URBEMIS2001 Model only generates emissions in five-year increments after 2010 and this analysis then uses a Year 2015 build-out date. (Year 2014 emissions could be slightly higher while subsequent years would be lower.) The emissions associated with the assumed project are shown in Table 5.3-4, *Projected-Related Emissions Inventory*). As noted in the table, both NOx and ROG would exceed the 10-tons per year criterion. Additionally, PM₁₀ emissions would exceed their 15-ton per year criterion. Regional emissions and therefore project impacts are considered a significant impact of the project. The URBEMIS2001 Model results are provided in Appendix D to this EIR.

Unit Type	CO	NOx	ROG	SOx	PM ₁₀
Mobile Source Emissions					
Single-Family Residential	1,499.3	118.8	134.9	0.8	8.7
Multi-Family Residential	806.6	63.9	74.8	0.4	4.7
Elementary School	16.4	1.3	1.7	0.0	0.1
Junior High School	46.6	3.8	4.5	0.0	0.3
High School	103.5	8.4	9.9	0.1	0.6
Open Space/Recreational	7.9	0.7	0.8	0.0	0.1
Commercial	1761.5	144.4	155.3	0.9	10.4
Office	145.9	11.7	13.2	0.1	0.9
Business Campus (Office Park)	894.6	71.4	81.3	0.5	5.2
Total Mobile Sources	5,282.3	424.4	476.3	2.8	30.9
Stationary Source Emissions		wall and			William I
Natural Gas	13.6	31.6	2.4	0.0	0.1
Fireplaces	548.6	5.7	497.3	0.9	75.1
Landscaping	8.3	0.1	1.0	0.2	0.0
Consumer Products			96.69		
Total Stationary Sources	570.1	37.3	597.4	1.1	75.2
Total Yearly Emissions	5,852.4	461.7	1,073.7	3.9	106.1

Microscale Emissions

An assessment of the project-related impact on localized air quality requires that future ambient levels be projected. Carbon monoxide concentrations can be estimated adjacent to nearby intersections that would be assumed to carry substantial volumes of project-related traffic using the California Department of Transportation Line Source Dispersion Model (CALINE4). Carbon monoxide levels in the project vicinity during peak-hour traffic were assessed with the CALINE4 computer model. The CALINE4 model uses the EMFAC model and intersection volumes and turning movements, as well as atmospheric

conditions, to predict local CO concentrations. These concentrations are then used to determine compliance with the Ambient Air Quality Standards. A complete discussion of the CALINE4 model and modeling assumptions are provided in Appendix D to this EIR.

Existing ambient carbon monoxide concentrations are 2.93 ppm over the 8-hour averaging period. (The ARB no longer publishes 1-hour concentrations for Clovis monitoring station. However, the 1-hour standard has not been exceeded in the last three years and the 8-hour standard is always exceeded prior to the 1-hour standard.)

Countless model runs of the CALINE4 model indicate that CO concentrations are greatest at intersections where vehicles queue and are subject to reduced speeds. The level of service of the intersection is also used to determine the potential for CO exceedance conditions. Typically, for an exceedance to occur, the intersection would operate at level of service (LOS) D or worse. In the year 2015, the only intersection projected to operate at LOS D is at Fowler Avenue and Ashlan Avenue during the p.m. peak hour. The intersection is estimated to carry 4,922 vehicles during this peak hour. CO modeling indicates that these vehicles would generate and eight-hour concentration of approximately 2.66 ppm of CO. This value would be added to the ambient concentration of 2.93 ppm for a total concentration of 5.59 ppm. This value is well under the State standard of 9.0 ppm and any impact is less than significant. Furthermore, because the "with project" analysis does not demonstrate a significant CO impact, the "without project" scenario would also be less than significant and need not be modeled.

Operational emissions would exceed the threshold values included in the SJVAPCD *Guide for Assessing and Mitigating Air Quality Impacts* and the impact is considered as potentially significant. The SJVAPCD notes that General and Specific Plans that result in significant air quality impacts adopt policy to reduce these emissions to the extent reasonably feasible. The District references 77 policies that directly and indirectly benefit air quality. These policies are included in SJVAPCD's *Air Quality Guidelines for General Plans* (AQGGP) (October 20, 1994) and incorporated here by reference. The SJVAPCD recommends that cities and counties incorporate as many air quality policies from the AQGGP as possible into their general plans, community plans and specific plans to ensure that development occurs in ways that produce fewer air quality impacts. Most notably, the City of Clovis should focus on those policies related to transportation control and trip reduction as mobile sources contribute the majority of the emissions. However, fireplaces contribute more ROG than all mobile sources combined as well as almost 10 percent of the total CO. Goal 6 of the AQGGP specifically relates to minimizing air pollutants associated with wood burning fireplaces and includes objectives and policies to minimize these emissions.

Residual emissions would depend on the level to which the City commits to the policies included in the AQGGP. However, based on the size of the project, the impacts would remain significant.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: No additional mitigation measures are feasible.

Level of Significance After Mitigation: Significant.

IMPACT: CONSISTENCY WITH AIR QUALITY PLAN

Impact Analysis: CEQA requires that projects be consistent with the any applicable air quality plans; in this case, the City of Clovis Air Quality Element of the General Plan and the SJVAB's contribution to the State Implementation Plan (SIP). The City of Clovis Air Quality Element outlines policies and goals to improve air quality. As previously noted, the first goal of the Element is the improvement of air quality through proper land uses planning. The goal is implemented through a balance of jobs to housing, the



development of infill near activity centers and along transportation corridors and reducing emissions by "mitigating air quality impacts associated with development projects to the greatest extent feasible."

This policy is implemented through project design. The project includes a mixture of residential and non-residential uses. Such a mixture results in air quality benefits by reducing both the number of trips as well as the average trip length as people find it unnecessary to drive to outlying areas fro goods and services. Furthermore, the project would result in the creation of approximately 13,116 jobs and 10,829 housing units resulting in a jobs to housing balance of 1.21:1. This also reduces the number of vehicle trips and trip lengths by placing the employment centers proximate to the residential areas. While the project is consistent with the standards and goals outlined in the City's General Plan Air Quality Element, it is expected to create a significant impact on air quality due to the magnitude of its emissions and its cumulative addition to emissions within the SJVAB.

The SJVAPCD *Guide for Assessing and Mitigating Air Quality Impacts* also notes that a project is potentially significant if it will "conflict with adopted environmental plans or goals of the community where is located." In this case, a project should be consistent with the goals of the SIP. Unfortunately, the Guide provides no methodology (or discussion) as to how to determine if a project complies with these goals, The AQGGP does set goals for large-scale projects that are aimed at the reduction of both mobile and stationary source emissions. Projects that implement these goals would result in emissions reductions to the extent reasonably feasible. The significance of consistency with the SIP is ultimately related to the City's requirements for both large- and small-scale projects, as proposed under the Specific Plan, to comply with the 77 policies included in the AQGGP. Implementation of these policies, as applicable, would ensure SIP consistency. Failure to comply with these goals would represent a potentially significant impact.

The provided analysis discusses air quality impacts associated both with the construction and operation of the proposed Specific Plan. While most air quality impacts would be avoided through regulatory requirements, large-scale construction would require additional mitigation (previously discussed) thereby mitigating these impacts to the extent reasonably feasible.

Additionally, project operations would result in significant air quality impacts that also add to the cumulative impact. The included mitigation provides the City with policy guidance to be used in the approval of Tentative Tracts and site development and shall be instituted to the extent reasonably feasible. However, based on the magnitude of the emissions associated with Specific Plan development, project impacts would result in unavoidable and cumulative impacts that would not be mitigated to less than significant levels.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: No additional mitigation measures are feasible.

Level of Significance After Mitigation: Significant.

5.4 BIOLOGICAL RESOURCES

5.4.1 Methodology Related to Biological Impact Assessment

Live Oak Associates, Inc. prepared a biological resources study for the Southeast Urban Center (project area) in November 2002, as included in Appendix E of this document. The information found in this report was generated from a review of existing literature, interviews with individuals familiar with the flora and fauna of the project area, and a reconnaissance level field survey performed by the staff of Live Oak Associates, Inc. The information gathered from a review of the existing literature and the field survey was used to identify and map plant communities and characterize the botanical and wildlife resources occurring within the project area and in the broader region.

5.4.2 Existing Conditions Related to Biological Resources

Sensitive biological resources include:

- Species given special recognition by federal, state, or local resource conservation agencies and organizations due to declining, limited, or threatened populations, resulting in most cases from habitat reduction; and
- · Habitat areas that are unique, or relatively limited distribution, or of special value to wildlife.

It is important to recognize that the biological resources assessment and impact analysis were prepared at a Program EIR level of analysis. A program level EIR is appropriate for evaluating "a series of actions that can be characterized as one large project and can be related either (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory authority and having generally similar environmental effects which can be mitigated in similar ways" (CEQA Guidelines, Section 15168).



Subsequent development projects proposed within the project area must be reviewed in the context of this Program EIR to determine if additional environmental documentation is required. This program EIR would not replace future project-specific EIRs. Rather, it provides a general baseline of existing biological resources that must be considered during the environmental review of future individual projects. Where an EIR is required for a subsequent project, the EIR should implement the applicable mitigation measures developed in the Program EIR and focus its analysis on site-specific issues that were not previously addressed.

Biological Setting of the Surrounding Area

The project area consists of agricultural lands located between the highly urbanized areas of Fresno and Clovis to the west and relatively undeveloped rangeland (i.e. grasslands used for grazing) of the Sierra foothills to the north and east. The foothills begin their rise up to the main axis of the Sierra within 5 to 7 miles north and east of the project area's northern and eastern boundaries. Rural development in the form of estate size parcels or ranchettes has occurred on lands surrounding the project area. Such development has, for the most part, eliminated large contiguous areas of agricultural lands that were once present west of Academy Avenue, and east of Clovis Avenue.

The highest biological values (in terms of biological diversity, presence of special status plant and animal species, available open space through which native terrestrial vertebrates can move, etc.) remaining in

the area are now found along the San Joaquin River and in the remaining open rangeland at the foot of the Sierra foothills.

The San Joaquin River, which is located approximately 10 miles to the northwest of the Specific Plan area's northwest comer supports, extensive riparian forest and woodlands of considerable importance to native wildlife. Aquatic and wetland habitats associated with the river attract migratory waterfowl, resident wading birds, and a variety of raptors, including bald eagles during the winter. The river serves as a connection between the trough of the San Joaquin Valley and the Sierra foothills. This connection facilitates the movements of many wildlife species through the region.

The river is, however, relatively isolated from the project area. The project area is not within the San Joaquin River's watershed. Dog Creek, the only natural drainage within the project area, appears to never have had a hydrologic connection to the river. Based on an analysis of historic United States Geologic Survey maps, this creek appears to have originally continued to the southwest of Fresno, before dissipating into a sink. Furthermore, the lands between the river and the project area have generally been developed for agricultural and residential uses, thus creating barriers to the movement of some native wildlife that may have once freely roamed throughout the region.

Rangeland associated with the Sierra foothills only 7 to 10 miles to the north and east is also an area of significant biotic value. Extensive vernal pool complexes with their complement of endemic plants and animals can still be found between Friant Road and the Friant-Kern Canal, as well as along Fancher and Hog Creeks north and north east of Round Mountain. The large expanses of grasslands within which these vernal pool complexes are found provide important habitat for both resident and migratory wildlife. Native plant diversity in this area remains substantial, despite years of grazing. Furthermore, these grasslands provide a nearly continuous connection between large expanses of open rangeland to the northeast in Madera and Merced Counties and open rangeland to the southeast near Fresno County's boundary with Tulare County. This nearly continuous band of foothill grassland habitat constitutes the only remaining corridor suitable for the movement of native wildlife along the eastern margins of the southern Central Valley.

The nearest location of the project area is, however, 3 to 4 miles from the nearest continuous expanse of grassland habitat to the east. Isolated grassland patches are closer, some immediately west of Academy Avenue (and several small grassland patches in the project area itself), but the project area is buffered primarily by agricultural lands and rural residential development, land uses not particularly suited for most wildlife species once native to the area.

Biological Setting Within the Specific Plan Area

The project area consists of 3,307 acres of land located 2 to 4 miles to the east of the Clovis town center. The terrain is nearly level, sloping imperceptibly from northeast to southwest. Elevations range from a low of 360 feet National Geodetic Vertical Datum (NGVD) at the project area's southern boundary to a high of 398 feet NGVD at its northeast boundary on Bullard Avenue. Historically, lands of the project area have been used for agriculture, vineyards and orchards of peaches, nectarines and almonds making up much of the agricultural lands within its proposed boundaries.

The biological report identifies ten soil types within the project area, which are frequently associated with hummock and swale topography where numerous natural depressions occur. During the rainy season (primarily winter and spring), these depressions fill with water that cannot percolate through the subsurface hardpan, thus forming vernal pools that may hold water into late spring. Vernal Pools are shallow depressions which fill with water in the spring and dry out over a period of several months. A unique plant and animal community develop in concentric succession as the water evaporates. The pools form due to both an undulating topography and an impervious or weakly permeable subsurface

layer, which prevents or slows drainage. In recent years, vernal pools have become the focus of conservation efforts, because by some estimates nearly 90% of the vernal pools present when the Spanish colonized California in the late 18th century have been destroyed by agriculture and urbanization (Holland 1978). No vernal pools are likely to remain within the boundaries of the project area, because all the native lands once present have since been converted to other uses (primarily agriculture). The conversion of such lands typically involves deep ripping (to break up the hardpan) and land leveling.

Biotic Habitats

Agricultural

The primary land use in the project area during 2001 and 2002 was agricultural. Highly managed agricultural lands do not support significant plant diversity. The flora once native to the area is very poorly represented. Agricultural habitats of the project area provide limited habitat for terrestrial vertebrates. The absence of an herbaceous understory deprives many species of both food and cover. On-going maintenance operations discourage breeding, often depriving animal species of suitable breeding habitat. Maintenance operations are also likely to result in the mortality of various species of ground dwelling animals. Reptiles and small mammals, for example, are likely to be buried by annual discing. The application of pesticides in orchards may interfere with breeding success of birds nesting in orchards. Therefore, the diversity of native species occurring in agricultural lands is quite likely significantly lower than on less disturbed foothill grasslands to the east. These lands nonetheless support various native terrestrial vertebrate species, and seasonally attract large numbers of some bird species. Amphibians and reptiles are poorly represented in agricultural lands of the project area.

Croplands provide foraging habitat for several bird species common to the Central Valley. Brewer's blackbirds (Euphagus cyanocephalus), mourning doves (Zeniada macroura), scrub jays (Aphelocoma californica), European Starling (Sturnus vulgaris), and American crows (Corvus brachyrhynchos) are resident species often attracted to fields and orchards by fruit or grain. The western kingbird (Tyrannus verticalis) would be a common summer visitor to dry-farmed fields. Winter migrants that show up in late September and leave by late April would include American pipits (Anthus rubescens), white-crowned sparrows (Zonotrichia leucophrys) and occasional mountain bluebirds (Scialia currucoides). Red-tailed hawks (Buteo jamaicensis) and turkey vultures (Cathartes aura) are commonly seen foraging over the project area at various times of the year.

Several mammal species are also expected to occur in the agricultural lands of the project area, even though these lands are regularly disturbed. House mice (Mus musculus), deer mice (Permyscus maniculatus), California voles (Microtus californicus), Botta's pocket gophers (Thomomys bottae) and broad-footed moles would all occur in limited numbers in this habitat type. These small mammals would attract predators such as gopher snakes, red-tailed hawks and, possibly, coyotes (Canis latrans).

Suburban/developed Areas

Suburban developed lands of the project area include residential development, schools, landscaped grounds, and roads. Native plant diversity has all but been eliminated from these developed areas. Landscaped grounds are typically planted with non-native species of horticultural value. Such species typically include a number of non-native pines, the Canary Island pine (Pinus canariensis), Allepo pine (Pinus halepensis), and Japanese black pine (Pinus thunbergii) being the most common. Other non-native tree species observed included coast redwood (Sequoia sempervirens), deodar cedar (Cedrus deodora), several species of eucalyptus (Eucalyptus sp.), and sweetgum (Liquidambar styraciflua). Landscaping elements also include shrubs such as low-growing junipers (Juniperus sp.), firethorn



(Pyracantha sp.), photinia (Photinia sp.), rockrose (Cistus sp.), and oleanders (Nerium oleander), flowerbeds, and lawns.

Although substantially altered from the natural habitats they once were, buildings, parking areas and landscaping support some animal species adapted to the presence of humans. Brewer's blackbirds and European starlings would forage in a variety of habitats, including parking areas and lawns. Scrub jays, northern mockingbirds (Mimus vociferus), house finches (Carpodacus mexicanus) and house sparrows (Passer domesticus) are attracted to landscaping, especially where shrubs and trees have been planted. Anna's hummingbirds (Calypte anna) are attracted to garden flowers year round.

Numerous migrant species are attracted to residential landscaping for the cover it affords, stopping long enough to forage and rest before moving on to breeding habitat in the spring or wintering habitat in the fall. Residential areas also provide habitat for a number of small mammal species, including broadfooted moles, Botta's pocket gophers, house mice, roof rats (Rattus rattus) and feral cats (Felis cattus).

Non-Native Grassland

Non-native grassland includes primarily lands used for the grazing of livestock, but also includes fallow fields that have not been recently disced, such that they could revert back to grassland habitat. Within the project area this habitat comprises small, scattered patches that are relatively isolated from one another.

Non-native grassland habitat provides significant value to a variety of native terrestrial vertebrates, but within the project area these values have been diminished by the relatively small size of the habitat patches and their isolation from large continuous expanses of grasslands to the east. To some degree, grasslands of the project area provide many of the same values to native wildlife as dry-farmed fields, but they are less frequently disturbed by discing and plowing. The extent of grazing significantly affects the value of a given grassland patch to native wildlife species. Heavily grazed patches provide less cover and food to such species than moderately grazed patches. Because many small grassland patches occur on ranchettes where too many horses are turned out on to a given piece of ground, many of the grassland patches of the project area have very little value for native wildlife.

Grasslands provide important habitat for a number of avian species. Resident ground nesting birds using grassland habitats of the SPA would include mourning doves, western meadowlarks (Sturnella neglecta), and California horned larks (Eremophila alpestris actia). Winter migrants would include mountain bluebirds, American pipits, savannah sparrows (Passerculus sandwichensis) and Say's phoebes (Sayornis saya). Western kingbirds would forage in this habitat during the late spring and summer. Raptors may forage in this habitat as well. Common species include turkey vultures, red-tailed hawks, red-shouldered hawks (Buteo lineatus), white-tailed kites (Elanuns leucurus), American kestrels (Falco sparverius), and loggerhead shrikes (Lanius ludovicianus). Burrowing owls (Athene cunicularia) may also occur in this habitat, utilizing the former burrows of California ground squirrels (Spermophilus beecheyi) for cover and nesting.

Mammals are common to grassland habitats of California. The isolation of the grassland habitats of the SPA would probably reduce the diversity of mammal species present, if not their populations. Some of the species expected include meadow voles, deer mice, Botta's pocket gophers, California ground squirrels, and desert cottontails (Sylvilagus bachmani). Most of these species with the exception of meadow voles, whose densities are positively correlated with vegetative cover, are most prolific in short grass ecosystems. Theses small mammals would serve as prey for gopher snakes, various species of raptors, and coyotes, and possibly gray foxes (Urocyon cinereoargenteus).

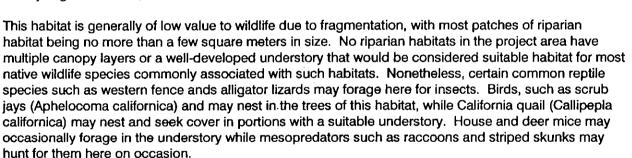
Ruderal

The term "ruderal" refers to areas frequently disturbed by human activities, such as mowing, discing, and the application of herbicides. Such areas generally include road shoulders, farm roads, vacant lands frequently disced to reduce the fire hazard, etc. Such lands may be vegetated with non-native grasses common to the previously described non-native grassland. Often they support Johnson grass (Sorghum halapense), annual sunflower (Helianthus annuus), prickly lettuce (Lactuca serriola), Canada horseweed (Conyza Canadensis) and puncture vine (Tribulus terrestris).

This habitat is generally of low value to most forms of native wildlife due to the poor nutritional value of the vegetation, the scant cover that it provides, and the frequent disturbance that reduces cover and, at times, results in direct mortality to ground-dwelling species. Most wildlife species found in such habitats are generally those that are adapted to frequent disturbance. Such species have become very common in California's Central Valley.

Riparian

Riparian habitat is that which occurs along natural stream courses and in California's Central Valley typically consists of cottonwoods, willows, and button willows. Much of the riparian habitat along Dog Creek is highly fragmented. Riparian tree species present occur as isolated patches of valley oaks (Quercus lobata), Gooding's black willow (Salix gooddingii), red willow (Salix laevigata) and Fremont's cottonwood (Populus fremontii). Non-native trees have become established along the channel at one location south of Ashlan Avenue (Hartesveldt Ecological Consulting Services 1999). These include edible fig (Ficus carica), olive (Olea europea), and pecan (Carya pecan). Along much of its course through the project area, Dog Creek is flanked by agricultural lands. These lands either support no woody vegetation at all, or orchard trees such as almonds.



Irrigation Ditch and Drainage Canals

Winter storms can generate a considerable amount of runoff from lands of the project area, especially when several storms pass through the area within a short interval of time. Drainage from the project area occurs principally via Dog Creek, the only natural drainage present. In addition, several ditches and an irrigation canal pass also carry winter storm runoff and irrigation water. These mainly support rabbitfoot grass, cattails (Typha sp.), and wild mustard (Brassica sp.). Ditches and vegetation along these drainages can provide significant cover for wildlife using adjacent fields for foraging habitat.

These channels are used by many of the same terrestrial vertebrates that use the adjoining agricultural lands. They also serve as habitat for various aquatic organisms (primarily invertebrates) that in turn serve as food for various birds, reptiles and amphibians, and mammals. Many would use the creek as a source of drinking water and for foraging. However, because of the location and lack of vegetation along much of these areas not much wildlife is expected to use these areas, except for raccoon (Procyon lotor), and feral as well as domestic cat (Felis cattus).



Isolated Seasonal Wetlands

The reconnaissance level surveys could not comprehensively cover private lands within the project area such that all isolated seasonal wetlands could be identified and mapped. It is likely that relatively few such wetlands are present in the project area, because habitats once native to the site have generally been converted to agricultural, residential and school uses. Two low spots, one just north of Shaw Avenue between Locan and DeWolfe Avenues, and one just east of Locan between Ashlan and Gettysburg Avenues, potentially pond water seasonally, although site specific surveys during the winter and spring would be necessary to confirm this. Both areas are in agricultural fields and are unlikely to be considered naturally functioning vernal pools. Sugnet and Associates identified a vernal pool in Section 12 east of DeWolfe and south of Bullard Avenues (CDFG 2002). It is not clear where this location was, but a recent aerial photograph of the area indicates that most or all of Section 12 has been altered for agriculture. Site specific surveys conducted in the winter or spring would be necessary to determine if this vernal pool is still present.

Relevant Laws Governing Biological Resources

California Environmental Quality Act (CEQA)

CEQA was first enacted in 1970, one year after Congress enacted the National Environmental Policy Act. A primary objective of CEQA is to disclose to decision makers and the public the "significant" environmental effects of proposed activities. A significant effect on the environment is defined as a "substantial, or potentially substantial, adverse change in the environment." (Public Resources Code Section 21068). The CEQA Guidelines have recently been revised to include a checklist to assist in the determination of "significance." These are discussed in more detail under Section 5.4-3 of this EIR. This document was prepared to meet CEQA statutes and guidelines with respect to project impacts on biological resources. Other federal and State laws that apply to biological resources are discussed in the following paragraphs.

Federal Endangered Species Act

Species listed as endangered and threatened by the USFWS under the Federal Endangered Species Act (FESA) are protected under Section 9 of FESA, which forbids any person to "take" an endangered or threatened species. "Take" is defined in Section 3 of the Act as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." The U.S. Supreme Court ruled in 1995 that the term "harm" includes destruction or modification of habitat. Section 7 and 10 of the Act may authorize "incidental take" for otherwise lawful activity (a development project, for example) if it is determined that the activity would not Jeopardize the species' survival or recovery.

California Endangered Species Act

The California Endangered Species Act (CESA), enacted in 1970, is intended to provide protection to endangered and threatened species in California. CESA generally parallels the main provisions of the Federal Endangered Species Act and is administered by the CDFG. Under CESA the term "endangered species" is defined as a species of plant, fish, or wildlife which is "in serious danger of becoming extinct throughout all, or a significant portion of its range" and is limited to species or subspecies native to California. CESA prohibits the "taking" of listed species except as otherwise provided in State law. Unlike its Federal counterpart, CESA applies the take prohibitions to species petitioned for listing (state candidates). §86 of the Fish and Game Code defines "take" as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Sections 2081 and 2090 of the CESA provide for consultation by project proponents with CDFG regarding measures to minimize impacts on species

listed by CESA. The proposed project is not expected to result in a "take" of any species currently listed by CESA.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA), first enacted in 1916, prohibits any person to:

"pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, " any migratory bird.

The list of migratory birds includes nearly all bird species native to the United States. Non-native species such as European starlings are not included. The statute was extended in 1974 to include parts of birds, such as eggs and nests. Therefore, it is illegal under MBTA to directly kill, or destroy a nest of, nearly any bird species, not just endangered species. Activities that result in removal or destruction of an active nest, defined as a nest with eggs or young being attended by one or more adults, would violate the MBTA. Removal of unoccupied nests, or bird mortality resulting indirectly from a project, would not represent violations of the MBTA.

Section 404 of the U.S. Clean Water Act

The objective of the Clean Water Act of 1977 is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Section 404 of the Act regulates activities that result in discharge of dredged, fill or excavated material into "waters of the United States." This generally includes any waterway, intermittent stream, man-made wetland or reservoir. Projects that include any such physical modification of a "water of the United States" must generally comply with Section 404 under the jurisdiction of the U.S. Army Corps of Engineers (ACOE). If the proposed project would include any modifications to waters of the United States, such as the installation of an outfall structure, compliance with Section 404 of the Clean Water Act (CWA) would be required (see also discussion of CWA on page 5-10).

Sections 301 and 402 of the U.S. Clean Water Act

These sections of the Clean Water Act address problems of water pollution through the National Pollution Discharge Elimination System (NPDES). Section 301 prohibits the discharge of any pollutant without a permit, and Section 402 establishes the permit program administered by the Environmental Protection Agency (EPA). Although a project may not require a Section 404 permit, the Section 301/402 provisions may still apply and regulate aspects of a project, such as wastewater discharges during construction.

California Fish and Game Code Sections 1600 - 1607

California Department of Fish and Game (CDFG) oversees streambeds and their associated habitats pursuant under Sections 1600 to 1607 of the Fish and Game Code, which manages activities that would "substantially change" the "bed, channel, or bank of any river, stream or lake designated by the department in which there is at any time an existing fish or wildlife resource, or from which these resources derive benefit." In addition to complying with Section 404 of the Clean Water Act, any modification of streambed habitat may require a Streambed Alteration Agreement pursuant to Section 1603 from CDFG.



5.4.3 Standards of Significance

The following criteria are extracted from the Biological Resources Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA) Guidelines. The project will, at a minimum, be considered to have a significant effect related to biological resources if the following may occur:

- 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;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree
 preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or state habitat conservation plan.

Thresholds of significance for biological resources are also based on current regulatory guidelines for the protection of biological resources, including wetlands and other waters of the United States, fisheries habitats, tree resources and species of special concern. Under CEQA, a finding of significance is normally made if a project would result in impacts on threatened or endangered species or their habitats. In the absence of regulatory thresholds, impacts are determined based on whether an action would substantially affect or diminish a sensitive or declining natural resource or species. CEQA Guidelines uses the following definition to determine whether the "substantial" criterion is met for this project:

"Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

For purposes of this section, "sensitive habitat" refers to habitat for plants and animals (1) which plays a special role in perpetuating species utilizing the habitat on the property, and (2) without which there would be substantial danger that the population of the species would drop below self-perpetuating levels; and "substantial effect" means significant loss or harm of a magnitude which, based on current scientific data and knowledge, (1) would cause a species or a native plant or animal community to drop below self-perpetuating levels on a statewide or regional basis, or (2) would cause a species to become threatened or endangered.

5.4.4 Impacts and Mitigation Measures

Refer to Appendix E of this EIR for a complete discussion of direct and indirect impacts on all biological resources. Discussion of impacts summarizes findings of technical studies prepared by biological resources specialists contained in EIR Appendix E.

IMPACT: CREATE A SUBSTANTIAL ADVERSE EFFECT ON ANY SPECIAL STATUS SPECIES

Impact Analysis: A total of 44 special status species are known to occur in the general region of the project area (complete list is shown in Table 3 of the biological report contained in EIR Appendix E). Possible impacts to populations of these special status species resulting from buildout of the project area are described below:

<u>Species Absent From the Site, or Unlikely to Occur There:</u>. Of the 44 animal species occurring regionally, 24 are believed not to be present, or have a low probability of being present in habitats of the project area. These species would not be affected by the proposed project.

However, federally threatened vernal pool fairy shrimp, which primarily occur in vernal pools, may be present in the project area. This species was documented within Section 12 of the project area near east of DeWolfe and south of Bullard Avenues in the spring of 1993 by Sungnet and Associates (see Figure 5.4-1, Special Status Species Observation in the Region). However, it is not clear where this location is, and a recent aerial photograph of the area indicates that most or all of Section 12 has been altered for agriculture and developed with low and medium residential development.

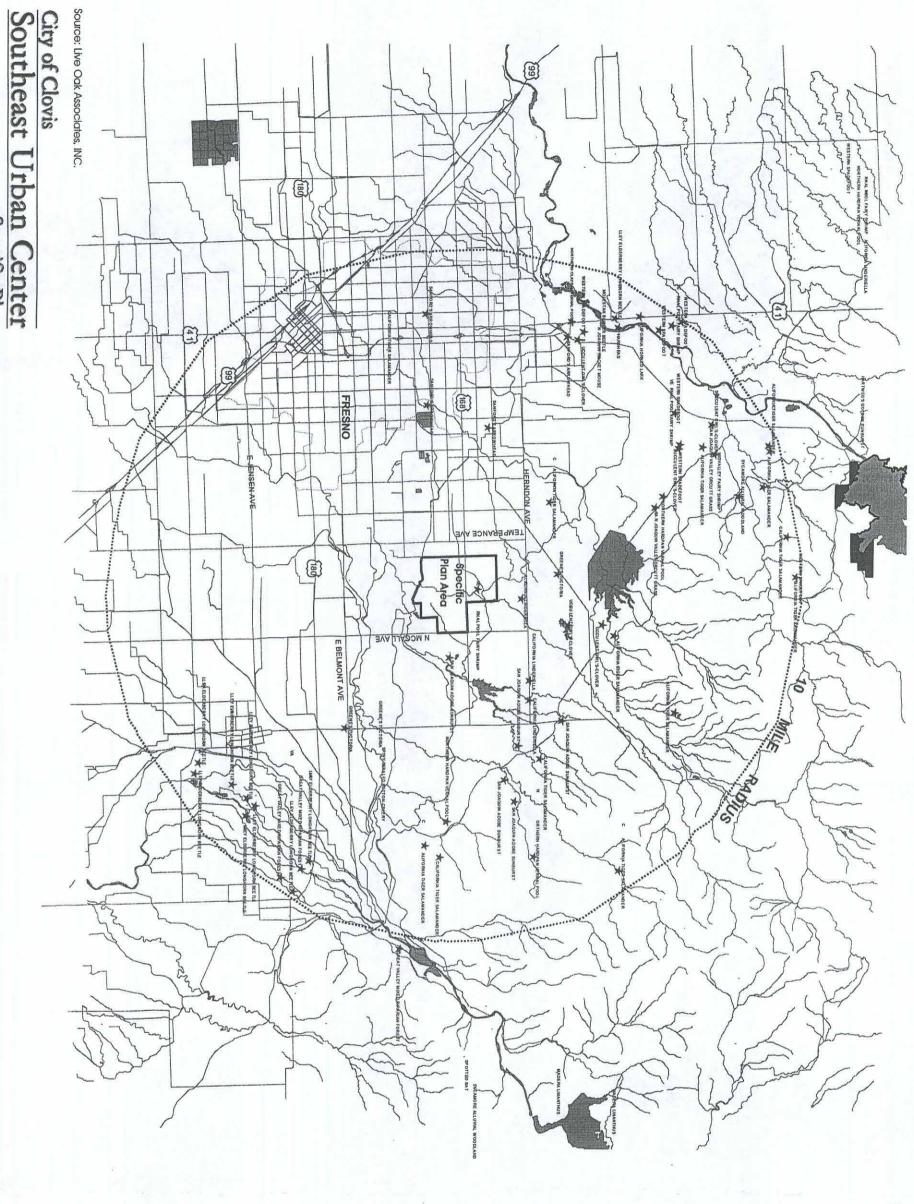
Although there are two other potential vernal pools in the project area, the Bio Report suggests that both of these spots are in agricultural fields and are unlikely to be considered naturally functioning vernal pools. Therefore, a site-specific survey in the winter or spring would be necessary to determine the presence of vernal pools within the project area. The loss of vernal pool habitats in which the vernal pool fairy shrimp occur, or could occur is considered a significant impact of the proposed project.

Although the presence of elderberry bushes, habitat for the federally threatened valley elderberry longhorn beetle (VELB), has not been observed in the project area, elderberry bushes could potentially occur in one or more locations of the project area, especially along some reaches of Dog Creek. Development of the project area according to the proposed land use plan could result in the loss of individual elderberry bushes, and therefore, individual valley elderberry longhorn beetles. The possible loss of valley elderberry longhorn beetles constitutes a potentially significant impact of the project.

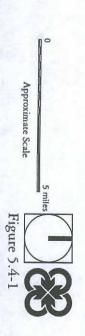
<u>Species That May Forage on the Site:</u> Sixteen species may forage from time to time within the project area, but would not breed there. These species include peregrine falcons, northern harriers, sharpshinned hawks, ferruginous hawks, merlins, prairie falcons, short-eared owls, tri-colored blackbirds, and eight special status bat species. A considerable amount of regional foraging habitat would remain even with the Specific Plan development, and these species would not be adversely impacted by the proposed project.



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Special Status Species Observations in the Region



Specific Plan

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Species that May Breed and Forage on the Site: The project area provides possible breeding and foraging habitat for four special status animal species. Trees, including landscape trees, eucalyptus and orchard trees provide possible nesting habitat for white-tailed kites and loggerhead shrikes, which would also forage nearby. Grassland patches and some agricultural lands provide possible habitat for the California horned lark and burrowing owl, both state species of special concern. The former species receives little protection from habitat loss at this time. However grassland patches observed in the project area either support dense tall stands of grass where horned larks would be unlikely to breed, or have been so overgrazed that horned larks would have insufficient cover to successfully breed. The development of the project area according to the proposed land use plan would result in a less than significant impact on these species.

Grassland patches and some agricultural lands provide possible habitat for burrowing owls, a state species of special concern protected from mortality by California Fish and Game Code. This species is also protected under the Federal Migratory Bird Treaty Act. Development of the project area according to provisions of the proposed land use plan may result in construction activities that occur in habitat occupied by burrowing owls during the nesting season, or when resident in roost burrows. Construction mortality and loss of habitat suitable for this species are potentially significant impacts of the project.

Although no siting of San Joaquin Kit Fox, a federally endangered and California threatened species, has been reported within the project area, a lengthy discussion on this species has been provided in the biological report contained in Appendix E. (See Figure 5.4-2, San Joaquin Kit Fox Observations.) The biological report indicates that the absence of confirmed kit fox sightings in habitats that are likely to be suitable for this species suggest that the San Joaquin fit fox may not be present in the region, and certainly not in the highly disturbed habitats of the project area. Even of kit foxes were to occur in grasslands east of the project area, individual kit foxes would be relatively unlikely to traverse the lands of the project area itself, which are generally not suitable for them, and bordered by urban lands that are entirely unsuitable for them.



Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.4-1 Development areas with potential special status species, as identified in the General Plan, Specific Plan, or by other substantive evidence, shall be subject to an appropriate level of biological reconnaissance and mitigation measures to comply with state and federal regulations shall be made conditions of development.

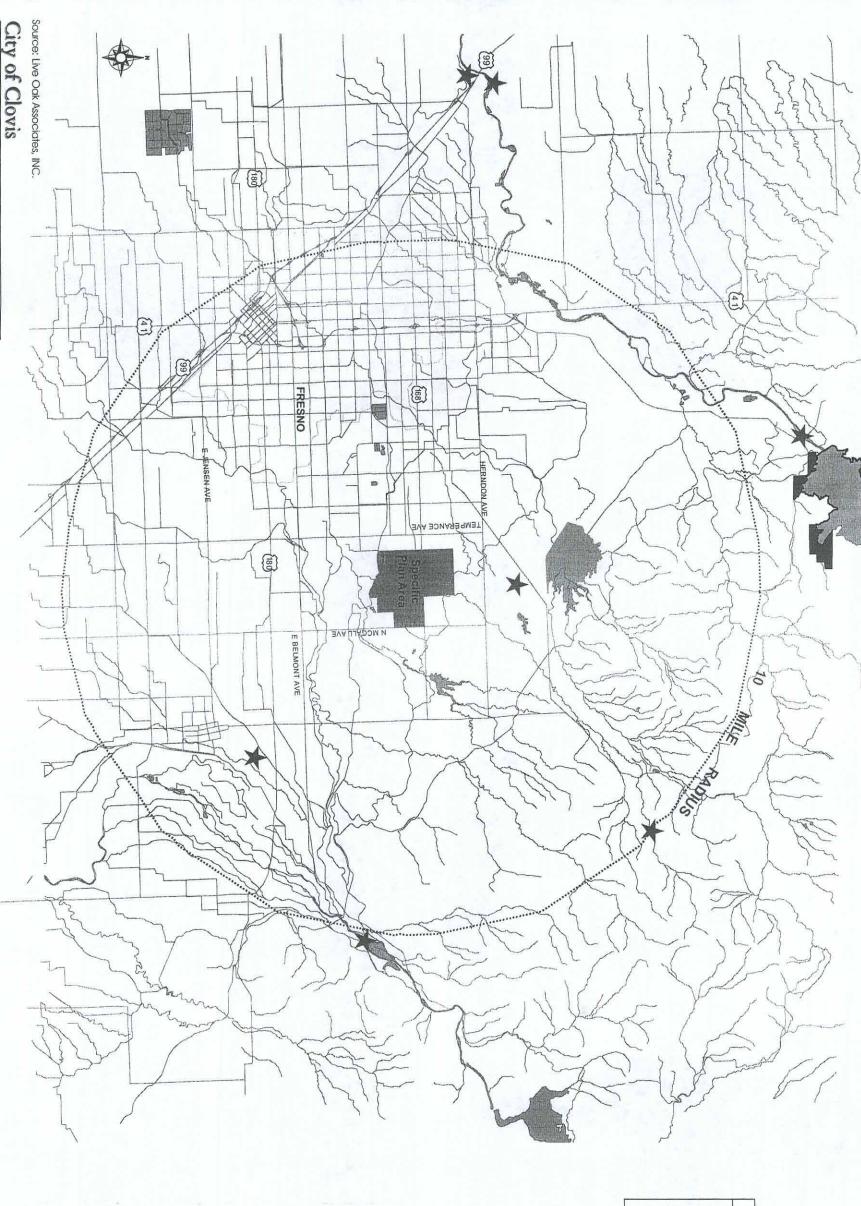
Level of Significance After Mitigation: Less than significant.

IMPACT: CREATE A SUBSTANTIAL ADVERSE EFFECT ON RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITY

Impact Analysis: Much of the riparian habitat along Dog Creek is highly fragmented. In addition, along much of its course through the project area, Dog Creek is flanked by agricultural lands. The riparian habitat within the project area is generally low value to wildlife due to fragmentation, with most patches of riparian habitat being no more than a few square meters in size. No riparian habitats in the project area have multiple canopy layers or a well-developed understory that would be considered suitable habitat for most native wildlife species commonly associated with such habitats.

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San Joaquin Kit Fox Observations







Southeast Urban Center Specific Plan

Implementation of the proposed Specific Plan could potentially result in damage or removal of these habitat patches. However small these habitat patches may be, they provide locally important cover, foraging habitat, and, possibly nesting habitat for birds common to the project area and riparian species moving through the area. Riparian habitats of the region have been substantially reduced in area, and further losses, however small, would constitute a significant impact of the proposed land use plan.

The potential impacts of individual projects to the riparian habitats in the project area would be minimized by the establishment of development-free buffers on either side of the creek channel. Such setbacks are standard in this part of Fresno County, as they function in the preservation of water quality and biodiversity.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.4-2 Setbacks from canals or creeks for the purposes of habitat protection along recreational trails shall be determined by site specific reconnaissance studies in consultation with the appropriate resource management agency(ies).

Level of Significance After Mitigation: Less than significant.

IMPACT: CREATE A SUBSTANTIAL ADVERSE EFFECT ON JURISDICTIONAL WATERS

Impact Analysis: The U.S. Army Corps of Engineers (ACOE) regulates discharges of dredged or fill material into "Waters of the United States" (hereafter referred to as "jurisdictional waters"). These waters include wetlands and non-wetland bodies of water that meet specific criteria. ACOE regulatory jurisdiction pursuant to Section 404 of the CWA is founded on a connection or nexus between the water body in question and interstate commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the ACOE regulations.

Implementation of the proposed land use plan has the potential to impact the channel of Dog Creek and, possibly, other isolated wetlands occurring in scattered locations of the project area. The jurisdictional status of these waters is presently in question due to the Solid Waste Agency of Northern Cook County (SWANCC) vs. ACOE decision of the U.S. Supreme Court in January 2002 that stated the ACOE did not have jurisdiction over non-navigable, isolated, intrastate waters solely on the basis of their use by migratory waterflow. Dog Creek appears to be an intrastate water that was never tributary to the San Joaquin River, or other navigable waters of the state. Therefore, Dog Creek may not be subject to the jurisdiction of the ACOE.

The CDFG, through Sections 1601 and 1603 of the California Fish and Game Code provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream or lake where fish or wildlife resources may be affected adversely. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. CDFG regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFG.

Therefore, even if the ACOE does not have jurisdiction over Dog Creek, all projects within the project area would be required to delineate all waters within the project area and obtain permits from the appropriate agency at the time of application submittal per CDFG, as well as the Regional Water Quality Control Board under provisions of the State Water Code.



While other small seasonal wetlands may be present within the project area, all would be isolated from other jurisdictional waters, due in part to land leveling that occurred when the project area was brought into agricultural production. Adhering to all applicable permit programs at the time of application submittal would ensure that no net loss of jurisdictional waters would occur within the specific plan area.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.4-3 Developments with potential jurisdictional waters shall comply with the permit program of the appropriate resource management agency.

Level of Significance After Mitigation: Less than significant.

IMPACT: INTERFERE SUBSTANTIALLY WITH THE MOVEMENT OF ANY WILDLIFE SPECIES OR CORRIDORS

Impact Analysis: An analysis of the distribution of regional habitats suggests that the project area does not constitute a "movement corridor" for native wildlife, although many species move within it and through it. In particular, avian species opportunistically move through the project area in search of agricultural lands providing the best foraging habitat, and migrant birds move through the project area in route to breeding habitat further north during the spring, or in route to wintering habitat in the fall. Furthermore, amphibians, reptiles, birds and mammals move through their home ranges on a daily basis, and their young disperse to new habitats suitable for them.

The project area does not appear, however, contribute to important regional movement patterns. The project area is located immediately east of a large urban center that discourages many terrestrial vertebrates from moving through it from east to west. The presence of highly managed habitats of the project area comprise of rural residential development, the construction of a large school facility, the presence of fencing, roads, canals, and etc. render project area to be marginal for regular movements of many wildlife species.

Site development will have an adverse effect on home range and dispersal movements of native wildlife now using habitats where individual projects are to eventually occur. However, the habitats to be converted to urban uses are already highly disturbed and provide limited value for most native wildlife species. Additionally, a considerable amount of open space lands in the project vicinity will continue to be used by native species for home range and dispersal movements.

Many migratory species that now pass through the project area are neo-tropical migrant birds that are likely to pass through and over the project area even at Specific Plan buildout. Therefore, implementation of the proposed project would result in a less than significant effect on regional wildlife movements.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

5.5 CULTURAL RESOURCES

<u>Paleontological resources</u> are the fossilized remains of organisms that have lived in the region in the geologic past and the accompanying geologic strata. Because the majority of species that have existed on earth are extinct, the fossil records represent the primary source of data on ancient life forms. In addition, the fossil record is finite, and many scientists feel that no single species is sufficiently understood or represented in research as to preclude further need for specimens. Paleontological resources are considered non-renewable and important. Paleontologic sites are those that show evidence of pre-human existence. Quite frequently, they are small outcroppings visible on the earth's surface. While the surface outcroppings are important indications of paleontologic resources, it is the geologic formations that are most important.

Archaeology involves the physical, structural, and documentary evidence of past human endeavors. Such cultural resources may or may not be visible on the surface, and may be of either prehistoric or historic origin. Artifacts are considered finite and non-renewable resources. Archaeological sites are defined as locations containing significant levels of resources that identify human activity. Generally, a site is defined by a significant accumulation or presence of one or more of the following: food remains; waste from the manufacturing of tools; tool concentrations (i.e., obsidian); alignment of stones; modification of rock surfaces (i.e., mortars); unusual discoloration or accumulation of soil (i.e., yields past fire activity); or skeletal remains. Archaeological sites are classified into three categories: prehistoric, ethnographic and historical. Prehistoric sites are resources for which there is no evidence of Euro-Americans contact. Ethnographic sites are Native American sites associated wit the early settlement period by Euro-Americans. Historical sites are associated with the advent of written documents and area considered Euro-American sites.

Historical resources are found throughout most cities and are reminders of historical and cultural development. Resources include buildings, structures, street lighting systems, spaces, sites or components thereof. Uses include residential, non-residential (i.e., commercial, industrial, institutional), and public facilities. Resources may be important individually or as a part of a district or grouping of complementary resources.

5.5.1 Methodology Related to Cultural Impact Assessment

A cultural resource study was completed for the Southeast Urban Center by Donald G. Wren, a consulting archaeologist in January 2002. The report is summarized in the following section and is part of this document as Appendix F under a separate cover, which is on file with the City of Clovis Planning Services Department at 1533 Fifth Street, City of Clovis.

- Historical Resources Records Check: A records check was conducted through the Southern San Joaquin Valley Information Center (SSJVIC). Under the State Office of Historic Preservation, the SSJVIC is responsible for the local management of the California Historic Resources Inventories.
- Review of Past Research Efforts: Past research such as Buena Vista Lake, Tulare Lake, Pine Flat
 Reservoir, Wishon Reservoir, Helms Transect, Balsam Meadows and others provides proper context.
 A comprehensive history and prehistory of the Southern Sierra Nevada by TCR/ACRS (1984),
 Moratto's California Archaeology (1984), and the Redbank and Francher's Creeks by Meighan and
 Dillon. This information was used to place the project area within a cultural context of the preliminary
 evaluation of any resources that may have been located within the project area.
- Field Survey: Three survey approaches were utilized: 1) a complete survey on plots of land that
 were recently plowed or had been harvested for excellent visibility; 2) a general survey on plots of



land with a high growth of weeds or thistle; and 3) an intuitive survey where areas are under intense cultivation, pasture with livestock, or the presence of residences where the owners can not be interviewed. A complete survey involved walking over plots of land in segments of ten to twenty meters (i.e., 33 to 64 feet); a general survey involved walking over areas in segments of fifteen to thirty meters (i.e., 49 to 98 feet); and an intuitive survey involved examining only the likely spots where any rocks would have been cleared from the fields.

- Interviews: A number of interviews were conducted with local residents.
- Analysis of the Data: Data from each level of the investigation were used to determine the presence
 or absence of cultural resources within the project area and to determine the likelihood for previously
 unknown resources to exist on-site.

Based on a familiarity of the lands east of Clovis some areas were more likely to reveal cultural resources than others. However, the overall area was viewed as having low sensitivity (few or no archaeological sites). No archaeological resources were found in all of the previous surveys conducted within or near the project. In addition, the project area has undergone extensive and intensive cultivation for over one hundred years.

5.5,2 Existing Conditions Related to Cultural Resources

Environmental Setting

The project area is located in the greater Fresno-Clovis Metropolitan Area in the heart of the San Joaquin Valley. In general, the topography of the San Joaquin Valley is gentle, with most irregularities in relief formed by meandering streams and gullies that dissect the alluvium floodplain. Locally, the project area is located immediately east of the City of Clovis in unincorporated Fresno County, but within the City's sphere-of-influence. The project area encompasses approximately 3,307 acres bound by Locan Avenue to the west, McCall Avenue to the east, portions of Bullard Avenue and Shaw Avenue to the north, and the Gould Canal and Dakota Avenue to the south (see Figure 3.3-1, Local Vicinity).

Clovis was historically a lumber milling and agricultural community. Currently a large percentage of the project area consists of rural residential, agricultural and vacant land. Low-density residential land use dominates the developed area. Clovis' commercial development is concentrated downtown along the Clovis Avenue corridor that includes Old Town, and along the Shaw Avenue and Herndon Avenue Corridors.

Paleontological Resources

According to the San Bernardino County Museum's review of pertinent geologic information for the City of Clovis, the City is located on recent alluvium, pre-Cretaceous meta-sedimentary rocks, and Pleistocene river and possibly lake sediments. Based on these sedimentary formations, the Sensitive Paleontological Areas Map contained in the City of Clovis General Plan EIR delineates the City's Planning Area in two categories, the areas of "low" paleontologic sensitivity and the areas of "undetermined" paleontologic sensitivity.

The project area contains areas of low sensitivity as well as the areas of undetermined sensitivity. The areas of recent alluvium, consisting of coarse-grained unconsolidated river wash, is too young to contain paleontologic resources, thus delineated as having "low" paleontologic sensitivity. Similarly, the areas of pre-Cretaceous meta-sedimentary rocks are also delineated as "low" within the map, since the sediment may have contained abundant fossils at one time but would have been destroyed.

Due to the deposition occurring in the project area at various times throughout the Pleistocene, there are at least three distinct sedimentary formation exposed in the Pleistocene river sediments, which potentially contain significant non-renewable paleontologic resources. These areas marked on the Sensitive Paleontological Area map of the General Plan as "undetermined".

- Modesto Formation, Upper Unit Primarily composed of Sierran arkosic sand and gravel that
 precedes fine sand and silt near the lower San Joaquin River. Carbon-14 dating determines the
 age of these sediments to be 9,000 to 27,000 old.
- <u>Riverbank Formation</u>, <u>Middle Unit</u> Associated with broad alluvial surfaces, the middle unit of the Riverbank Formation consists of yellowish-brown sandy loam. Uranium-trend dating and other research suggest the age of this unit to be from 45,000 to 260,000 years old and to have produced a vertebrate fauna assigned to the Rancholabrean Land Mammal Age.
- <u>Turlock Lake Formation, Upper Unit</u> These sediments contain stratified silt and fine sand and are believed to be 600,000 years old. This unit contains vertebrate fossils, indicating an Irvingstonian Land Mammal Age, which have been recovered in several locations therein.

Prehistory

In the pretohistoric period, the Indians that occupied the Clovis Southeast Specific Plan area were speakers of Yukustan languages. The Yokustan speakers are commonly called Yokuts. It is estimated that there were approximately 63 groups of prehistoric Yokuts, and these units were scattered throughout the Central Valley of California as well as along the western foothills of the Sierra Nevada and the eastern slopes of the Coast Range. The staple food source among the Yokuts, as among most of the California aboriginal population, was the acorn. The process of gathering and preparing acorns entailed an immense amount of labor.



The Yokuts belonged to a linguistic family known as the Penutian. Other California Indian groups such as the Costanoan, Maidu, Miwok, and Wintun, who inhabited the area north and west of the Yokuts, belonged to this same linguistic family. Although some Yokuts dialects were mutually intelligible, especially among the valley tribes, others were not, as in the case of the foothill people. This diversity of dialects among the foothill tribes might be partially explained as a difference in topography of their territory. The dialects became more specialized the further they were found from what is considered the center of influence and possibly the origin of the Yokuts language.

The Yokuts were unique among the native California population in that they were the only group that were divided into true tribes, each with its own name, dialect and territory. Boundaries among various groups were recognized, but were often transgressed for purposes of hunting and gathering. Trade was frequent among the various Indian groups in California.

Protohistory (Ethnographic)

Various expeditions into the San Joaquin Valley exposed some of the native Californians to European Culture and diseases. The first known contact was made by Captain Pedro Fages of the Spanish cavalry in April 1772. He was accompanied by Father Juan Crespi and both Fages and Crespi kept diaries which provide some of the earliest accounts of the Sierra Nevada region.

Many of the Indians that had been brought to the Spanish missions along the coast were fleeing into the valley. Spanish soldiers were thus sent into the San Joaquin Valley to capture such Indians, therefore,

bringing the valley's residents into contact with the Spanish. After the initial contact, the Gold Rush brought more foreigners into the valley and adjacent mountain regions.

History

The early history of project area is related to events in general that characterized the scene of the eastern plain and lower foothills of Fresno County. Historical events surrounding the City of Clovis such as the discovery of gold, sheep and cattle ranching, developments in Academy, Letcher and Auberry Valley, the lumber industry and the building of railroads all had an impact in the unique growth of this City.

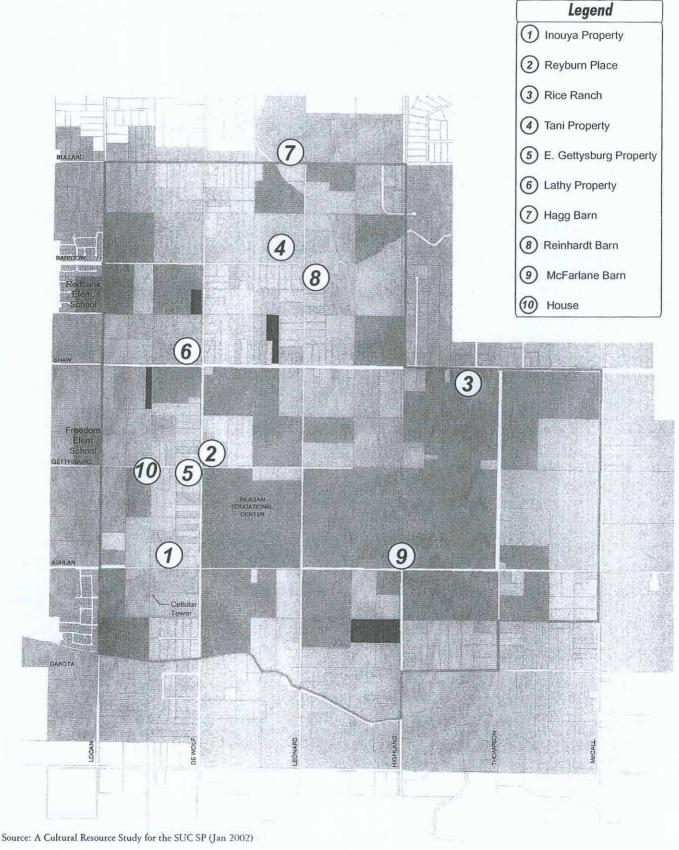
The City of Clovis began as a railroad town, where the Southern Pacific built a spur, as a freight line up to Pollasky (Friant) on the San Joaquin River. On this line they established a station named for the first name of the area's major grain grower, Clovis Cole. With the completion of the flume, Clovis became a lumber town. When lumbering began to fail after World War I, Clovis became a ranching and farming center.

Before irrigation transformed the land, the plains were green only in winter and spring. A major force in the development of the Fresno County was the efforts of Church and Easterby in the building of canals, which revolutionized Fresno County's economy. In the late 1800's the increase of farming prompted the expansion of some irrigation systems and the creation of others. The Enterprise Canal, which touches the project area at the corner of Bullard and Leonard Avenues, was constructed during this period. Part of the general pattern was the replacing of smaller farmers and ranchers by large agricultural interest, which moved the smaller landholders into the cities of Clovis, Fresno, and Sanger.

The surveys identified a total of ten potentially significant historical sites (see Table 5.5-1, *Site Records for Historic Resources*). The majority of these sites represent architectural style of early agricultural residences. However, these sites were not identified as unique and the majority of them have been renovated extensively, therefore, compromising their historic integrity. In addition, none of the ten sites are registered nationally. See Figure 5.5-1, *Location of Historic Resources*, for the location of the identified potentially significant historical sites.

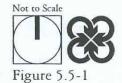
TABLE 5.5-1 SITE RECORDS FOR HISTORIC RESOURCES					
	Common Name	Location	Date Constructed	Historic Attributes	
1.	Inouya Property	7630 E. Ashlan	1890-1910	HP2, HP33	
2.	Reyburn Place (Barn)	4538 N. DeWolf	1880-1890	HP2, HP33	
3.	Rice Ranch	9049 E. Shaw	1920-1930	HP4, HHP33, AH10	
4.	Tani Property	8418 E. Barstow	1900-1910	HP2, HP33	
5.	E. Gettysburg Property	7928 E. Gettysburg	1900-1930	HP2, HP33	
6.	Lathy Property	7920 E. Shaw	1890-1910	HP2, HP33	
7.	Hagg Barn	8403 E. Bullard	1920-1930	HP2, HP33	
8.	Reinhardt Barn	5463 N. Leonard	1920-1930	HP3 .	
9.	McFarlane Barn	North side of Ashlan and Highland Ave.	1920-1930	HP3	
10.	House, Locan & E. Gettysburg	SE corner of Locan and E. Gettysburg	1910-1920	HP2	

Location of Historic Resources



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5.5.3 Standards of Significance

The following criteria are extracted form the Cultural Resources Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA) Guidelines. The project will, at a minimum, be considered to have a significant effect related to cultural resources if any of the following may occur:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

For purposes of these standards of significance, a "substantial adverse change in significance" of a historic or archeological resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be "materially impaired" as that term is defined in Chapter 14 California Code of Regulations §15064.5(b)(2).

5.5.4 Impacts and Mitigation Measures

IMPACT: CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE SIGNIFICANCE OF A HISTORICAL RESOURCE

Impact Analysis: Section 10564.5 of the CEQA Guidelines defines historic resources as resources listed or determined to be eligible for listing by the State Historical Resources Commission, a local register of historical resources, or the lead agency. Generally, a resource is considered to be "historically significant", if it meets one of the following criteria:

- i) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- ii) Is associated with the lives of persons important in our past;
- iii) Embodies the distinctive characteristics of a type, period, region or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- iv) Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, historical resources must also possess integrity of location, design, setting, materials, workmanship, feeling, and association. If the criteria are met and the resources is determined eligible for the California Register of Historical Resources (CRHR), the lead agency must evaluate whether the project will cause a "substantial adverse change in the significance of the historical resource," which the regulation defines as a significant effect on the environment.

The survey yielded ten recorded sites of historical importance, of which three were recognized as being of particular interest:



- An early rural residence with an attached water tower at 7630 E. Ashlan Avenue (HP2-HP33) that has interesting structure with comparatively little modification. However, the setting of the house has been compromised by the presence of a modern house seventy five feet to the west;
- A barn at 4538 N. DeWolf Avenue, which is not unique in itself, but yields significance because it was associated with an early family who built a basin house in 1881 known as the Reyburn place. Although the Reyburn place has been bulldozed with no remaining features of the original, the remaining barn may be eligible for National Register of Historic Places (NRHP) status based on above criteria i and iv. It should also be noted that the building status is compromised by the presence of a manufactured home on the property; and
- An early western barn known as the Rice Ranch (9049 E. Shaw) set in rural residential with open wheat fields to the east and north, is a single family bungalow style house with two metal silos, one brick silo and various early farm machinery.

While the site survey identified ten potentially significant historical resources in the project area, most properties have gone through several modifications, therefore compromising their special status as historically significant. While the Reyburn place is also listed under the Fresno County Library as having local significance, the house itself has been destroyed and the barn in itself is not unique in nature. Additionally, there is a manufactured house on the property as well.

Included in the General Plan Open Space/Conservation Element are ways to retain and maintain historic structures, which involves cooperating with various community organizations to develop programs, utilizing redevelopment fund or other mechanisms to promote historic restoration, and implementing flexible zoning regulations. Implementation of the proposed project is consistent with the General Plan, and methods specified in the Open Space/Conservation Element would ensure less than significant impacts pertaining to historical structures in the project area. In addition, through the City's environmental review process, future development project would be evaluated on an individual basis for potential impacts to historical resources.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE SIGNIFICANCE OF AN ARCHAEOLOGICAL RESOURCE OR SITE

Impact Analysis: A Cultural Resource Study for the Clovis Southeast Urban Center Specific Plan was prepared in January 2002 (see Appendix F). The author of the report, Donald G. Wren, has completed three archaeological surveys within the project boundaries and five within a mile radius and used his knowledge for the area to determine areas of low to high archaeological sensitive sites. Three different survey methods (i.e., complete survey, general reconnaissance, & intuitive survey) were employed based on the sensitivity scale (i.e., high, medium, & low), and revealed no archaeological resources. The author's previous surveys conducted within or near the project area also found no archaeological resources. Furthermore, as noted in the Historical Setting section, the project area has undergone extensive and intensive cultivation for over one hundred years.

However, the project area contains sensitive archaeological areas that are considered Moderate and Potentially High on the Sensitive Archaeological Areas (see Figure 5.5-2, Sensitive Archaeological Areas). Therefore, per General Plan Open Space/Conservation Element (1993) Goal 7, Policy 7.2, archaeological surveys are required as a component of development submittals in areas with Potentially High or High archaeological resources. The services of a qualified archaeologist are also required to determine the extent and significance of a site if evidence of archaeological artifacts is discovered during excavation. Implementation of the propose Specific Plan is consistent with the Clovis General Plan, and adhering to the following mitigation measure would reduce potential archaeological impacts to less than significant.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.5-1 Should site preparation, grading or excavation activities uncover a previously unidentified archaeological resource, work shall be stopped and a qualified archaeological consultant shall be retained to assess the find(s).

Level of Significance After Mitigation: Less than significant.

IMPACT: CAUSE A SIGNIFICANT ADVERSE CHANGE IN THE SIGNIFICANCE OF A
PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGICAL FEATURE

Impact Analysis: Review of geological landforms and the potential for paleontological resources shows that some part of the proposed project area lies within the boundaries containing geologic deposits of undetermined sensitivity (see Figure 5.5-3, *Sensitive Paleontological Areas*). Areas marked on the Sensitive Paleontological Area map of the General Plan as "undetermined" includes Pleistocene river and possibly lake sediments with at least three distinct sedimentary formations (Modesto, Riverbank, & Turlock Lake Formations). Because it is difficult to identify potentially high sensitivity areas within undetermined areas, Section 4.13 Cultural Resources of the General Plan EIR recommends a list of measures to alleviate potential paleontological impacts.

Implementation of the project area is consistent with the General Plan, and adhering to the following mitigation measure would reduce potential paleontologic impacts to less than significant.

Level of Significance Before Mitigation: Potentially significant.

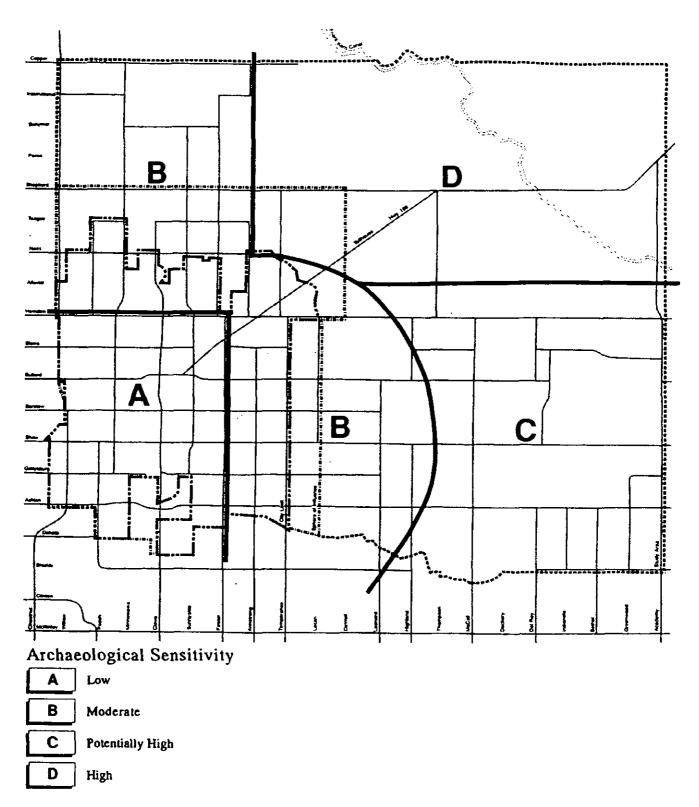
Mitigation Measures:

5.5-2 In the event that site preparation, grading or excavation activities uncover a previously unidentified geological deposit identified as fossil bearing, work shall be stopped and a qualified paleontological consultant shall be retained to assess the find(s) and appropriate steps shall be instigated.



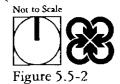
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Sensitive Archaeological Areas

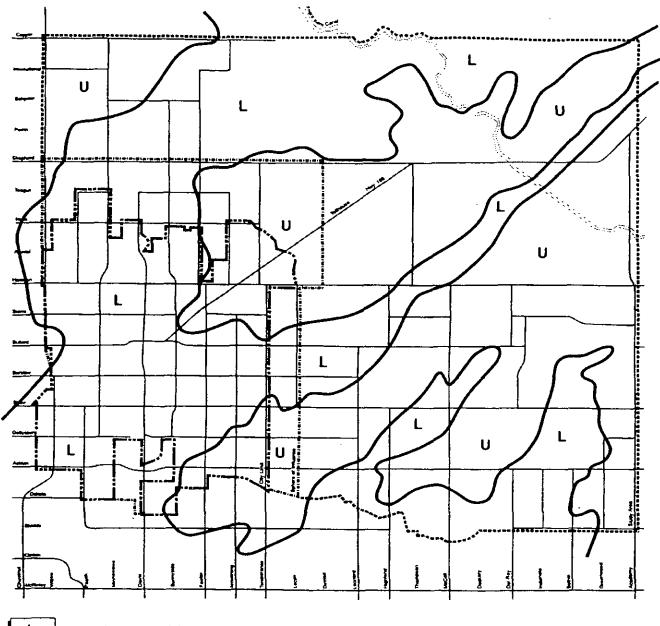


Source: California Archaelogical Inventory, Southern San Joaquin Valley Information Center, California State University, Bakersfield City of Clovis

Southeast Urban Center Specific Plan



Sensitive Paleontological Areas



- Areas of Low Sensitivity
- U Areas of Undetermined Sensitivity

Source: San Bernardino Museum

City of Clovis

Southeast Urban Center Specific Plan



- 5.5-3 For all areas of the Paleontological Sensitive Areas map marked as "undetermined," the following steps should be performed:
 - Monitoring of excavation in areas identified as likely to contain paleontologic resource by a qualified paleontology monitor. The monitor should be equipped to salvage fossils as they are unearthed to avoid construction delays and to remove samples of sediments which are likely to contain the remains of small fossil vertebrates. In addition, the monitor must be empowered to temporarily halt or divert equipment to allow removal of abundant or large specimens;
 - Preparation of recovered specimens to a point of identification, including washing of sediments to recover small vertebrates;
 - Identification and curation of specimens into a museum repository with retrievable storage; and
 - Preparation of a report of findings with an appended itemized inventory of specimens.
 The report and inventory, when submitted to the appropriate Lead Agency, signifies completion of the program to mitigate impacts to paleontologic resources.

Level of Significance After Mitigation: Less than significant.

IMPACT: DISTURBANCE OF HUMAN REMAINS, INCLUDING THOSE INTERRED OUTSIDE OF FORMAL CEMETERIES

Impact Analysis: Based on the review of existing studies as well as disturbed condition of the project area due to intensive agricultural use, it is unlikely that any human remains would be uncovered due to the proposed project. However, in the event that such remains are discovered, the following mitigation measures would alleviate the potential impacts to human remains to less than significant level.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.5-4 Should site preparation, grading or excavation activities uncover previously unidentified human remains, work shall be stopped and a qualified paleontological consultant shall be retained to assess the find(s).

Level of Significance After Mitigation: Less than significant



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5.6 HYDROLOGY AND WATER QUALITY

Hydrology deals with properties, distribution and circulation of water. Water quality deals with the quality of surface and groundwater. Groundwater is water below the surface of the earth. Surface water is water on surface of the land and includes lakes, rivers, streams and creeks. This section discusses the existing characteristics of, and the potential effects of, the proposed project on ground and surface waters.

5.6.1 Methodology Related to Hydrology and Water Quality

The methodology for identifying and assessing potential hydrology and water quality impacts of the proposed project in this EIR included the review of the following documents:

- Section 4.8, Water Resources, Fresno County General Plan Update EIR, February 2000.
- Groundwater Report, Fresno Irrigation District, January 1, 2002.
- Section 4.3, Hydrology, City of Clovis General Plan EIR, December 1992.
- Water Mater Plan Update, Phase One, City of Clovis, April 1995.
- Water Master Plan Update, Phase II Facilities Plan, City of Clovis, July 1999.
- Fresno Metropolitan Flood Control District Master Plans (Urban and Rural), Fresno Metropolitan Flood Control District.

5.6.2 Existing Conditions Related to Hydrology and Water Quality

Existing Conditions Related to Surface Waters

Existing Watercourses

The City of Clovis is located on the eastern side of the central San Joaquin Valley floor approximately 30 miles east of the main trough of the valley and about 7 to 10 miles west of the base of the foothills of the Sierra Nevada range. The City lies between the Kings River drainage area to the south and the San Joaquin River drainage area to the north.

The San Joaquin Valley is separated into two hydrologic basins by a divide that interrupts the lengthwise slope of the Valley. The two basins include the San Joaquin Subbasin to the north (including Merced County), which drains to the Pacific Ocean, and the Tulare Subbasin to the south, which has an outlet only when rare flood flows carry its water across the divide and into the San Joaquin Subbasin (Merced Co., 1990).

The Central Valley Water Quality Control Plan (Basin Plan) refers to the San Joaquin Basin as the San Joaquin River drainage basin. The San Joaquin River drainage basin covers 15,880 square miles and includes the entire area drained by the San Joaquin River. It includes all watersheds tributary to the San Joaquin River and the Delta south of the Sacramento River and south of the American River watershed. The principal streams in the basin are the San Joaquin River and its larger tributaries: the Consumnes, Mokelumne, Calaveras, Stanislaus, Tuolumne, Merced, Chowchilla and Fresno Rivers. Major reservoirs and lakes include Pardee, New Hogan, Millerton, McClure, Don Pedro, and New Melones (CVRWQCB)



Basin Plan, 1998). U.S. Geological Society (USGS) further divides the San Joaquin Basin into smaller basins, or watersheds, with hydrologic unit codes (HUCs) to identify each watershed.

Thirty-eight percent of the surface water in the San Joaquin Subbasin is imported from the Sacramento-San Joaquin Delta through the Delta-Mendota Canal and the California Aqueduct (U.S. Bureau of Reclamation, 1990; California Department of Water Resources, 1991). Most of the rest of the surface water comes from the Sierra Nevada through the tributaries of the San Joaquin River and the San Joaquin River itself.

The Greater Clovis area is traversed by three natural stream systems. Each of these systems is comprised of sub-streams or creeks that collect together to discharge to a centralized natural drainage channel. These systems include the Redbank Slough. Fancher and Hog Creek system, the Dry and Dog creek system, and the Pup Creek/Alluvial drain system. The latter is a tributary of the original Dry Creek Channel. These stream systems collect storm runoff from the foothills east of the project area, in addition to within the project area. They convey the runoff to the Fresno Slough, which is located west of the City of Fresno where the Fresno Irrigation District (FID) has obtained flooding easements. Ultimately, the discharge from the Fresno Slough is to the San Joaquin River. Many of these channels have modified over time such that they have become duel-use storm water conveyance and irrigation water conveyance channels. Those streams that have not been used for irrigation purposes have essentially remained in their natural state and have been historically flowed uncontrolled during storm water runoff events.

There are six FMFCD Master Plan Stream Channels located within the project area: Dog Creek, Dog Creek Tributaries No. 1, No. 2, No. 3, and No. 4; Redbank Tributary No. 10; and an unnamed tributary believed to be part of Dog Creek.²

Existing Drainage Facilities

The Fresno Metropolitan Flood Control District (FMFCD) is responsible for storm water management within the Fresno-Clovis metropolitan area, including the Southeast Urban Center Specific Plan area. Storm water runoff produced by land developed is controlled through a system of pipelines and storm drainage retention basins. Roughly half of the project area is included in an adopted urban Master Plan drainage area. A small portion of the Specific Plan area northeast of the Enterprise Canal is within the Rural Master Plan area where no urban storm water drain facilities are currently planned. However, changes in land use designation may result in the need for revision to the existing urban and rural Master Plans.³

The project area includes land within two existing storm drainage basins, Drainage Basin Area "3G", located at Locan between Barstow and Shaw, and Drainage Basin "DO", located at Locan and the Gould canal, and one proposed storm drainage basin, Drainage Area "DP" (see Figure, 5.6-1, *Project Area Storm Drainage Facilities*). The remaining Specific Plan area, south of the Enterprise Canal, and not currently within an adopted urban Master Plan, will be within the proposed Drainage Basin "DP". A study to determine the location of proposed Basin "DP" has been begun by the FMFCD. If the location of Basin "DP" is determined to be on the north side of the Gould Canal, then the appropriate elements of the Specific Plan will need to be updated to show the proposed basin location. See Figure 5.6-2 through 5.6-4 for the proposed locations for Drainage Area "DP".

² Per discussion with Dan Gilbert, Fresno Metropolitan Flood Control District, November 2002.

³ Ibid.

FO

Fancher Creek

8

Dog Creek

 \Box

Clovis Lakes

B

Big Dry Creek

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Alluvial Drain

Legend

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Holland Creek

Little Dry Creek

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Wolf Lakes

Tributary

Basin

Reservoir

ð

Vernon Drain

 $\stackrel{\mathsf{R}}{\circ}$

Redbank Creek

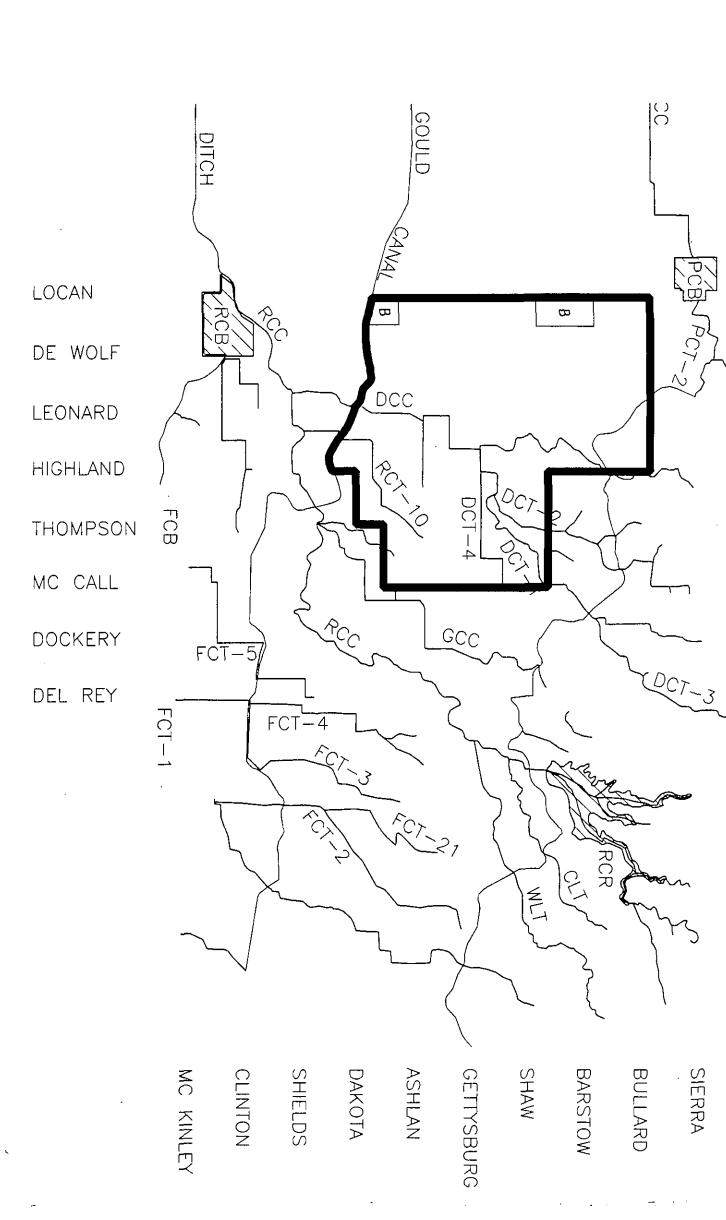
S C

Mud Creek

Pup Creek

8

Greys Creek





City of Clovis

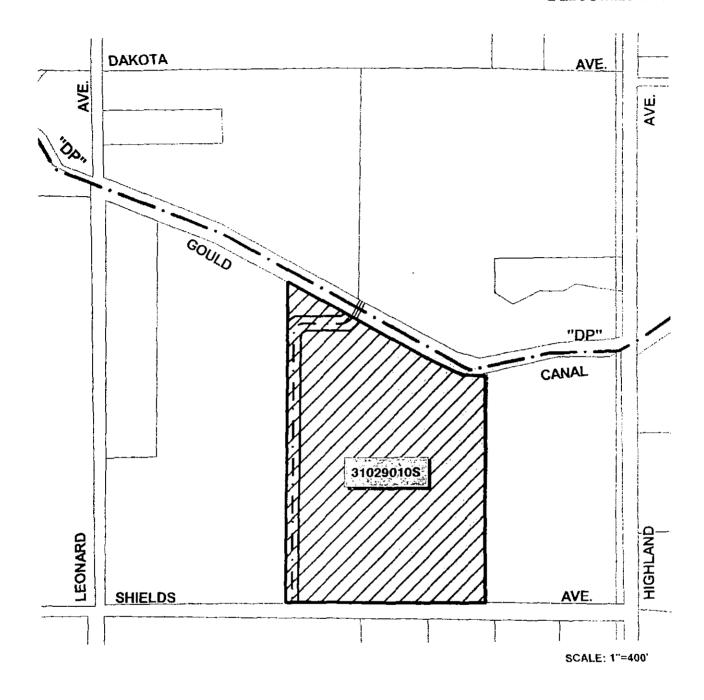
Southeast Urban Center

Specific Plan

Source: Provost & Pritchard Engineering Group, Inc.

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Basin "DP" Site Selection Study Alternative 2



APN 31029010S - WALLACE & ALICE SHUBIN
PROPOSED BASIN "DP" ACQUISITION
GROSS AREA = 30.6 ACRES

REDBANK CREEK REALIGNMENT

"DP" DRAINAGE AREA BOUNDRY

Source: FMFCD

City of Clovis

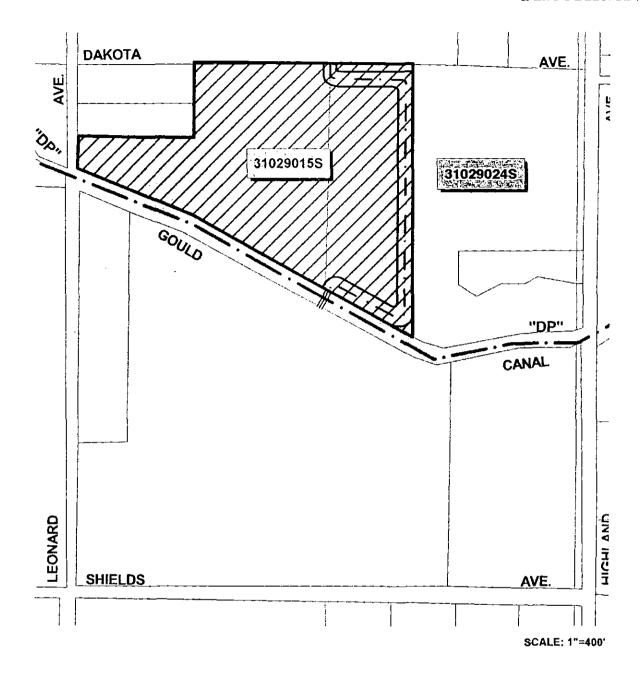
Southeast Urban Center

Specific Plan



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Basin "DP" Site Selection Study Alternative 4



APN 31029015S - CARLOS WATSON - 19.3 AC. REDBANK CREEK REALIGNMENT

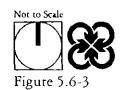
PROPOSED BASIN "DP" ACQUISITION GROSS AREA = 32.8 ACRES

"DP" DRAINAGE AREA BOUNDRY

Source: FMFCD

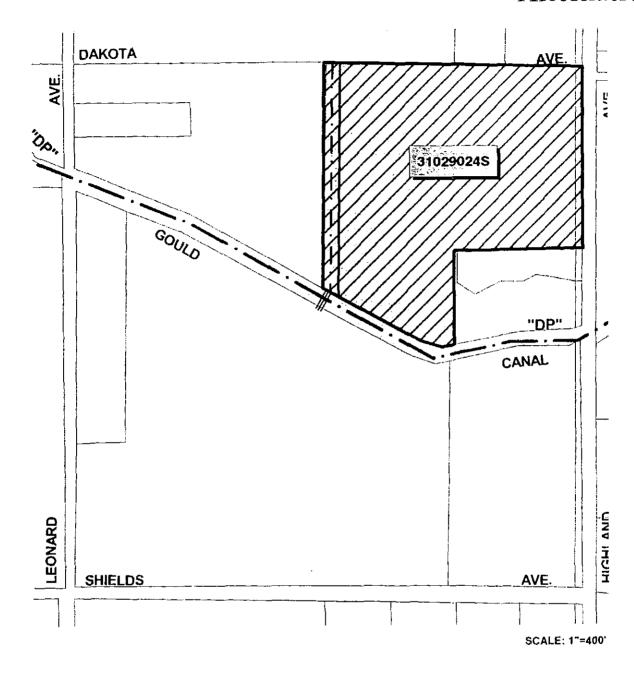
City of Clovis

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Basin "DP" Site Selection Study Alternative 5



APN 31029024S - GREGORY JUE

PROPOSED BASIN "DP" ACQUISITION GROSS AREA = 34.3 ACRES

"DP" DRAINAGE AREA BOUNDRY

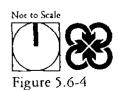
REDBANK CREEK
REALIGNMENT

Source: FMFCD

City of Clovis

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The only existing pipelines in this area can be found in the vicinity of the Reagan Educational Center, along its western and eastern edges extending south to Drainage Basin "DO". There are numerous proposed pipelines in this area for the future collection and transport of urban run-off to the "3G" and "DO" drainage basins. However, there are no additional drainage basins proposed in these drainage areas.

In the future, FMFCD plans to construct channel improvements along Dog Creek and other streams within the project to improve stream capacities. These eventual improvements will begin at the downstream ends of each channel and proceed upstream. As development proposals within the project area are routed to the FMFCD by the City of Clovis, comments will be provided as to what conditions of development are necessary to implement the FMFCD Master Plan. It is then up to the City to enforce those conditions as development occurs. FMFCD recommendations will not include channel improvements of other features that would alter 100-year flood zones for new development. Protection of new development from flood hazards shall be accomplished through policies that prohibit development within the flood plain

Flood Hazards

Because the Central Valley is a natural drainage basin for thousands of acres of Sierra and Diablo foothill and mountain lands, flooding is a natural occurrence in the San Joaquin Basin. Fresno County and the Central Valley experience two types of floods: (1) general rainfall floods occurring in the late fall and winter in the foothills and on the valley floor, and (2) snowmelt floods occurring in the late spring and early summer.

According to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency (FEMA), portions of the project area are classified within Zone A, defined as the area most susceptible to flooding hazards during a 100-year flood event where base flood elevations and flood hazards have not yet been determined. The FIRM is used to set insurance rates for property lying within flood-prone areas and in implementing flood control ordinances that govern new development.

During the early 1990s, the Army Corps of Engineers (ACOE) constructed projects, including the Redbank-Fancher Creeks Project, to provide flood protection to the Fresno-Clovis metropolitan area and nearby agricultural land. Although the flood zone designations with the Specific Plan project area did not change following the Redbank-Fancher Creeks Flood Control Project, 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.

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 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.

As determined by the ACOE, the project area is within the calculated dam failure area of Fancher Creek Dam. Although the dam failure inundation map does not currently have state approval, it has been submitted to the Governor's Office of Emergency Services for review and approval. 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. The City of Clovis will be responsible for preparing plans for State-designated dams affecting the project area. The plans should be updated every two years and submitted to the State Office of Emergency Services for review and comment.

Existing Conditions Related to Groundwater

Regional

Groundwater in the San Joaquin Valley is supplied by runoff from foothills and mountains, which percolates through the soil into the underground aquifers. There are three general levels of aquifers in the San Joaquin Subbasin, and all levels are pumped for irrigation and drinking water supply. Irrigation is the largest source of recharge to the regional aquifers. Currently, groundwater withdrawals in the Valley exceed recharge. Consequently, subsidence of land throughout the San Joaquin Valley has occurred, especially on the west side. Subsidence can be halted or reduced if the groundwater table is replenished or if pumping is reduced; however, storage space within an aquifer can be reduced by subsidence. All groundwater in the San Joaquin Basin are considered as suitable or potentially suitable, at a minimum, for municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply (CVRWQCB Basin Plan, 1998).

Local

The City of Clovis has relied on untreated, largely non-disinfected groundwater as its sole source of potable water. Aquifers in the project area are generally semi-confined to unconfined. 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.

Groundwater resources are closely managed to maintain groundwater balance. In Fresno-Clovis metropolitan area, the recharge program is implemented though the combined efforts of the Fresno Irrigation District (FID), the FMFCD, and the cities of Clovis and Fresno. The Cities' surface water allocations of San Joaquin River water are conveyed by FID canals to FMFCD recharge basins in the metropolitan area. This serves to replenish groundwater pumped by wells in the project area. In addition, the FMFCD operates several ponding basins in and around the project area, which serve the dual purpose of retaining stormwater drainage for flood protection and capturing surface water flows for groundwater recharge. These efforts have reduced the rate of groundwater overdraft.

Regionally, groundwater in the Fresno-Clovis area is almost in a state of balance though canal groundwater conditions reflect an unbalance between withdrawals and recharge. In addition, treated effluent produced by the Fresno-Clovis Regional Wastewater Treatment and Reclamation Facility is

⁴ City of Clovis Water Master Plan Update, Phase 1, April 1995.

conveyed to large evaporation and percolation ponds. Percolation pond achieve some level of nutrient reduction and disinfection by filtering effluent through soil and extracting the treated, soil-filtered effluent by means of reclamations 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.

Currently, the FID obtains measurements from approximately 75 well sites located in agricultural areas, over 115 additional well sites located within the Fresno and Clovis and urban area and numerous others outside the FID. The average depth to groundwater within FID boundaries is 67.6 feet⁵, an increase of 2.2 feet over the prior year. In rural areas, the groundwater level increased by 1.1 feet from 52.6 feet to 53.7 feet. During the 2001 irrigation season, the FID delivered 409,800 acre-feet of water, 59,046 acre-feet of which were delivered to recharge basins within urban areas. The net result net result was 53,902 acre-feet decrease in the volume of stored groundwater. This was primarily due to a shortened irrigation season and below normal runoff from the Kings River. District-wide there is a noticeable increase in the depth to groundwater, particularly in the urban areas, a trend that continues to lower the groundwater.

Pesticide contamination was discovered in some City wells in the late 1970s. As of April 1995, five of the 26 City wells have been fitted with granular activated carbon (GAC) water treatment facilities and four other wells are used only as standby units because of groundwater quality.

A number of factors influence the potential to develop groundwater for public supply in the project area. These factors include subsurface geologic conditions, depth to water and water level trends, aquifer characteristics, recharge, and groundwater quality. Subsurface conditions below the water level are important in terms of well yields and conditions above the water level are important when considering potential recharge operations.

Existing Conditions Related to Water Quality

Regional

Beneficial uses of surface waters and groundwater are critical to water quality management in California. State law defines beneficial uses of California's waters that may be protected against quality degradation to include (and not be limited to) "... domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050(f)). The Regional Water Quality Control Board is required to establish water quality objectives for surface waters per the Porter-Cologne Water Quality Control Act.

The CVRWQCB Basin Plan states that protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The Basin Plan lists beneficial uses for surface waters and groundwater within the San Joaquin River Basin. The Basin Plan also lists water quality objectives for both surface waters and groundwater within the San Joaquin River Basin.



⁵ As of January 1, 2002.

The National Water-Quality Assessment (NAWQA) Program is a water quality assessment performed by the U.S. Geological Society (USGS), evaluating more than 50 of the Nation's largest river basins and aquifers. The San Joaquin-Tulare Basins NAWQA Study Unit includes the San Joaquin Valley, the eastern slope of the Coast Ranges, and the western slope of the Sierra Nevada. A report, which summarized major findings that emerged between 1992 and 1995 from the water quality assessment of the San Joaquin-Tulare Basins Study Unit, noted the following:

- Toxicity to aquatic organisms in streams is attributed to pesticides. A wide variety of pesticides
 occur in the San Joaquin River and its tributaries, some at concentrations high enough to
 adversely impact aquatic life.
- There is potential for adverse effects on biota from pesticides in bed sediment and biota. Longbanned organochlorine insecticides continue to be transported to streams by soil erosion of contaminated agricultural fields, resulting in contamination of suspended sediment, bed sediment, and aquatic organisms.
- Nutrient concentrations in the San Joaquin River generally support the beneficial uses. Some
 nitrate and ammonia concentrations exceed criteria in some small tributaries, but generally do
 not limit beneficial uses in the main stem of the San Joaquin River. Nitrate concentrations in the
 San Joaquin River have been increasing over the last 40 years, but concentrations are still well
 below the drinking-water standard. None of the ammonia samples collected in the main stem of
 the San Joaquin River exceeded criteria during 1993–95.
- Habitat disruption and water chemistry have adversely affected native fish populations. Fish
 communities in the San Joaquin River and its tributaries change in response to water chemistry
 and habitat quality in a pattern suggesting that human activities, including agriculture, are
 important factors in controlling the distribution and abundance of fish species. Fish communities
 in the lower San Joaquin River were highly degraded compared with other NAWAQ study units,
 as was stream habitat at some sites.
- Drinking-water supplies from groundwater have been degraded by fertilizers and pesticides.
 Nitrate concentrations in groundwater frequently exceed drinking-water standards; however, pesticide concentrations rarely exceed drinking-water standards, with the exception of 1,2-dibromo-3-chloropropane (DBCP).

Local

As stated above, the City of Clovis has relied on untreated groundwater as its sole source of potable water. Pesticide contamination was discovered in some City wells in the late 1970's. As of April 1995, five of the 26 City wells have been fitted with granular activated carbon (GAC) water treatment facilities and four other wells are used only as standby units because of groundwater quality problems. Contaminants include 1, 2-dibromo-3-chloropropoane (DBCP) and ethylene dibromide (EDB) and nitrate. Naturally occurring contaminants such as iron and manganese are also present in some areas.

DBCP and EDB are primarily due to former pesticide application to the surrounding farmland. Nitrates can also become elevated due to farm practices and the presence of rural residential septic tanks. Iron and manganese are present in the alluvium and in some cases the groundwater. On a more limited areal scale, commercial and industrial solvents, particularly volatile organic compounds may enter the aquifer. This introduction is usually through poor storage and handling practices, careless or improper disposal, and leaking underground storage tanks. However, these constituents have not impacted city wells to date.

The City's water distribution system was constructed based on dispersed wells and a local distribution network of relatively small water mains. The loss of some wells and spatial distribution network of the remainder has created pumping activities to smaller isolated areas. In addition, many of the City's wells were historically in the southwest, in an area where groundwater conditions are generally favorable. However, growth areas have been to the north and east, including the project area, where groundwater conditions are not as good.

It is possible that some form of wellhead treatment at every public well in the City may be required. Such treatment may consist of disinfections, corrosion control, and/or removal of radionuclides and organic chemicals. However, many of the well sites are not sized, located or configured easily to accommodate wellhead treatment.

Water Quality Regulations

The proposed project would be subject to federal and state water quality regulations. These are summarized below.

Clean Water Act (see also discussion on page 5-68)

The Clean Water Act (CWA) is a 1977 amendment to the Federal Water Pollution Control Act of 1972 (United States Code, Title 33), which established the basic structure for regulating pollutant discharges to navigable waters of the United States. The CWA provides two general types of pollution control limits:

- Effluent limits that are technology-based and limit the quantity of pollutants discharged from a
 point source such as a pipe, ditch, tunnel, etc. into a navigable waterbody (nonpoint source
 pollution is subject to state control); and
- Ambient water quality standards that are based on beneficial uses and limit the concentration of pollutants in navigable waters.

The primary focus of the 1977 CWA amendment was toxic substances. In 1987, the CWA was reauthorized and again focused on toxic substances, mandating an urban storm water runoff National Pollutant Discharge Elimination System (NPDES) permit program. Management of nonpoint source discharges is regulated under Section 319 of the CWA. Section 319 requires the states to submit an assessment report that identifies navigable waters that are not expected to achieve applicable water quality standards or goals, identify categories of nonpoint sources or specific sources that add significant pollution to contribute to non-attainment of water quality standards or goals, and describe the process to develop best management practices and measures to control each category of nonpoint source or specific sources. The states are then required to develop a management program that proposes to implement the nonpoint source control program.

Section 305(b) of the CWA requires the states to perform a biennial assessment of the water quality of navigable waters within each state. The assessment is required to analyze the extent to which beneficial uses are supported and provide an analysis of the extent to which elimination of pollution and protection of beneficial uses had been achieved. The assessment is also required to describe the nature and extent of nonpoint sources of pollution and provide recommendations for control programs including costs.

Section 303(d) of the CWA requires the states to identify waters that are not expected to meet water quality standards after application of effluent limitations for point sources, develop a priority ranking and determine the total maximum daily load of specific pollutants that may be discharged into the water and still meet the water quality standards.



Section 402(p) of CWA (U.S. Code, Title 33, Chapter 26, Section 1342) requires a NPDES permit for storm water discharges from municipal separate storm sewer systems, industrial activities, construction activities, and designated dischargers that are considered significant contributors of pollutants to waters of the United States. The Phase I permitting program, which was promulgated in 1990, generally addressed storm water runoff from (1) municipal separate storm sewer systems serving populations of 100,000 or greater, (2) construction activity disturbing 5 acres of land or greater, and (3) 10 categories of industrial activity. The Phase II program was published in the Federal Register on December 8, 1999. Phase II will regulate storm water discharges associated with small construction activity (sites disturbing between 1 and 5 acres of land), and small municipal separate storm sewer systems (serving populations less than 100,000). By December 8, 2002, NPDES permitting authorities (Regional Water Quality

Control Boards (RWQCBs in California) will be required to issue general permits for Phase II regulated small municipal separate storm sewer systems and small construction activity. By March 2003, operators of Phase II regulated municipal separate storm sewer systems (MS4s) and small construction activities will be required to apply for NPDES permit coverage.

As required under Section 122.34(d)(2) of the storm water Phase II rule, on October 27, 2000, the EPA released a draft menu of Best Management Practices (BMPs) that address six minimum control measures that most regulated MS4s will need to implement under the Phase II rule. The six minimum control measures include: (1) public education and outreach on storm water impacts; (2) public involvement/ participation; (3) Illicit discharge detection and elimination; (4) construction site storm water runoff control; (5) post-construction storm water management in new development and redevelopment; and (6) pollution prevention/ housekeeping for municipal operations (www.epa.gov/npdes/menuofbmps/menu.htm).

Contractors will be required to file a Notice of Intent (NOI) to be covered under the California General Construction Activities Storm Water NPDES Permit (Order No. 99-08-DWQ) if the construction project area is greater than 5 acres or part of a development that is greater than 5 acres. Before construction begins, an NOI to comply with the permit must be submitted to the State Water Resources Control Board. Coverage under the permit will not occur until the applicant develops an adequate Storm Water Pollution Prevention Plan (SWPPP) for the construction project. Upon completion of construction and when final stabilization of the project area has been achieved, a Notice of Termination (NOT) must be filed. If the construction project is less than 5 acres, coverage under the Order will not be necessary if construction begins before March 2003. After March 2003, an NPDES permit will be required for construction areas over 1 acre.

The General Industrial Storm Water NPDES Permit (Order No. 97-03-DWQ) regulates storm water associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers. Industrial facilities include federal, state, municipally owned, and private facilities from the following categories: (1) facilities subject to storm water effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (2) manufacturing facilities; (3) oil and gas/mining facilities; (4) hazardous waste treatment, storage, or disposal facilities; (5) landfills, land application sites, and open dumps; (6) recycling facilities; (7) steam electric power generating facilities; (8) transportation facilities; (9) sewage or wastewater treatment works; and (10) manufacturing facilities where industrial materials, equipment, or activities are exposed to storm water.

Section 303(c)(2)(B) of the CWA requires that states adopt numeric criteria for priority pollutants as part of the states' water quality standards. In 1991, the State Water Resources Control Board (SWRCB) adopted the Inland Surface Waters Plan (ISWP) and the Enclosed Bays and Estuaries Plan (EBEP), in part, to comply with the Clean Water Act. The SWRCB amended the plans in 1993. In 1994, the SWRCB rescinded the ISWP and the EBEP in response to a court ruling invalidating the plans. In order to bring California into compliance with the CWA, the SWRCB and the EPA agreed to a two-phased approach.

Phase I consisted of the EPA promulgating numeric water quality criteria for priority pollutants for California in accordance with the CWA, and the SWRCB adopting statewide measures to implement those criteria in a statewide policy. In Phase II, the SWRCB will consider the adoption of appropriate statewide water quality objectives for toxic pollutants.

On May 18, 2000, the EPA published the California Toxics Rule (CTR) in the Federal Register, adding Section 131.38 to Title 40 of the Code of Federal Regulations (CFR). On May 22, 2000, the Office of Administrative Law approved, with modifications, the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (Phase 1 of the Inland Surface Waters Plan and Enclosed Bays and Estuaries Plan)*. The Policy establishes implementation procedures for three categories of priority pollutant criteria or water quality objectives. These are (1) criteria promulgated by the EPA in the National Toxics Rule that apply in California; (2) criteria proposed by EPA in the California Toxics Rule; and (3) water quality objectives contained in RWQCB water quality control plans (basin plans).

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969, which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of CWA Section 303 that water quality standards be set for certain waters by adopting water quality control plans under the Porter-Cologne Act. In addition, the Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans for areas within the region (Basin Plans), identifying water quality objectives, and issuing NPDES permits pursuant to the Waste Discharge Requirements (WDRs). Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. The Porter-Cologne Act was later amended to provide the authority delegated from EPA to issue NPDES permits. Under the Porter-Cologne Act, discharges of subsurface agricultural drainage, tailwater, and storm water from agricultural lands to surface water do not require NPDES permits.

NPDES permits, issued by RWQCBs pursuant to the CWA, also serve as WDRs issued pursuant to the Porter-Cologne Act. Generally, WDRs are issued for discharges that are exempt from the CWA NPDES permitting program, discharges that may affect waters of the state that are not waters of the United States (i.e., groundwater), and/or wastes that may be discharged in a diffused manner. WDRs are established and implemented to achieve the WQOs for receiving waters as established in the Basin Plans. Sometimes they are combined WDRs/NPDES permits.

The Central Valley RWQCB has adopted an Antidegradation Implementation Policy pursuant to the antidegradation directives of Section 13000 of the Water Code and State Water Board Resolution No. 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). These directives require that high quality waters of the State shall be maintained "consistent with the maximum benefit to the people of the State." The Regional Water Board will apply Resolution No. 68-16 in considering whether to allow a certain degree of degradation to occur or remain by evaluating the nature of any proposed discharge, existing discharge, or material change of the discharge, that could affect the quality of waters within the region. Pursuant to this Policy, a Report of Waste Discharge, or any other similar technical report required by the Board under Water Code Section 13267, must include information regarding the nature and extent of the discharge and the potential for the discharge to affect surface or ground water quality in the region. As explained in detail below, specific plan development is not anticipated to result in degradation of the waters in the region. Additionally, as further explained



 $^{^{\}circ}$ In adopting the Clean Water Act's NPDES permit program, the Porter-Cologne Act also has adopted the Clean Water Act's exception for agricultural return flows. 33 USC = $\S1342(d)(1)$.

below, if future development includes a wastewater recycling plant, the plant will treat wastewater to tertiary levels and any discharges will comply with Title 22 standards, preventing a condition of pollution or nuisance from occurring and ensuring consistency with the RWQCBs antidegradation policy.

1998 Central Valley RWQCB Basin Plan

The project area is within the jurisdiction of the Central Valley Region of the RWQCB (Region 5). The 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 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. Because the project area is located within the CVRWQCBs jurisdiction, all discharges to surface water or groundwater are subject to the Basin Plan requirements (CVRWQCB Basin Plan, 1998).

Beneficial uses are critical to water quality management in California. State law defines beneficial uses of California's waters that may be protected against quality degradation to include (and not be limited to) "... domestic, municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code § 13050(f)). Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning.

Beneficial use designation (and water quality objectives, see Chapter III) must be reviewed at least once during each three-year period for the purpose of modification as appropriate (40 CFR § 131.20). The beneficial uses listed below are relevant to the project.

- Municipal and Domestic Supply (MUN)—Uses of water for community, military, or individual
 water supply systems including, but not limited to, drinking water supply.
- Agricultural Supply (AGR)—Uses of water for farming, horticulture, or ranching including, but
 not limited to, irrigation (including leaching of salts), stock watering, or support of vegetation for
 range grazing.
- Groundwater Recharge (GWR)—Uses of water for natural or artificial recharge of groundwater for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- Freshwater Replenishment (FRSH)—Uses of water for natural or artificial maintenance of surface water quantity or quality.
- Noncontact Water Recreation (REC-2)—Uses of water for recreational activities involving proximity to water, but where there is generally no body contact with water, nor any likelihood of ingestion of water. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sight-seeing, or aesthetic enjoyment in conjunction with the above activities.

- Warm Freshwater Habitat (WARM)—Uses of water that support warm water ecosystems
 including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or
 wildlife, including vertebrates.
- Wildlife Habitat (WILD)—Uses of water that support terrestrial or wetland ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats or wetlands, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- Preservation of Biological Habitats of Special Significance (BIOL)—Uses of water that support designated areas or habitats, such as established refuges, parks, sanctuaries, ecological reserves, or Areas of Special Biological Significance (ASBS), where the preservation or enhancement of natural resources requires special protection.
- Rare, Threatened, or Endangered Species (RARE)—Uses of water that support aquatic
 habitats necessary, at least in part, for the survival and successful maintenance of plant or
 animal species established under state or federal law as rare, threatened, or endangered.

Reclaimed Water Regulations

Reuse of treated wastewater is regulated by federal and state laws and is under the jurisdiction of several state and local agencies. Federal and state laws provide regulation of reclamation and reuse through the Clean Water Act and the California Water Code, respectively. The Clean Water Act specifically encourages water reclamation as an integral part of water pollution control projects. The California Water Code (Section 13576) declares that the environmental benefits of recycled water include a reduced demand for water in the Sacramento-San Joaquin Delta which is otherwise needed to maintain water quality, reduced discharge of waste into the ocean, and the enhancement of groundwater basins, recreation, fisheries, and wetlands.



Regulation of reclaimed water in California is governed by RWQCBs and the Department of Health Services. The California Water Code establishes the SWRCB as the agency with primary authority for water reclamation. The nine RWQCBs administer this authority. The SWRCB provides reuse plans and policy guidelines, while the RWQCBs establish regulations for specific projects. Section 13521 of the California Water Code states that the Department of Health Services shall establish uniform statewide recycling criteria for each varying type of use of recycled water where the use involves the protection of public health. These criteria appear in the California Code of Regulations, Title 22, Division 4, Chapter 3. Additional design criteria appear in the California Code of Regulations, Title 17, Division 1, Chapter 5.

The Department of Health Services publishes several documents to aid in reclaimed water planning and design such as Guidelines for Use of Reclaimed Water, Guideline for the Preparation of an Engineering Report on the Production, Distribution, and Use of Reclaimed Water, Guidelines for the Use of Reclaimed Water for Construction Purposes, Demonstration of Equivalency to Full Title 22 Treatment, and Criteria for Mosquito Prevention in Wastewater Reclamation or Disposal Projects. The American Water Works Association also publishes several reclaimed water guidelines. The SWRCB publishes a guidance manual which includes water quality parameters and the effects on soils and plants titled, Irrigation With Reclaimed Municipal Wastewater, a Guidance Manual, Report No. 84-1, July 1984.

The proposed specific plan may include the use of reclaimed water for irrigation and non-residential toilet flushing. The tertiary wastewater treatment system and distribution systems will be regulated by the above agencies throughout the planning, design and implementation phases. To obtain a permit for the proposed tertiary wastewater treatment system or distribution system, an "Engineer's Report" must

be filed with the Central Valley RWQCB per Section 13522.5 of the California Water Code. The RWQCB, after consulting with and receiving the recommendations of the State Department of Health Services, and after any necessary hearing, will prescribe water reclamation requirements for water that is used or proposed to be used as reclaimed water. The requirements may be placed upon the person reclaiming the water, the user, or both.

General Plan Goals and Policies

The General Plan Public Facilities Element contains several goals, policies, and actions which help mitigate impacts associated with implementation of the General Plan, and thus the Southeast Specific Plan. Goal 5 encourages the development of "a comprehensive drainage system." Several actions are provided in the Public Facilities Element including:

- The City of Clovis maintains its agreement for the FMFCD to be responsible for all storm drainage master planning, multiple use of storm water basins and system implementation within the General Plan area.
- Update the existing FMFCD storm drainage Master Plan to account for changes in expected storm drainage runoff due to changed land uses within the storm drainage master plan area.
- As part of the update of the existing FMFCD storm drainage Master Plan, include a detailed analysis of the adequacy of the proposed storm drainage facilities to serve the needs of future development and intensification of the City.
- Installation of facilities necessary to provide services to the project will be based on the full-buildout scenario.
- Storm water detention ponds and the drainage system should be designed to appear natural in character with rounded or sculpted edges, the use of natural materials and abundant landscaping where possible dual uses of recreational facilities is planned.
- Construct a storm drain collection system as adopted by FMFCD to replace the natural water course to meet drainage needs of the urban development with each Urban Center development area.
- Develop all properties within the General Plan in accordance with adopted criteria of the FMFCD.
- Identify and preserve all natural watercourses that collect rainfall runoff from rural areas adjacent to urban areas and allow them to convey runoff through developed area to its designated retention facility.

5.6.3 Standards of Significance

The proposed project would have a significant impact on surface hydrology, water quality and/or groundwater if it meets or exceeds the following thresholds:

- violates water quality or waste discharge requirements;
- interferes substantially with groundwater recharge;
- substantially alters existing drainage patterns resulting in substantial erosion and/or flooding;

- creates excessive runoff beyond capacity of drainage systems; or
- substantially degrades overall water quality.

The Initial Study prepared for the proposed project (which is contained in Appendix A) examined these criteria and determined that the proposed project would generate no impact with respect to: placing housing within a 100-year flood hazard area; or place within a 100-year flood hazard area structures, which would impede or redirect flood flows. In addition, it was determined that no additional information was needed for a less than significant determination as it relates to the proposed project's potential to expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and inundation by seiche, tsunami, or mudflow. These issues are, therefore, not addressed further in this EIR.

5.6.4 Impacts and Mitigation Measures

IMPACT: INCREASED STORM WATER RUNOFF AND EROSION ASSOCIATED WITH SHORT-TERM CONSTRUCTION ACTIVITIES

Impact Analysis: During construction, portions of the project area would be cleared of vegetation in preparation for grading, which would expose loose soil to potential wind and water erosion. If not controlled the transport of these materials to local waterways could temporarily increase suspended sediment concentrations and release pollutants attached to sediment particles into local waterways. Construction contractors and the project applicant would be responsible for obtaining a Construction Activities General Permit from SWRCB/ RWQCB prior to construction.

This NPDES General Permit, as noted previously, requires preparation of a SWPPP prior to construction. The purpose of a Construction Activity SWPPP is to identify, construct and implement stormwater pollution prevention measures that would reduce water pollution associated with construction. Implementation and monitoring required under the SWPPP is anticipated to control and reduce short-term intermittent impacts to water quality from construction activities to less than significant levels.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: SURFACE WATER AND STORM WATER DISCHARGE AS A RESULT OF AN INCREASE IN IMPERVIOUS SURFACES

Impact Analysis: Urban development has two typical effects on storm runoff hydrology: an increase in total runoff volume and faster rising and higher peak flows. The increased area of impervious surfaces such as roads, parking lots, sidewalks, and buildings prevents natural infiltration to the soil and thus creates higher runoff volumes. More rapid transport of runoff over smooth artificial surfaces and drainage facilities, combined with the higher volume of runoff, causes elevated peak flows. This increase in flows may adversely affect downstream channels.

Urban development within the project area would replace the natural soil and vegetation with roadways, building pads, and structures. This would result in an increase of impermeable surfaces within the project area. An increase in the runoff would be anticipated due to the increase in impermeable



surfaces. Development shall comply with City of Clovis and FMFCD policies and standards, to construct facilities which prevent increased runoff from affecting downstream receiving waters. Because of existing policies and design standards, the increase in stormwater runoff will be less than significant.

Soils in the proposed project area are characterized with a high runoff potential because there is a relatively thin layer of soil overlaying impervious rock. There is therefore currently limited recharge of groundwater at the site from the percolation of rainwater. Although the potential for significant recharge in the project area is limited because of the high runoff potential of the soils and relatively thin layer of soil overlaying impervious rock, percolation and recharge of the groundwater aquifer will still be encouraged. In designing the project area, open space areas were provided, and an additional detention basin would be developed in the project area to allow for groundwater recharge on site to the maximum extent feasible. Because groundwater recharge on site without the project is limited, the addition of impervious surface within the project area would not significantly alter current groundwater recharge patterns, or interfere with groundwater recharge, and therefore the impact on groundwater recharge is considered less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: PROJECT IMPACT ON WATER QUALITY OF GROUNDWATER AND SURFACE WATERS

Impact Analysis: As discussed above, the CVRWQCB Basin Plan states that protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The Basin Plan lists beneficial uses for surface waters and groundwater within the San Joaquin River Basin. The beneficial uses under the CVRWQCB Basin Plan, include Municipal and Domestic Supply (MUN) and Agricultural Supply (AGR). The Basin Plan also lists water quality objectives for both surface waters and groundwater within the San Joaquin River Basin.

Maintaining the quality of existing groundwater resources is of regional importance since tertiary-treated wastewater and stormwater runoff from the project area have the potential to be used to offset groundwater pumping or for groundwater recharge, respectively. The proposed project would not inject any water into the ground, so there would not be any direct impacts to groundwater quality. Groundwater quality and surface water quality could be affected if pollutants were introduced into surface waters from urban sources. Existing runoff from the project area could contain sediment containing nutrients, naturally occurring metals and minerals, pesticides or herbicides, and organic matter, which may have already affected water quality at the project area. Activities that could increase the types or quantities of non-naturally occurring 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. Pesticides and herbicides used for agricultural, as well as other landscape maintenance products typically used in landscaping and lawn maintenance could also be present in the urban runoff.

Several design and operational practices are currently employed and will be used as the project area develops to reduce the potential for discharge of pollutants in runoff into surface waters. Examples of appropriate facilities developed on the site will include: detention ponds, retention ponds, bio-filtration channels for water quality treatment, oil water separators, wet ponds within the detention facilities, erosion control features during construction, SWPPP, and best management practices within the final storm water design and construction processes. Runoff can be collected in on-site detention and

retention ponds from where it would be slowly discharged into local canals and streams. Storm water runoff would then be directed to on-site detention and retention ponds. These detention/retention ponds would be designed to hold runoff from a 100-year, 24-hour storm. These facilities will be incorporated within the project design and construction to control the runoff rate and improve the quality of storm water discharged to the existing natural drainage conveyance features.

Furthermore, the project would be subject to NPDES Phase II regulations that require development and implementation of urban runoff pollutant control programs. The eventual urban development of the project area would be required to obtain appropriate NPDES permits prior to site occupancy, prepare a Surface Water Pollution Protection Plan (SWPPP), and implement BMPs. Due to the requirements imposed by the NPDES the degradation of ground and surface water will be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: DECREASE IN GROUNDWATER SUPPLY

Impact Analysis: The Fresno Irrigation District's groundwater supply is directly related to the runoff from the Kings River and Class I and II water delivered from the Friant Division of the Central Valley Project. During the above normal runoff years and extended delivery seasons, the District has shown substantial increases in groundwater storage. This is due mainly to agricultural use of surface water, which both decreases groundwater pumping and contributes to the groundwater recharge through deep percolation of irrigation water.



However, urban growth in the Fresno-Clovis metropolitan area is rapidly causing a negative impact on the groundwater supply. Until new recharge sites and methods are implemented and both Fresno and Clovis surface water treatment plants are developed, the groundwater within the project area will continue to decline.

Furthermore, the aquifer is thickest under the southwest portion of the City, generally south of Herndon and west of Clovis Avenues. To the north and east of Clovis, the aquifer becomes substantially thinner and bedrock becomes shallow, with a resulting reduction in water production capacity. As such, the project area is less favorable for groundwater recharge or well development than in the existing City of Clovis.

The City has almost fully developed the available well field and there are currently very limited opportunities to construct new viable municipal wells. Additionally, due to continued overdraft in the metropolitan area, the nominal water level in the City's existing wells continues to fall. This phenomenon has resulted in reduced yield of the wells and increased energy costs. Due to the continued decline of the areas groundwater levels and the limited availability of new well sites within the City, the City has proposed a Surface Water Treatment Plant (SWTP) to ensure a consistent dependable water supply for the City's customers. The initial phase will be 15 million gallons per day (MGD), with the ultimate build-out being 45 MGD. Clovis has identified a need to construct a SWTP that will filter and disinfect Kings River water delivered via the Enterprise Canal making it suitable for distribution to the City's customers.

Construction of the initial phase is anticipated to begin in late February to March with a rough site grading and fencing project. The site construction project is anticipated to begin in June 2003. The plant is targeted to begin producing water by May 2004 and be completed and commissioned by September 2004.

With development of the surface water treatment plant, the subsequent decreased dependence on groundwater, and the provision of retention basin, the anticipated impact to groundwater is less than significant. See Section 5.10, *Public Services and Utilities*, for additional detail on the SWTP and water supply.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: FLOOD HAZARDS

Impact Analysis: Portions of the project area are within the 100-year flood plain as defined by the Federal Emergency Management Agency's Flood Insurance Rate Map (FIRM). Historically, flooding has occurred within the project area (see Figure 3.4-3, Flood Zone Map).

As stated above, Fresno 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 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.

In addition, 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.

While bridges, channels and/or other features may be constructed to allow the continued flow of floodwaters through identifiable flood hazard areas. Any construction would be carried out a time and in a manner to avoid the impediment or redirection of flood flows. Because other forms of development will not be permitted, constructed or maintained within the 100-year flood hazard areas, floodwaters in these areas would not be implemented or redirected. Therefore, no impacts related to flooding are anticipated.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: ALTERATION OF SITE DRAINAGE PATTERNS

Impact Analysis: As discussed in Section 5.13, Geology and Soils, most of the soils within the proposed project area are characterized by moderate to slight erosion potential. Therefore, the potential for erosion or sitation on site due to altered site drainage is minimal. Site drainage patterns would be altered as a result of the development of the project area because site runoff would be directed into detention and retention ponds and then into the local canals

Under the new NPDES Phase II rules there would be requirements under the minimum control measures to present erosion and siltation and BMPs would be implemented to address these requirements. Therefore, impacts due to altered site drainage patterns on or offsite that could result in erosion or siltation are considered less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable



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5.7 LAND USE AND PLANNING

5.7.1 Methodology Related to Land Use

The proposed Southeast Urban Center Specific Plan was evaluated to determine its consistency with the City of Clovis General Plan Land Use Element and City of Clovis Municipal Code (Zoning regulations). The General Plans of the County of Fresno and the City of Fresno, and other local land use policies that may be affected by the proposed project area, are identified. In addition, compatibility of the proposed project with existing and proposed land uses in the surrounding area was evaluated. Figure 3.3-1, Local Vicinity, illustrates the project area and surrounding jurisdictions.

5.7.2 Existing Conditions Related to Land Use

Existing Land Uses On-Site

The land within the project area is currently devoted to agricultural uses, such as farming and grazing activities, and rural residential uses. There are also several agriculturally related commercial uses within the project area (see Section 5.1, Aesthetics, for site photographs). The project area is currently within the County of Fresno, but is within the City of Clovis' sphere-of-influence. It is zoned by Fresno County as AE-20, Exclusive Agricultural (20 Acre Minimum). For additional detail see Section 5.2, Agricultural Resources.

Near the center of the project area is the Ronald W. Reagan Educational Center, a 145-acre complex that houses Clovis East High School, Reyburn Intermediate School, and the future Reagan Primary School. The Reagan Educational Center is part of the Clovis Unified School District.

There are several irrigation canals located within the project area. Gould Canal forms the southern boundary of the project area. Jefferson Canal and Enterprise Canal are located in the northern portion of the project area, while Redbank Ditch is in the southeastern corner of the project area. Several other privately owned irrigation canals, such as McFarlane Ditch, are interspersed throughout the project area. In addition, there are five seasonal or intermittent stream channels located in the project area, including Dog Creek, and some of its tributaries, and Redbank Creek.

The project area is divided into over 300 legal parcels. Collections of smaller parcels are generally concentrated in the area west of Leonard Avenue. The larger parcels are generally east of Leonard Avenue. The areas with smaller parcels under multiple ownerships present a challenge to coordinating development and in phasing a project over time. Larger parcels, especially those under a single ownership, provide greater flexibility for unified development.

The project area includes a 960-acre area lying north of Shaw Avenue identified by 1993 General Plan update as a "special study area." When the City was updating its General Plan, a number of property owners wanted this area to be evaluated and incorporated into a specific plan for greater predictability regarding the future of their lands. The General Plan designated the area for agricultural uses until such time as a specific plan could be initiated and the property then evaluated for urban uses. The City included area in its updated sphere of influence.

On December 20, 2000, the Fresno Local Agency Formation Commission (LAFCO) acted on the City of Clovis' pending application to expand the City of Clovis Sphere of Influence. An amendment of the Memorandum of Understanding between the City of Clovis and Fresno County approved June 25, 2002, provided for the City to continue annexing lands to address its urban growth needs, consistent with Fresno County's policies to direct urban growth to cities.



To further promote orderly growth and for more compact development, the City and Fresno County agreed to a Memorandum of Understanding stipulating that 60% of the lands within the project area will be committed to development prior to the City initiating annexation of residential lands within the Northwest Urban Center. The 2002 amendment to the Memorandum of Understanding (MOU) recognized that the City of Clovis' expanded sphere of influence includes the project area and the special study area, the Northwest Urban Center, and a triangular area in the northeast.

Planning of the former special study area requires the concurrence of the County for any intensification of land use beyond the current uses. The lands are currently designated as AE-20, in the Fresno County General Plan.

Adjacent Land Uses in the City of Clovis

The City of Clovis corporate boundary lies immediately west of Locan Avenue, the western boundary of the proposed Specific Plan project area. These areas are residential and agricultural in nature, and include two large single-family residential neighborhoods and two school sites. The City of Clovis has zoned these residential areas a range of residential designations (see Figure 5.7-2, County of Fresno and City of Clovis Zoning), and assigned General Plan designations of Residential – Low, Schools, and Parks (see Figure 4.2-1, City General Plan).

Adjacent Land Uses In the County of Fresno

The County of Fresno borders the proposed Specific Plan area to the north of Bullard Avenue, northeast of the Highland Avenue and Shaw Avenue intersection, east of McCall Avenue, and generally south of the Gould Canal and Dakota Avenue. The land uses bordering the project area are almost exclusively agricultural and rural residential.

These areas are designated in the County of Fresno General Plan as Northeast Rural Residential and Agricultural and zoned RR, Rural Residential (2 Acre Minimum), RR5 Rural Residential (5 Acre Minimum); AL-20, Limited Agricultural; and AE-20, Exclusive Agricultural). The Rural Residential designation allows for the creation of 2- to 5-acre parcels and the maintenance of certain animal and agricultural activities.

There are also some unincorporated areas west of Locan Avenue, including an existing school at the northwest corner of Gettysburg Avenue and Locan Avenue. The Fresno County General Plan has designated these areas as AL-20, while the City of Clovis has designated these areas as Residential-Low.

Planned/Proposed Land Uses in the Project Vicinity

There are two other urban centers specified under the 1993 Clovis General Plan: Northwest Urban Center and Northeast Urban Center (see Figure 5.7-1, *Proposed Urban Center Specific Plan Areas*). The development of these Urban Centers is required to be guided by specific plans.

The Northwest Urban Center is located in the northwestern corner of the Clovis General Plan Planning Area, south of Copper Avenue and east of Willow Avenue. Much of the Northwest Urban Center is now part of updated 2000 Clovis sphere-of-influence (SOI). The Northwest Urban Center consists of approximately 3,356 acres, and the existing land uses consist of agricultural, rural residential, a limited very low density residential, and vacant uses. The Northwest Urban Center will include uses such as rural and low to high residential uses. The majority of units will be designated low and medium, and higher density residential will be located in close proximity to the commercial and employment generating uses.

The Northeast Urban Center as described in the 1993 General Plan is approximately 6,522 acres with a relatively low development intensity proposed. The Friant-Kern and Dog Creek Canals form the eastern boundary of the Urban Center, Herndon Avenue the far southern edge, the outer beltway (Copper Avenue) is the northern border, and the 1993 sphere of influence line comprises the western perimeter. Existing land uses are predominantly vacant, with some rural residential and agricultural pockets. The intent of this Urban Center is to provide a mix of residential, industrial, agricultural, mixed-use and open space uses. It will contain substantial proportion of agriculture and very low-density residential land uses. The Northeast Urban Center was not added to the Clovis sphere of influence, however, it is still part of the City's Planning Area under 1993 General Plan.

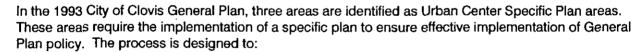
Numerous subdivisions are currently under development or proposed within the City of Clovis. However, other than the proposed urban centers, no other major projects proposing land use changes exist in the project area.

Local Plans and Policies

Relevant related land use designations and policies are located in the City of Clovis General Plan Land Use Element and the County of Fresno General Plan Land Use Element. Applicable goals, objectives and policies from these documents are described in the following sections. Other pertinent policies include LAFCO policies regarding conversion of open space lands and the City/County Memorandum of Understanding and its Amendment.

City of Clovis

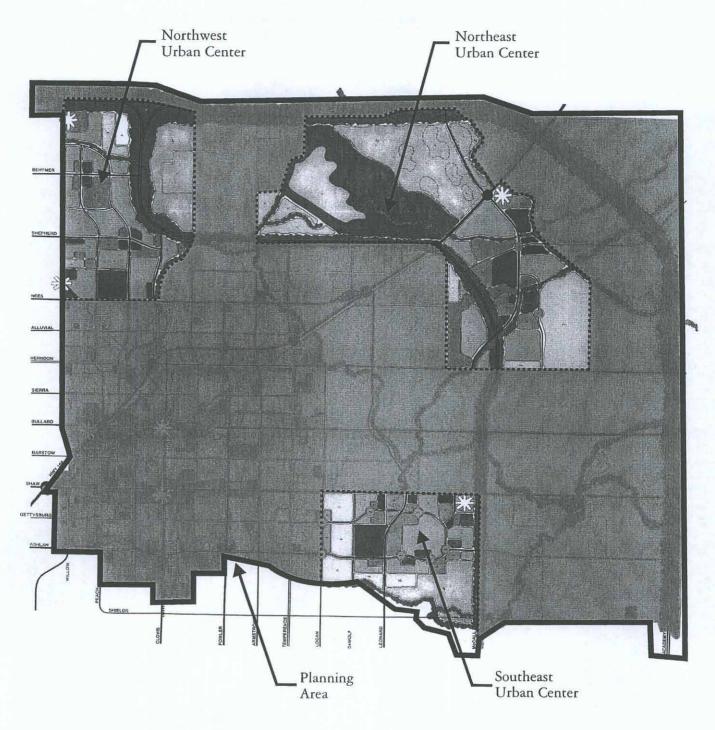
The proposed project area is located within the City of Clovis sphere of influence, and upon annexation, is subject to the land use designations in the proposed Southeast Urban Center Specific Plan.



- Facilitate high quality development;
- Allow for coordination of planning efforts between several property owners;
- Allow for infrastructure cost-sharing arrangements; and
- Provide development that is sensitive to the environment and integrates open space and recreation facilities requirements.



Proposed Urban Center Specific Plan Areas



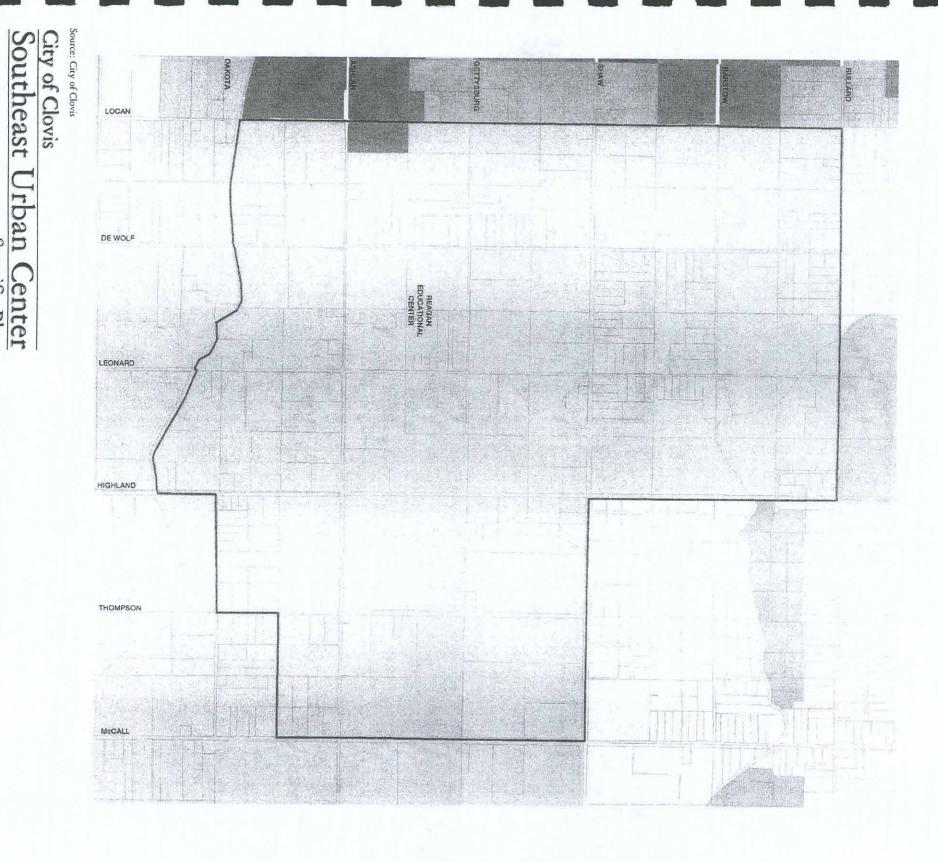
Source: City of Clovis 1993 General Plan

City of Clovis

Southeast Urban Center

Specific Plan





County of Fresno and City of Clovis Zoning

RR5 (5 Ac. Min)

AL20 (20 Ac. Min. - Limited Ag)

AE20 (20 Ac. Min. - Exclusive Ag

RR (2 Ac.

Min.)

City of Clovis Zoning

R-A (24,000 Sq. Ft. Min.)



Specific Plan

Development within the project area shall occur in accordance with the adoption of a specific plan, as defined by Section 65450 of the California Government Code.

The existing Clovis General Plan consists of eight individual elements: Air Quality, Land Use, Circulation, Noise, Open Space/Conservation, Housing, Public Facilities and Safety. The most recent update to the General Plan was in April 1993. The General Plan contains policies and programs to help guide future development within the City of Clovis and its sphere-of-influence. For applicable goals and policies within the project area, see Table 4.3-1, City of Clovis General Plan Applicable Goals and Policies.

There are no redevelopment areas within the project area.

County of Fresno

The project area is currently under the jurisdiction of Fresno County. Although, it is within the City of Clovis' sphere-of-influence, it will need to be annexed before the City has jurisdiction.

The County of Fresno's General Plan contains the following applicable 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 decision making 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:
 - Maintain zoning on existing fully developed properties consistent with the County's community plan.
 - 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 that 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 that 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:
 - 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



- 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 (½) 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 oneeighth (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 (1/4) mile radius.

City of Fresno

The City of Fresno is located along the Clovis' southern boundary. The City of Fresno has recently adopted 2025 Fresno General Plan and its associated EIR. The Fresno 2025 General Plan's purpose is to accommodate a population of 790,000 within the planned urban boundaries per the City of Fresno General Plan prior to 2-25 General Plan update.

Fresno's recently adopted General Plan update includes policies for the orderly growth of that city's urban area immediately south of the Specific Plan between Locan and McCall Avenues. The Fresno General Plan defines its "Southeast Growth Area" as bound by the Gould Canal and McCall, McKinley, Highland, Jensen, Temperance and Locan Avenues, extending approximately 11 square miles.

Development of this area may proceed subject to approval of a detailed community and/or specific plan to accommodate a total population of 55,000 people, comprised of approximately 10,000 people in an urban village south of the Gould Canal and approximately 45,000 people in an urban activity center south of Tulare Avenue.

Local Agency Formation Commission (LAFCO) of Fresno County

LAFCO is responsible for designating spheres of influence for the incorporated cities in the County, various districts, and other service providers. The agency is also responsible for approving annexations. The sphere of influence for Clovis includes the area that is unincorporated, but ultimately intended to be annexed and served by the city. Within the City of Clovis's sphere of influence, the agencies that are responsible are the City (incorporated area) and the County (unincorporated area). LAFCO goals are to ensure: (1) planned, well-ordered, and efficient development patterns in the County; (2) efficient and effective delivery of governmental services; and (3) the balancing of the needs of urban development with conservation of open space.

Council of Fresno County Governments (COG)

The Council of Fresno County Governments is a voluntary association of local governments, one of 25 in California. The COG was informally created in 1967 by elected officials of Fresno County and its incorporated cities as a means of providing a cooperative body for the discussion and resolution of issues which go beyond their individual boundaries. Subsequent state and federal laws encouraged such efforts, and the COG was formalized in 1969.

The COG is not a land use agency. However, the COG plays a major role in fostering inter-governmental communications and cooperation, undertaking comprehensive regional planning with an emphasis on transportation, provide for citizen involvement in the planning process and provide technical services to the member agencies. The COG is responsible for publishing the Regional Traffic Monitoring Report which provides average daily trip (ADT) volumes used in the traffic analysis of this DEIR.

5.7.3 Standards of Significance

The Environmental Checklist form contained in the California Environmental Quality Act (CEQA) along with other City factors were used to develop the following list of impact criteria. The project will, at a minimum, be considered to have a significant effect related to land use if any of the following occur:

- Physical division of an established community;
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project; or
- Conflict with compatibility of land uses in surrounding jurisdictions;
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

The Initial Study prepared for the proposed project, which is contained in Appendix A, screened these criteria and determined that the proposed project would generate no impact with respect to conflicting with any applicable habitat conservation plans or natural community conservation plan.

5.7.4 Impacts and Mitigation Measures

IMPACT: PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY

Impact Analysis: The project area is located immediately east of the City of Clovis incorporated boundary in unincorporated Fresno County, but within the City of Clovis' sphere of influence. Although the physical arrangement of existing land uses will be changed with implementation of the Specific Plan,



the project area is to occur at the urban fringe in an area primarily agricultural and rural residential. There are no existing communities to divide.

The project area also includes a circulation plan that identifies both existing and future roadways. The construction of future roadways, and expansion of existing ones, has the potential to disrupt existing communities. However, given the nature of the existing land uses (agricultural and rural residential), and the lack of developed communities, the proposed project is not anticipated to divide an established community.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: CONFLICT WITH ANY APPLICABLE LAND USE PLAN, POLICY, OR REGULATION OF

AN AGENCY WITH JURISDICTION OVER THE PROJECT

Impact Analysis: The Southeast Urban Center Specific Plan is the implementation of the City of Clovis General Plan. As such it is required to be consistent with the General Plan. The following document the consistency of the proposed project with goals and policies of the Clovis General Plan:

Land Use Element

Goal 1: A self-sustaining community that provides a full range of land uses and related amenities.

The project area accommodates a wide range of uses, from commercial, office, light industrial, social, civic, educational, recreational, public facilities, and residential at densities that range from rural to 43 dwelling units an acre. These uses are concentrated around two community centers, which allow a mixture of uses in a pedestrian oriented setting. The community centers provide an ideal opportunity for community events and gathering spots. The residential neighborhoods are located within a close proximity to retail, service, employment, educational, cultural, civic, and recreational opportunities and interconnected by a system of streets, trails, and linear open space features.

Since the Southeast Urban Center Specific Plan is a long-range plan, flexibility in the style and type of development is provided as well as clear guidance as to the expected character and quality of development. The four Master Planned Communities allow flexible land use options but assure quality through development standards and design guidelines. Quality and attention to design detail are the focus of the development standards and design guidelines.

Goal 2: Future land uses of high quality design that are compatible with existing development and are sensitive to existing natural resources.

The Southeast Urban Center Specific Plan is a direct response to the City's General Plan, which requires "new urban development to be designed around the Urban Village neighborhood concept," and mandates "the use of the Specific Plan process for new areas of urban development." As mentioned above, the project area is designed around two community centers, which are the social, cultural, entertainment, commercial, and service centers for the community. The community centers allow a combination of commercial, office, public facilities, and residential uses mixed both horizontally and vertically.

The significant natural resources in the project area, such as the Jefferson, Gould, and Enterprise canals and Dog Creek are preserved as linear open space amenities that help provide pedestrian connections.

Goal 3: A variety of residential uses that accommodate a range of household needs and styles.

The Southeast Urban Center Specific Plan contains eight land use designations that accommodate 10,829 residential units in a wide range of product choices: from semi-rural residential, to single-family detached subdivisions, to urban living in the community centers. Some of the existing rural residential areas are preserved and incorporated into the land use plan. The residential neighborhoods are integrated internally and with the rest of the community by the system of trails, a hierarchy of streets, and nearby educational and recreational facilities.

Goal 5: A well-balanced and diversified economy that provides a variety of economic and employment opportunities.

The Southeast Urban Center Specific Plan accommodates approximately 2,001,800 square feet of commercial and employment opportunities. The project area allows the development of retail, professional office, commercial, and clean industrial land uses that provide a diversity of employment opportunities. Commercial and employment areas are concentrated in and around the two community centers, thus preventing relatively inefficient strip commercial development.

Goal 8: The orderly conversion of agricultural lands within Clovis' project area.

Per the direction of the General Plan, the Southeast Urban Center Specific Plan is intended to accommodate future growth in a concentrated manner that allows the preservation of the characteristic rural and agricultural lifestyle that is characteristic of Clovis. The Southeast Urban Center Specific Plan guides the conversion of the existing agricultural and rural lands to planned urban uses in a gradual, phased, and orderly manner.

Goal 10: Sound City fiscal conditioning underlying growth conditions.

Per the direction of the General Plan, a fiscal analysis of the project area has been performed to study the impact on the City's General Fund, see Appendix D of the Specific Plan. The fiscal analysis found that with Maximum FARs (Floor Area Ratios), the project area appears to be fiscally feasible.

Circulation Element

Goal 1: Provide for the development of a street system to adequately address the mobility needs of the community.

The project area is designed around a hierarchical street system that includes expressways, arterial, collector, and local streets. The classification of the streets in the project area is based upon the designations in the City's General Plan and the City's Level of Service standards, which were also utilized to analyze the traffic impact of the project.

McCall Avenue, which forms the eastern boundary of the project area, plays a significant regional role as a part of the regional beltway system envisioned in the General Plan. Accordingly, McCall Avenue is designated as an expressway in the Southeast Urban Center Specific Plan. Shaw, Leonard, and Ashlan Avenues are significant regional roadways and are designated as arterial roadways in the specific plan.



Goal 2: Provide adequate, safe, well maintained, and efficient access to employment, educational, commercial, and recreational uses throughout the community, including the downtown core area.

The Southeast Urban Center Specific Plan is designed to concentrate the employment, educational, commercial, and recreational uses near the residences. In fact, every residence in the specific plan is within one-half mile of these uses. The pathways, linear open space systems, and streets allow convenient access.

The arterial and collector roadway system provides an efficient system to move high volumes of traffic while protecting pass-through traffic in residential neighborhoods. The circulation systems will be designed to current City standards and specifications in order to maximize traffic safety for automobile, transit, bicycles and pedestrians. Landscape and streetscape standards help to unify the community and create a pleasing driving experience. Gateways announce arrive into the project area and significant features of the plan.

Goal 3: Promote all modes of transportation, including transit, bicycle, walking, for the development of alternatives to the private automobile.

The land use plan is designed to provide every opportunity for residents to minimize the use of the automobile. The employment, educational, commercial, and recreational uses in the plan are located within one-half mile of every residence in the specific plan. A multi-modal transportation system, including multi-purpose open space corridors, bicycle paths, and pedestrian connections provide convenient access to the employment, educational, commercial, transit, and recreational uses.

Housing Element

Goal 1: A diversity of housing opportunities that satisfy the physical, social, and economic needs of existing and future residents of Clovis.

The Southeast Urban Center Specific Plan accommodates 10,829 residential units in a wide range product choices: from mixed-use projects that promote an urban lifestyle, to single-family detached subdivisions that are typical of a suburban lifestyle, and large lot residential consistent with a semi-rural lifestyle. This range of residential products accommodates a range of housing cost, density, type, and occupancy status.

This wide range of housing opportunities is balanced with a range of job opportunities, from employment, to educational, to recreational, to retail commercial, which provides the opportunity for local residents to live and work in the same community.

The purpose of the Southeast Urban Center Specific Plan is to guide the future development of this variety of uses in a balanced and orderly manner that minimizes unnecessary development costs.

Goal 2: Balance growth between housing production, employment, and provision of services.

The Southeast Urban Center Specific Plan accommodates approximately 29,238 people and 12,453 jobs. This means that there are slightly more employment opportunities than may reasonably be filled by residents of the project area. The employment opportunities are concentrated near the residences and community centers. Connections to the employment opportunities are provided by a system of trails and linear open space corridors.

The Southeast Urban Center Specific Plan guides how development will occur within the project area. The specific plan requires that new construction be designed in accordance with clear yet flexible

aesthetic standards that will ensure the safety and integrity of each housing unit and provide for the development of attractive functional housing. In addition, infrastructure and service systems that meet the demands generated by the uses within the project area are required to be operational prior to development.

Goal 3: Affordable housing for all economic segments of Clovis.

The Southeast Urban Center Specific Plan accommodates 10,286 residential units in a wide range product choices: from mixed-use projects that promote an urban lifestyle, to single-family detached subdivisions that are typical of a suburban lifestyle, and large lot residential consistent with a semi-rural lifestyle. This range of residential products accommodates a range of housing costs and occupancy status. This range of housing opportunities accommodates the needs of all income levels and provides opportunities to meet the City's fair share of low- and moderate-income housing.

Goal 6: To promote energy conservation activities in all neighborhoods.

Development within the project area will be required to comply with all adopted local, state and federal standards that promote energy conservation.

Public Facilities Element

Goal 2: New development which includes a full complement of infrastructure and public facilities.

The Southeast Urban Center Specific Plan guides how development will occur within the project area. The specific plan requires that infrastructure and service systems that meet the demands generated by the uses within the project area be operational prior to new construction. Infrastructure will be developed and maintained through developer fees and assessment districts.

Goal 3: A comprehensive wastewater infrastructure system in Clovis.

Pursuant to the Clovis Wastewater Master Plan the Southeast Urban Center Specific Plan may accommodate the development of a new wastewater-sewer treatment plant/water reuse facility. The project area includes uses and open spaces that are intended to create opportunities to reuse and spread reclaimed water.

Goal 4: A comprehensive water source, distribution and treatment infrastructure system in Clovis.

The project area accommodates a surface water treatment facility, which is located west of Leonard and south of Bullard Avenues. The surface water treatment plant would provide potable water for the project area and much of the existing City. The surface water treatment plant will improve water system reliability and protect the groundwater basin from overdraft.

Goal 5: A comprehensive drainage system in Clovis.

The project area accommodates and preserves existing canals and waterways as open space corridors. Bike and pedestrian paths, recreation facilities, and landscaping are integrated with the open space corridors. Two existing storm water retention basins, located along Locan Avenue, are accommodated within the plan.

The specific plan requires that infrastructure, including storm drainage facilities, be operational prior to development within the project area.



Goal 6: Adequate school facilities for all students in the Clovis project area.

The project area is divided into two separate school districts along Highland Avenue. The area west of Highland Avenue is within the Clovis Unified School District and the area east of Highland Avenue is within the Sanger Unified School District. Each district utilizes different student generation rates and minimum sizes for schools. Based upon the land use plan and the student generation rates provided by the school districts, development of the project area would result in approximately 5,066 new students in the Clovis Unified School District and 1,835 new students in the Sanger Unified School District.

There are two schools within the project area, the Clovis East High School and the Reyburn Intermediate School within the existing Reagan Educational Center. The Specific Plan would provide three proposed school sites, two within the CUSD and one within the SUSD. Two additional schools, Redbank and Freedom Elementary Schools are located outside of the project area west of Locan Avenue between Barstow and Gettysburg Avenues.

Goal 7: Cultural and public community services that improve and maintain the quality of life for the residents of the Clovis community.

The project area accommodates public and cultural uses such as museums, fire and police stations, libraries, community centers, schools, places of worship, and recreational uses that meet the cultural, spiritual, and health related needs of the community.

Open Space/Conservation Element

Goal 2: Conserved and effective use of water resources.

The project area accommodates a surface water treatment facility, which is planned west of Leonard and south of Bullard Avenues. The surface water treatment plant would provide potable water for the project area and much of the City. The surface water treatment plant will improve water system reliability and protect the groundwater basin from overdraft.

Goal 3: Conserve natural resources through protection and enhancement of permanently observed open space.

The project area accommodates and preserves existing Jefferson, Gould, and Enterprise canals, Dog Creek, and other seasonal waterways as open space corridors. Bike and pedestrian paths, recreation facilities, and landscaping are integrated with the open space corridors.

Goal 4: Open space lands for the future expansion of City facilities and amenities.

The project area accommodates and preserves existing canals waterways and water retention basins as open space features. The waterways and canals are utilized for bike and pedestrian paths, recreation facilities, and landscaping. McCall Avenue, designated as a beltway in the General Plan, is accommodated and includes a wide landscaped area.

Goal 5: Preservation of productive agricultural lands to facilitate orderly conversion of lands to development.

Per the direction of the General Plan, the Southeast Urban Center Specific Plan is intended to accommodate future growth in a concentrated manner that allows the preservation of the characteristic rural and agricultural lifestyle that is characteristic of Clovis. The Southeast Urban Center Specific Plan

guides the conversion of the existing agricultural and rural lands to planned urban uses in a gradual, phased, and orderly manner.

Goal 6: An environment in Clovis where energy resources are efficiently utilized.

The compact development pattern and extensive system of trails and open space corridors promote the use of bicycles as an alternative transportation mode. In addition, development within the project area will be required to comply with all adopted local, state and federal standards that promote energy conservation.

Goal 8: Provide park facilities to meet the needs of existing and future residents, including acreage to offset the current deficit and provide for the projected population growth.

The project area includes 110 acres of parks and usable open spaces. In addition, approximately 35 acres open space is available at the Reagan Education Center in compliance with the City's General Plan.

Goal 10: A trails system that meets the needs of residents.

An extensive multi-purpose trails system connects the project area. The specific plan incorporates regional trails that are identified along the Enterprise and Gould Canals.

Safety Element

Goal 1: Protect the Clovis community from hazards associated with the natural environment.

The project area accommodates and preserves existing canals waterways and water retention basins as open space features. The 100-year floodplain was utilized to determine the width and location of open space corridors in the plan area.

Noise Element

Goal 1: Land use planning that provides for the separation of significant noise generators from sensitive receptor areas.

The roadways contain landscaped setbacks from the paved areas to increase the distance for the vehicles and reduce impacts from noise. The noise sensitive uses, such as schools, are separated from the potentially noise generating uses in the community centers and business campus. All projects will be required to comply with the City's noise requirements.

Air Quality Element

Goal 1: Improvement of air quality through proper land use planning in Clovis.

The Southeast Urban Center Specific Plan accommodates approximately 29,238 people and 12,453 jobs. This means that there are slightly more employment opportunities than may reasonably be filled by residents of the project area. The employment opportunities are concentrated near the residences and community centers. Connections to the employment opportunities are provided by a system of trails and linear open space corridors.



Goal 2: Enhanced mobility to minimize air pollutant emissions.

The Southeast Urban Center Specific Plan is designed to concentrate the employment, educational, commercial, and recreational uses near the residences. In fact, every residence in the specific plan is within one-half mile of these uses. The pathways, linear open space systems, and streets allow convenient access. This provides the opportunity for residents of the project area to access employment, educational, social, entertainment, recreational, and civic uses without using the automobile.

Based on foregoing discussion under different General Plan Elements, implementation of the proposed project would not conflict with the City's land use plans or policies. However, it must be acknowledged that the current boundaries of the project area do not correspond exactly with the project area boundaries outline in the 1993 General Plan. The 1993 General Plan project area boundaries did not extend north of Shaw Avenue, and extended south of Dakota Avenue to the Gould Canal. The boundaries of the project area now extend north of Shaw Avenue to Bullard Avenue. Therefore, one aspect of implementing the Specific Plan would be to undertake a General Plan Amendment (GPA) to change the Southeast Urban Center boundaries.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Less than significant.

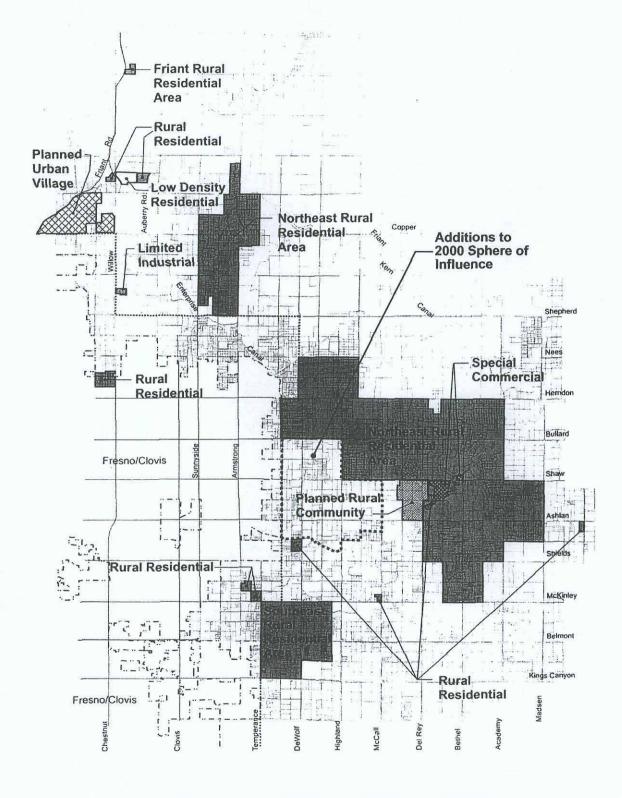
IMPACT: CONFLICT WITH COMPATIBILITY OF LAND USES IN SURROUNDING JURISDICTIONS

Impact Analysis: Agricultural land is the predominant land use in the areas to the north and east of the project area. To the north, northeast, and east of the project area, the County has designated the area as the Northeast Rural Residential Area. Figure 5.7-3, Northeast FCMA Land Use Diagram shows the project area in relation to the rest of the County's land uses. The figure illustrates that the County designates several small and large areas in the vicinity of the project area as rural residential, which may be incompatible with the proposed urban uses of the Specific Plan. The most comment examples of incompatible uses within the County with adjacent jurisdiction are where residential uses are directly adjacent to nearby agricultural operations and where urban residential uses and rural residential uses are adjacent.

However, the project area is located within the City of Clovis sphere of influence, and implementation of the proposed project would be compatible with the County's Policies LU-A.1, which directs urban growth away from valuable agricultural lands to cities and other areas where public infrastructures are available.

In addition, the County's Policies LU-A.12, LU-A.13, and LU-A.14 as described in the Section 5.7.2 Existing Conditions 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. Adhering to these County Policies regarding land use compatibility would ensure that implementation of the proposed Specific Plan would not conflict with surrounding land uses.

Northeast FCMU Land Use Diagram



..... Fresno/Clovis Sphere of Influence

- · · - · · Fresno/Clovis City Limits

Rural Residential

Source: Fresno County General Plan (2000)

City of Clovis

Southeast Urban Center Specific Plan





Figure 5.7-3

The City of Fresno is located along the Clovis' southern boundary. The City of Fresno recently adopted 2025 General Plan update, which included policies for the orderly growth of the City of Fresno's urban area immediately south of the project area known as "Southeast Growth Area." The City of Fresno's Southeast Growth Area has been added to the Fresno City's sphere of influence, and the Fresno General Plan defines its "Southeast Growth Area" as bound by the Gould Canal and McCall, McKinley, Highland, Jensen, Temperance and Locan Avenues, extending approximately 11 square miles. Any plans to develop this area are currently in a conceptual stage, therefore, any potential impact discussion would be speculative and unnecessary.

No potentially significant land use compatibility with surrounding jurisdiction is anticipated by the Specific Plan development.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No additional mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.



5.8 NOISE

The following analysis provides a discussion on the fundamentals of sound, examines federal, State and City noise guidelines, policies and standards, reviews noise levels at existing receptor locations, evaluates potential noise impacts associated with the proposed project, and provides methodology to reduce noise disturbance at sensitive residential locations. Modeled traffic noise levels are based upon vehicle data contained in the traffic analysis prepared by Associated Transportation Engineer (December 2002). This evaluation was prepared in conformance with local standards and utilizes procedures and methodologies as specified by CalTrans and the Federal Highway Administration. The technical noise data, including model run results, are provided in the Appendix G.

5.8.1 Methodology Related to Noise

The analysis of long term operational noise impacts presented in this chapter is based on the December 5, 2002 Associated Transportation Engineers traffic study, which assumes 10,829 dwelling units, schools to accommodate 4,700 students, 2,001,800 square feet of commercial uses, 550,163 square feet of office uses, a 183 acre business park and 127 acres of open space and golf course.

5.8.2 Existing Conditions Related to Noise

To limit population exposure to physically and/or psychologically damaging, as well as intrusive noise levels, the federal government, the State of California, county governments, and most municipalities in the State have established standards and ordinances to control noise. The following sections describe noise standards and ordinances that are applicable to this project.

Federal Government

The federal government regulates occupational noise exposure common in the workplace through the Occupational Health and Safety Administration (OSHA) under the USEPA. Noise exposure of this type is dependent on work conditions and is addressed through a facility's Health and Safety Plan. Site construction work will be required to operate under an approved Health and Safety Plan, thereby reducing its effects on construction workers to less than regulatory levels.

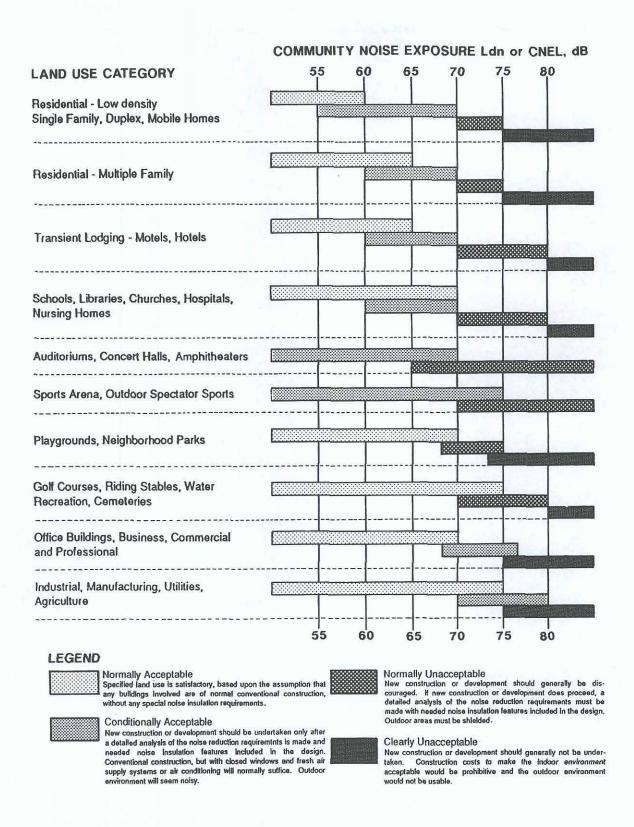
The US Department of Housing and Urban Development (HUD) has set a goal of 45 dBA Ldn as a desirable maximum interior standard for residential units developed under HUD funding. This level is also generally accepted within the State of California. While HUD does not specify acceptable exterior noise levels, standard construction of residential dwellings constructed under Title 24 standards typically provide 20 dBA of attenuation with the windows closed. Based on this premise, the exterior Ldn should not exceed 65 dBA.

State of California

The California Department of Health Services Office of Noise Control (DHSONC) has studied the correlation of noise levels and their effects on various land uses. As a result, the DHSONC has established four categories for judging the severity of noise intrusion on specified land uses. The types of land uses addressed by the DHSONC and acceptable noise, by category are presented in Figure 5.8-1, Noise and Land Use Compatibility.



Sound Levels and Human Responces



Source: California Office of Noise Control

City of Clovis

Southeast Urban Center
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Noise in the "normally acceptable" category is generally acceptable with no mitigation necessary. Noise in the "conditionally acceptable" category may require some mitigation as established through a noise study. The "normally unacceptable" category would require substantial mitigation while the "clearly unacceptable" category is probably not mitigatable to a level of less than significant. As noted in Figure 5.8-1, *Noise and Land Use Compatibility*, there is some overlap between categories.

Applicable interior standards for new multifamily dwellings are governed by Title 24 of the California Administrative Code. These standards require that acoustical studies be performed prior to construction in areas that exceed 60 dBA Ldn. Such studies are required to establish measures that will limit interior noise to no more than 45 dBA Ldn and this level has been applied to many communities in California.

Fresno County General Plan

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 in incorporated areas. The 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 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:
 - 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 sound walls, 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 dBA Ldn at outdoor activity areas of noise-sensitive uses, a 5 dBA Ldn increase in noise levels will be considered significant;
 - b) Where existing noise levels are between 60 and 65 dBA Ldn at outdoor activity areas of noisesensitive uses, a 3 dBA Ldn increase in noise levels will be considered significant; and
 - c) Where existing noise levels are greater than 65 dBA Ldn at outdoor activity areas of noise-sensitive uses, a 1.5 dBA Ldn 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 dBA Ldn or CNEL.

City of Clovis General Plan

The project area is located within the City of Clovis sphere-of-influence, and upon annexation, will be subject to the Noise Element of the General Plan and City Municipal Code.

The City of Clovis provides noise goals, objectives, policies and implementation measures in its General Plan Noise Chapter. The first goal of the noise chapter is to ensure that land use planning provides for the separation of significant noise generators and sensitive receptor areas. Other goals include the control of noise between land uses, the minimization of noise impacts from transportation sources, and the reduction of existing and future noise levels to eliminate annoyance and hazards to people. The chapter provides a mechanism to reduce and/or eliminate conflicts between land uses and noise, and further ensure that future noise and land use conflicts are minimized. The City provides land use compatibility standards for various land uses (Table 5.8-1, City of Clovis Land Use Noise Standards). The Element allows for the use of either the CNEL or Ldn descriptor. The Noise Element notes, "These standards shall be adhered to and implemented during the review of all proposed projects."

The goals of the Noise Element are administered through the City's development review process. In addition, the Clovis Municipal Code include provisions for noise control in Section 9.3 "Zoning" and specifically 9.3.228.10, "Noise." Section 9.3.10.f. includes activities exempt from noise control regulations. Those of relevance include:

- The emission of sound for the purpose of alerting persons to the existence of an emergency, or the emission of sound in the performance of emergency work;
- Warning devices necessary for the protection of public safety, (e.g., police, fire and ambulance sirens, and train horns);
- All transportation, flood control, and utility company maintenance and construction operations at any
 time on public rights-of-way, and those situations that may occur on private property deemed
 necessary to serve the best interest of the public and to protect the public's health and well being,

including, debris and limb removal, removal of damaged poles and vehicles, removal of downed wires, repairing traffic signals, repair of water hydrants and mains, gas lines, oil lines, sewers, restoring electrical service, street sweeping, unplugging sewers, vacuuming catch basins, etc.;

- Operating or causing the operation of tools or equipment used in alteration, construction, demolition, drilling, or repair work between weekday hours (Monday through Saturday excluding holidays) of 7:00 a.m. and 9:00 p.m.; and
- Any activity, to the extent regulation thereof has been preempted by Federal or State law.

TABLE 5.8-1 CITY OF CLOVIS GENERAL PLAN LAND USE NOISE STANDARDS						
Land Use	Interior Standard (dBA)	Exterior Standard (dBA)				
Residential (all types)	45	65 ¹				
Mixed Use Residential	45	70¹				
Commercial		70				
Office	50	70				
Industrial, Transit Center	55	75				
Public Facilities	50	70				
Parks		70/65²				
Schools	50	65				

In outdoor living areas.



Methodology Related to Noise

Noise Definitions

Sound is a pressure wave transmitted through the air. It is described in terms of loudness or amplitude (measured in decibels), frequency or pitch (measured in Hertz [Hz] or cycles per second), and duration (measured in seconds or minutes). The standard unit of measurement of the loudness of sound is the decibel (dB). Typical human hearing can detect changes in sound levels of approximately 3 dBA under normal conditions. Changes of 1 to 3 dBA are detectable under quiet, controlled conditions and changes of less than 1 dBA are usually indiscernible. A change of 5 dBA is discernable to most people in an exterior environment while a change of 10 dBA is perceived as a doubling (or halving) of the noise.

Noise may be generated from a point source, such as a piece of construction equipment, or from a line source, such as a road containing moving vehicles. Because noise spreads in an ever-widening pattern, the given amount of noise striking an object, such as an eardrum, is reduced with distance from the source. This is known as spreading loss. The typical spreading loss for point source noise is 6 dBA per doubling of the distance from the noise source.

A line source of noise, such as vehicles proceeding down a roadway, will also be reduced with distance, but the rate of reduction is a function of both distance and the type of terrain over which the noise passes. "Hard" sites, such as developed areas with paving, reduce noise at a rate of 3 dBA per doubling of the distance while "soft" sites, such as undeveloped areas, open space and vegetated areas reduce noise at a rate of 4.5 dBA per doubling of the distance.

² Where quiet is a basis for use.

These represent the extremes and most areas will actually contain a combination of hard and soft elements with the noise reduction placed somewhere in between these two factors. Unfortunately, the only way to actually determine the absolute amount of attenuation that an area provides is through field measurement under operating conditions with subsequent noise level measurements conducted at varying distances from a constant noise source.

Objects, which block the line-of-sight attenuate the noise source if the receptor is located within the "shadow" of the blockage (such as behind a sound wall). If a receptor is located behind the wall, but has a view of the source, the wall will do little to reduce the noise. Additionally, a receptor located on the same side of the wall as the noise source may experience an increase in the perceived noise level as the wall will reflect noise back to the receptor compounding the noise.

Noise Measurement Scales

Several rating scales (or noise "metrics") exist to analyze adverse effects of noise, including trafficgenerated noise, on a community. These scales include the equivalent noise level (Leq), the community noise equivalent level (CNEL), and the day/night noise level (Ldn). Leq is a measurement of the sound energy level averaged over a specified time period (usually one hour). Leq represents the amount of variable sound energy received by a receptor over a time interval in a single numerical value. For example, a one-hour Leq noise level measurement represents the average amount of acoustic energy that occurred in that hour.

Unlike the Leq metric, the CNEL noise metric is based on 24 hours of measurement. CNEL also differs from Leq in that it applies a time-weighted factor designed to emphasize noise events that occur during the evening and nighttime hours (when quiet time and sleep disturbance is of particular concern). Noise occurring during the daytime period (7:00 a.m. to 7:00 p.m.) receives no penalty. Noise produced during the evening time period (7:00 to 10:00 p.m.) is penalized by 5 dBA, while nighttime (10:00 p.m. to 7:00 a.m.) noise is penalized by 10 dBA.

The Ldn noise metric is similar to the CNEL metric except that the period from 7:00 to 10:00 p.m. receives no penalty. Both the CNEL and Ldn metrics yield approximately the same 24-hour value (within 1 dBA) with the CNEL being the more restrictive of the two.

Existing Conditions Related to Noise

The project area is lightly populated. Existing land uses include an array of types but most notably agricultural, rural residential, institutional, and minimal commercial space.

To determine the existing noise levels within the project area, a field survey was performed on October 22, 2002 by The Planning Center (TPC) staff. The study concentrated on those areas slated for the development of the urban centers and residential areas.

The study revealed that noise within the proposed project area is generally characterized by roadway noise. Noise monitoring was performed using a Quest Technologies Model 2900 Type 2 Integrating/logging Sound Level Meter. The unit meets the American National Standards Institute (ANSI) Standard S1.4-1983 for Type 2, International Electrotechnical Commission (IEC) Standard 651 - 1979 for Type 2, and IEC Standard 651 - 1979 for Type 2 sound level meters. The unit was field calibrated to a 114.0 dB standard at 12:30 p.m. using a Quest Technologies QC-10 calibrator immediately prior to the readings. The accuracy of the calibrator is maintained through a program established through the manufacturer and is traceable to the National Bureau of Standards. The unit meets the requirements of ANSI Standard S1.4-1984 and IEC Standard 942: 1988 for Class 1 equipment. Calibration was re-

checked at 4:33 p.m. after the obtained readings and a value of 113.9 dB was measured. As such, meter "drift" was negligible.

The study included six noise readings. The Leq, L_{02} , L_{06} , L_{25} and L_{50} values were recorded. Additionally, the L_{min} and L_{max} values were recorded. As discussed above, the Leq value is representative of the equivalent noise level or logarithmic average noise level obtained over the measurement period. The L_{min} and L_{max} represent the minimum and maximum root-mean-square noise levels obtained over a period of one second. The L_{02} , L_{06} , L_{25} and L_{50} represent the values that are exceeded two, eight, 25 and 50 percent of the time, or 1, 5, 15 and 30 minutes per hour if the readings were extrapolated out to an hour's duration. The readings were all taken approximately 5 feet above ground and no closer than 20 feet to any reflective surfaces (e.g., walls). All readings were supplemented with simultaneous vehicle counts. These counts were obtained for modeling purposes (discussed below).

The monitoring locations are shown in Figure 5.8-2 and the readings are included in Table 5.8-2 and summarized below.

TABLE 5.8-2 NOISE LEVEL MEASUREMENTS, CITY OF CLOVIS DEVELOPMENT PROJECT

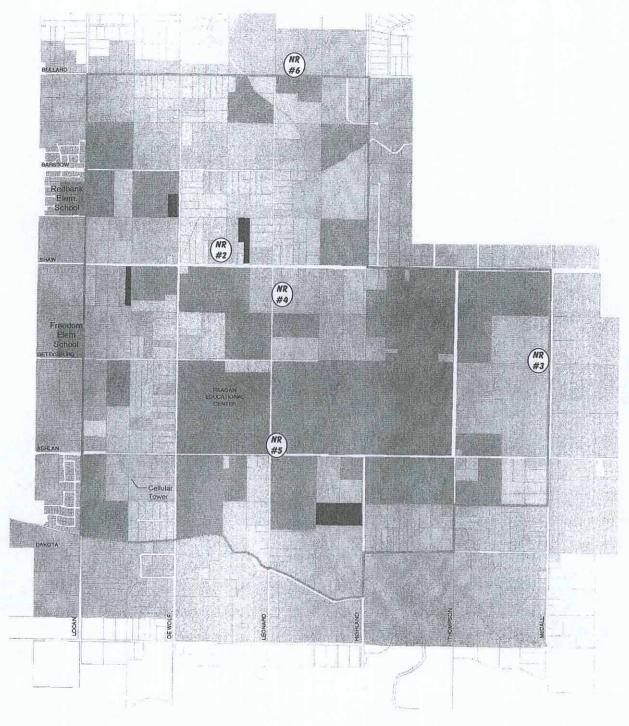
Monitoring Location	Leq (dBA)	L ₀₂ (dBA)	L _∞ (dBA)	L ₂₅ (dBA)	L _{so} (dBA)	L _{nús} (dBA)	L _{max} (dBA)
NR-1	66.2	72.8	70.7	67.4	63.7	44.5	79.6
NR-2	64.3	72.9	69.4	65.0	55.3	35.4	78.9
NR-3	64.3	73.4	69.3	62.2	53.3	37.2	82.1
NR-4	59.9	68.9	65.7	59.8	49.7	35.8	73.4
NR-5	61.4	69.6	67.3	62.2	52.1	37.2	72.4
NR-6	61.0	70.6	66.1	57.2	46.4	32.9	77.8

The Leq represents the equivalent sound level and is the numeric value of a constant level that over the given period of time transmits the same amount of acoustic energy as the actual time-varying sound level. The L_{02} , L_{08} , L_{25} and L_{50} are the levels that are exceeded 2, 8, 25 and 50 percent of the time, respectively. Alternatively, these values represent the noise level that would be exceeded for 1, 5, 15 and 30 minutes during a 1-hour period if the reading was extrapolated out to 1-hour's duration. The L_{min} and L_{max} represent the minimum and maximum root-mean-square noise levels obtained over a period of 1 second.

NR-1 – Shaw Avenue is to receive the greatest volume of project-related traffic and would serve as a major artery into the project area. This reading was obtained along the south side of Shaw Avenue east of Ash Avenue in the western portion of the project area. This area represents the most commercialized portion of the project area and would be expected to include the greatest volumes of traffic and highest existing ratio of trucks. The meter was placed in a vacant field, 50 feet south of the centerline of the near, eastbound lane. The 15-minute reading began at 12:42 p.m. The primary source of noise included the vehicle traffic traveling along Shaw Avenue. This traffic included 180 autos, two medium trucks and one heavy truck traveling in an eastbound direction. Westbound traffic included 206 autos, two medium trucks and one heavy truck. Other sources of noise included aircraft overflights and a string trimmer being used north of Shaw at a distance of about 400 feet.



Noise Measurement Locations



NR = Noise Reading

NR-1 South Shaw, between Fowler & Armstrong (located off sheet to the west)

NR-2 North of Shaw, between De wolf & Leonard NR-3

West of McCall, between Shaw & Ashlan NR-4 East of Leonard, between Shaw & Gettysburg

NR-5 North of Ashlan, approximately 300 feet east of Leonard

North of Bullard, between Leonard & Highland NR-6

Source: The Planning Center

City of Clovis

Southeast Urban Center Specific Plan



Figure 5.8-2

NR-2 – This reading was obtained along the north side of Shaw Avenue between De Wolf Avenue and Leonard Avenue. Specifically, the meter was placed in a vacant area in front of the residence located at 8166 Shaw Avenue. This would represent the area that is to receive the first community center and is also representative of the northern portion of the Community Center South and southern portion of the Community Center North. The meter was placed 50 feet north of the centerline of the near, westbound lane. The 15-minute reading began at 1:27 p.m. The primary source of noise included the vehicle traffic traveling along Shaw Avenue but birdcalls were also noted. This traffic included 49 autos, one medium truck and one two heavy truck traveling in an eastbound direction. Westbound traffic included 47 autos and four medium trucks.

NR-3 – This reading was obtained in the orange grove along the west side of McCall Avenue between Shaw Avenue and Ashlan Avenue. This area represents the eastern-most portion of the project and the reading is indicative of noise that would be experienced at the Eastern Village. The meter was placed 50 feet west of the centerline of the near, southbound lane. The 15-minute reading began at 2:12 p.m. The primary source of noise included the vehicle traffic traveling along McCall Avenue but other sources of noise were also notable. A farm tractor proceeded down McCall and pauses for several minutes in front of the meter at a distance of about 50 feet. Additionally, a pump associated with the orange grove was audible in the background. Finally, the high school marching band, and specifically the drum section, at the Reagan Educational Center west of Leonard Avenue could be heard. Traffic along McCall included 23 autos and two heavy trucks traveling northbound and 34 autos, two medium trucks, and two heavy trucks traveling southbound.

NR-4 – This reading was obtained in the field along the east side of Leonard Avenue between Shaw Avenue and Gettysburg Avenue. The reading is representative of eastern-most portion of the Community Center South bit would also be representative of the western portion of the Residential Planned Community. The meter was placed 50 feet east of the centerline of the near, northbound lane. The 15-minute reading began at 2:52 p.m. The primary source of noise included the vehicle traffic traveling along Leonard Avenue. Some minor noise from construction south of Gettysburg Avenue between DeWolf and Leonard could also be heard in the background. Traffic along Leonard included 55 autos and one medium truck traveling northbound and 18 autos proceeding southbound.

NR-5 – This reading was obtained in the field along the north side of Ashlan Avenue approximately 300-400 feet east of Leonard Avenue across from the residence located at 8579 Ashlan. The reading would be representative of southwest portion of the Residential Planned Community and southern portion of the Eastern Village. The meter was placed 50 feet north of the centerline of the near, westbound lane. A 15-minute reading was obtained from 3:33 p.m. The primary source of noise included the vehicle traffic traveling along Ashlan Avenue. However, aircraft overflights were also observed. Furthermore, a barking dog across Ashlan was noted. Finally, field activities and the use of the public address system at the Reagan Educational Center located to the west across Leonard also added to the ambient noise. Traffic along Ashlan included 40 autos and one medium truck traveling eastbound and 33 autos and three medium trucks proceeding westbound.

NR-6 – This reading was obtained in the field along the north side of Bullard Avenue east of east of Leonard Avenue. The reading would be representative of northern portion of the project area and the Very Low Residential area. The meter was placed in a vacant field 50 feet north of the centerline of the near, westbound lane. The 15-minute reading began at 4:12 p.m. The primary source of noise included the vehicle traffic traveling along Bullard Avenue, though aircraft overflights also added to the ambient noise. Traffic along Bullard included 28 autos and three medium truck traveling eastbound and 18 autos and one medium truck proceeding westbound.



Mobile Source Noise Level Modeling

Noise from motor vehicles is generated by engine vibrations, the interaction between tires and the road and the exhaust system. Reducing the average motor vehicle speed reduces the noise exposure of receptors adjacent to the road. Each reduction of 5 miles per hour reduces noise by 1 to 2 dBA.

Most noise in the project area is generated by vehicles using local roadways. To assess the potential for project-generated impact, it is necessary to quantify the existing traffic-generated noise. The CalTrans Sound32 version of the Federal Highway Administration traffic noise prediction model (Sound32 – Release 07/30/91) was used to evaluate traffic-related noise conditions in the vicinity of the project area. The model predicts one-hour Leq noise levels and an attenuation factor has been applied to provide the CNEL noise levels. These latter values were used in assessing potential mobile-source impacts from the proposed stadium.

The model uses various parameters including the traffic volume, vehicle mix, vehicle speed and roadway geometry to compute typical equivalent noise levels. Sound32 modeling was prepared for the number of vehicles and logistics observed during readings. Based on the types of locations monitored (all open space or vegetated areas), "soft site" modeling was conducted. With the exception of readings NR-2 and NR-3, the speeds included in the table are based on the posted speed limits. Reading NR-2 was obtained along Shaw after the speed transitions from 45 to 55 mph. The actual speed was estimated at approximately 50 mph. Reading NR-3 was obtained along McCall Avenue and this road has no posted speed limit. Again, the speed is based on an estimate observed in the field study. Reading NR-4 was obtained along Leonard Avenue south of Shaw. This segment is also not posted and traffic speed was estimated. The results of this analysis are included in Table 5.8-3. Note that the model correlates very closely with the field measurements demonstrating its applicability.

TABLE 5.8-3	
NOISE LEVEL MEASUREMENTS VERSUS	
PREDICTED MODEL RESULTS	

Monitoring Location	Measured Leq (dBA)	Modeled Speed (mph)	Modeled Leq (dBA)	Difference (dBA)	
NR-1	66.2	45	66.5	0.3	
NR-2	64.3	50	64.9	0.6	
NR-3	64.3	50	64.3	0.0	
NR-4	59.9	45	61.1	1.2	
NR-5	61.4	45	61.8	0.4	
NR-6	61.0	45	60.2	0.8	

Modeling of Existing Traffic Volumes

In order to assess the potential for mobile-source noise impacts on existing receptors, it is necessary to determine the noise currently generated by vehicles traveling through the project area. Average daily traffic (ADT) volumes were based on the existing daily traffic volumes provided by Associated Transportation Engineers. To determine the Ldn noise level produced by this traffic, the following methodology, suggested by CalTrans, was used:

- The morning rush hour lasts from 6:00 a.m. to 9:00 a.m. and each hour typically contains two hours
 of non-rush hour traffic. (I.e., each hour of non-rush hour traffic includes 4.3 percent of the daily
 total. Each hour of rush hour traffic receives 8.6 percent of the daily total),
- The evening rush hour lasts from 4:00 p.m. to 7:00 p.m. and each hour also contains two hours of non-rush hour traffic, and
- Nighttime traffic is equal to 10 percent of the total ADT traffic and is divided between the hours of 10:00 p.m. and 6:00 a.m. (l.e., each hour receives 1.1 percent of the daily total.)

For the purposes of this analysis, the ratio of automobiles, medium trucks and heavy trucks is based on the ratio noted in the field study. In all, 731 autos, 20 medium trucks and eight heavy trucks were observed during the six measurements. These values indicate a ratio of 96.31 percent automobiles, 2.64 percent medium trucks and 1.05 percent heavy trucks. All roads are modeled at their posted speed limits. In those cases where no limit is posted, an average speed of 45 mph is assumed. Table 5.8-4 presents the projected existing noise levels along site access roads in the project area as well as the distances to the 70 and 65 dBA Ldn noise contours. The table assumes a standard sound attenuation of 4.5 dBA with each doubling of distance. Noise levels at 50 feet from the centerline of roadways in the project area range from approximately 50 to 70 dBA Ldn. Using the suggested CalTrans methodology, in all cases, the CNEL noise level would be about 0.3 dBA greater than the predicted Ldn values.

TABLE 5.8-4 EXISTING EXTERIOR NOISE EXPOSURE							
Roadway	Speed (mph)	ADT 1	Ldn ² (dBA @ 50 Ft.)	Distance to 70 dBA Ldn (Ft.)	Distance to 65 dBA Ldn (Ft.)		
Bullard Avenue	45	3,000	63.0	<50	<50		
Barstow Avenue	35	2,800	60.1	<50	<50		
Shaw Avenue	55	9,300	70.0	50	108		
Gettysburg Avenue	35	300	50.4	<50	<50		
Ashlan Avenue	40	4,400	63.3	<50	<50		
Fowler Avenue	45	17,900	70.7	56	120		
Armstrong Road	45	4,200	64.4	<50	<50		
Temperance Avenue	50	3,000	64.1	<50	<50		
Locan Avenue	45	300	52.9	<50	<50		
DeWolf Avenue	45	2,200	61.6	<50	<50		
Leonard Avenue	45	500	55.2	<50	<50		
Highland Avenue	45	500	55.2	<50	<50		
Thompson Avenue	45	500	55.2	<50	<50		
McCall Avenue	45	3,800	64.0	<50	<50		



² Ldn = Day/Night Noise Equivalent Level. Measured at 50 feet from roadway centerline.



Note: The noise measurements in this table reflect existing conditions in the project area. No mitigation measures, such as walls, are reflected in the noise measurements.

Source: The Planning Center, October 2002

5.8.3 Standards of Significance

CEQA states that a noise impact may be significant if it were to expose persons to noise levels or groundborne vibration exceeding established standards or substantially increase ambient noise (temporary, periodic, or permanent). CEQA does not define what constitutes a "substantial" increase. In accordance with the goals of CEQA, the project will be considered to have a significant impact on the environment related to noise if it:

- Exposes people to severe noise levels. This is defined as placement of a potential land use within an
 area that exceeds its appropriate standard. These standards are as included in the City's General
 Plan Noise Element and presented in Table 5.8-1, above.
- Increases existing noise levels by 3 dBA Ldn where the resultant noise level exceeds the appropriate Ldn standard, or by 5 dBA Ldn where the resultant noise level remains below the Ldn standard.
 These levels are based on the human perception of noise as discussed above.

5.8.4 Impacts and Mitigation Measures

The development of the Southeast Urban Center Specific Plan would allow the creation of both stationary and traffic noise sources. Potential impacts may stem from short-term construction activities as well as increases in traffic associated with long-term build-out. The traffic analysis estimates that the project would generate as many as 220,520 daily vehicle trips.

IMPACT: TEMPORARY INCREASE IN NOISE LEVELS DUE TO CONSTRUCTION

Impact Analysis:

Clovis Regulatory Policy

The significance of any potential impact would vary with the distance to local receptors. The City's noise standards provide that exterior noise at residential receptors be limited to 65 dBA Ldn. Mixed uses are acceptable up to 70 Ldn, so long as interior levels in residential units do not exceed 45 Ldn. Schools are also subject to the 65 dBA Ldn exterior standard while commercial and office uses are subject to an exterior standard of 70 dBA Ldn.

However, Section 9.3.228.10.g(1) of the City Zoning Code allows for construction so long as it is restricted to between the hours of 7:00 a.m. and 9:00 p.m. weekdays and Saturdays, excluding holidays. Construction outside of the hours and days is acceptable so long as the sound does not create a noise disturbance across a residential property line, or for emergency work. The Code also notes that stationary equipment (e.g., generators) shall not be located adjacent to any existing residences unless enclosed in a noise attenuating structure, subject to approval of the Director.

Additional Regulatory Policy

Pursuant to Occupational Health and Safety Administration (OSHA) requirements, site construction work will be required to operate under an approved Health and Safety Plan. Under an approved Health and Safety Plan, construction noise levels would be reduced to less than regulatory levels.

Additional Impact Evaluation

Short-term noise impacts are those associated with construction activities necessary to implement the proposed land use. The noise levels would be higher than existing ambient noise levels in the project area today, but would subside once construction is completed.

Two types of noise impacts could occur during the construction phase. First, the transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. Even though there could be a relatively high single-event noise exposure potential with passing trucks (a maximum noise level of 87 dBA at 50 feet), the increase in noise would be small when averaged over a longer period of time, such as in the calculation of the Ldn, and therefore, would result in a less than significant impact to noise receptors along the truck routes and within the local area.

The second type of impact is related to noise generated by on-site construction operations. Construction activities are carried out in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise levels surrounding the construction site as work progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow noise ranges to be categorized by work phase. Table 5.8-5 lists typical construction equipment noise levels recommended for noise impact assessment at a distance of 50 feet.

Noise ranges have been found to be similar during all phases of construction, although the building erection phase tends to be less noisy. The grading and site preparation phase tends to create the highest noise levels, because the most powerful and noisiest construction equipment is found in the earthmoving equipment category. This category includes excavating machinery (back fillers, bulldozers, draglines, front loaders, etc.), and earthmoving and compacting equipment (compactors, scrapers, graders, etc.) Typical operating cycles may involve 1 or 2 minutes of full power operation followed by 3 to 4 minutes at lower power settings. Noise levels at 50 feet from earthmoving equipment range from 73 to 96 dBA. The USEPA estimates that constriction activities create a noise level of approximately 88 dBA Leq for residential development and 89 dBA Leq for commercial and industrial development, both as measured at a distance of 50 feet. These values consider not only the number of pieces in use, but also equipment spacing typical of construction operations (USEPA, 1971).

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Type of Equipment	Range of Sound Levels Measured (dBA at 50 feet)	Suggested Sound Levels for Analysis (dBA at 50 feet)	
Pile Drivers, 12,000-18,000 ft-lb/blow	81 – 96	93	
Rock Drills	83 – 99	96	
Jack Hammers	75 – 85	82	
Pneumatic Tools	78 – 88	85	
Pumps	68 – 80	77	
Dozers	85 – 90	88	
Tractor	77 – 82	80	
Front-End Loaders	86 – 90	88	
Hydraulic Backhoe	81 – 90	86	
Hydraulic Excavators	81 – 90	86	
Graders	79 – 89	86	
Air Compressors	76 – 86	86	
Trucks	81 – 87	86	

The City of Clovis includes requirements for construction to reduce the impact of construction noise. As noted, Section 9.3.228.10.g(1) of the City Zoning Code restricts construction to between the hours of 7:00 a.m. and 9:00 p.m. weekdays and Saturdays, excluding holidays. Construction outside of the hours and days is acceptable so long as the sound does not create a noise disturbance across a residential property line, or is for emergency work. The Code also notes that stationary equipment (e.g., generators) shall not be located adjacent to any existing residences unless enclosed in a noise attenuating structure, subject to approval of the Director. Adherence to the code is mandatory and will ensure than any impacts from construction noise remain less than significant.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: POTENTIAL NOISE-RELATED IMPACTS TO ON-SITE SENSITIVE RECEPTORS DUE TO LONG-TERM TRAFFIC GENERATION

The most profound source of noise in the project area is from vehicle travel on public roads. This noise has the ability to create significant impacts at both on-site and off-site sensitive land uses. The proposed on-site land uses would be subject to impact if this noise were to the exceed goals and standards of the City Noise Element and Municipal Code. Sensitive off-site uses could be subject to impact if the project were to generate a sufficient volume of traffic to substantially increase existing noise at these locations. Because of these differences, impacts to on-site and off-site sensitive land uses are addressed separately.

Impact Analysis:

City of Clovis Regulatory Policy

The City's noise standards for residential land uses provide for a maximum 65 dBA Ldn for habitable exterior areas (70 dBA Ldn in mixed use areas) and 45 dBA Ldn for interiors. Schools are also subject to the 65 dBA Ldn while commercial and office uses are subject to a 70 dBA Ldn exterior standard. Table 5.8-6 presents the results of Sound32 noise modeling for the Specific Plan build-out conditions as well as the distances to both the 70 and 65 dBA Ldn noise contours. (Note that the contours do not consider the presence of any walls or other structures or additional setbacks that could reduce noise at the potential receptor locations.)

The potential for noise impact would ultimately be based on the distances from the roadways as well as the selected land use. For example, if a purely residential tract was developed within 100 feet from the centerline of Bullard Avenue, the impact would be potentially significant. On the other hand, if the area were designated as mixed-use, the exterior standard is raised to 70 dBA Ldn. This contour would occur at a distance of less than 50 feet from the centerline of the road and through land use designation and zoning setbacks, the impact is reduced to less than significant without the need for a sound wall.

However, the residents would still be subject to a 45 dBA Ldn interior standard. Because Title 24 construction techniques provide approximately 20 dBA of attenuation with windows closed (thereby requiring the use of forced air ventilation), interior levels for residential areas sited within the 70 dBA Ldn would still be subject to potential impact and mitigation is warranted to ensure that this impact is reduced

to less than significant levels. Less sensitive land uses, are subject to a 50 dBA Ldn interior standard and typical construction would meet this standard if exterior levels do not exceed 70 dBA Ldn.

TABLE 5.8-6							
SPECIFIC PLAN POTENTIAL BUILD-OUT EXTERIOR NOISE EXPOSURE							
Roadway	Speed (mph)	ADT 1	Ldn ² (dBA @ 50 Ft.)	Distance to 70 dBA Ldn (Ft.)	Distance to 65 dBA Ldn (Ft.)		
Bullard Avenue	45	14,700	69.9	<50	106		
Barstow Avenue	35	12,100	66.5	<50	63		
Shaw Avenue	55	46,500	77.0	146	315		
Gettysburg Avenue	35	16,500	67.8	<50	77		
Ashlan Avenue	40	25,000	71.0	58	126		
Fowler Avenue	45	27,300	72.6	75	161		
Armstrong Road	45	14,300	69.8	<50	104		
Temperance Avenue	50	23,100	73.0	79	171		
Locan Avenue	45	5,900	65.9	<50	57		
DeWolf Avenue	45	11,000	68.6	<50	87		
Leonard Avenue	45	12,400	69.1	<50	94		
Highland Avenue	45	5,500	65.6	<50	55		
Thompson Avenue	45	7,300	66.8	<50	66		
McCall Avenue	45	17,400	70.6	55	118		

¹ ADT = Average Daily Traffic volume.

Note: The noise measurements in this table reflect existing conditions in the project area. No mitigation measures, such as walls, are reflected in the noise measurements.

Source: The Planning Center, October 2002

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

5.8-1 Table 5.8-6 shall be used to evaluate potential noise impacts from Specific Plan development.

5.8-2 The minimum distance described in Table 5.8-6 may be reduced if measures to achieve required noise attenuation are demonstrated by the developer. Specific measures shall be incorporated into each project as determined in an acoustical analysis to be prepared as a condition of approval of any Tentative Tract Map or site plan.

Level of Significance After Mitigation: Less than significant.

IMPACT: POTENTIAL NOISE-RELATED IMPACTS TO OFF-SITE SENSITIVE RECEPTORS DUE TO PROJECT-GENERATED TRAFFIC

Impact Analysis: As noted above, any proposed sensitive land uses are subject to impact if the project were to site these uses in incompatible areas due to excessive noise. However, off-site impacts could be significant if the project were to increase traffic to the point that it substantially raises the ambient noise levels at off-site sensitive receptors.



² Ldn = Day/Night Noise Equivalent Level. Measured at 50 feet from roadway centerline.

City of Clovis Regulatory Policy

The City's noise standards for residential land uses provide a maximum 65 dBA Ldn (70 dBA Ldn in mixed-use areas) for exterior areas and 45 CNEL for interiors. Schools are also subject to an exterior standard of 65 dBA Ldn while commercial and office space is subject to a 70 dBA Ldn. Schools, commercial, and office use are all subject to an interior standard of 50 dBA Ldn. The City has no criteria that define a significant noise increase. However, an action item of Goal 1 of the Noise Element, the City states, "During review of development applications, consider the noise impact of the proposed land uses on the existing and future noise environment of existing or planned contiguous uses." This is interpreted to include evaluation of potential impacts from new stationary sources creating noise in excess of City standards at existing and planned land uses and all noise associated with a proposed development, including its increase to roadway noise.

Additional Impact Evaluation

The project area is predominantly agricultural land and rural residential land uses. However, existing and ongoing residential development is located toward the west end of the project area concentrated to west of Locan Avenue. While much of the new development includes extended setbacks and sound walls, many homes do not.

Table 5.8-7 presents Sound32 noise modeling, demonstrating the increase in noise along project access routes. Here an impact would be significant if the project's contribution meets of exceeds 5 dBA Ldn and the resultant level remain under the 65 dBA Ldn standard, or 3 dBA Ldn if the noise levels are projected to exceed this standard. Note that with the exception of Fowler Avenue, the increase in noise along all routes would create significant impacts at any residential units lying along these roads and mitigation is warranted to both reduce these levels and ensure that interior levels do not exceed the interior 45 dBA Ldn standard.

TABLE 5.8-7
COMPARISON OF LONG-TERM TRAFFIC-RELATED EXTERIOR NOISE LEVELS

	Speed	_	Existing		Existing Plus Project	
Roadway	(mph)	ADT 1	Ldn @50 Feet 2	ADT 1	Ldn @50 Feet ²	(dBA)³
Bullard Avenue	45	3,000	63.0	14,700	69.9	6.9
Barstow Avenue	35	2,800	60.1	12,100	66.5	6.4
Shaw Avenue	55	9,300	70.0	46,500	77.0	7.0
Gettysburg Avenue	35	300	50.4	16,500	67.8	17.4
Ashlan Avenue	40	4,400	63.3	25,000	71.0	7.7
Fowler Avenue	45	17,900	70.7	27,300	72.6	1.9
Armstrong Road	45	4,200	64.4	14,300	69.8	5.4
Temperance Avenue	50	3,000	64.1	23,100	73.0	8.9
Locan Avenue	45	300	52.9	5,900	65.9	13.0
DeWolf Avenue	45	2,200	61.6	11,000	68.6	7.0
Leonard Avenue	45	500	55.2	12,400	69.1	13.9
Highland Avenue	45	500	55.2	5,500	65.6	10.4
Thompson Avenue	45	500	55.2	7,300	66.8	11.6
McCall Avenue	45	3,800	64.0	17,400	70.6	6.6

¹ ADT = Average Daily Traffic volume.

² Ldn = Day/Night Noise Equivalent Level. Measured at 50 feet from roadway centerline.

³ Bold values denote a potentially significant impact.

Source: The Planning Center, May 2002

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

- 5.8-3 Table 5.8-7 shall be used to determine the potential for noise impacts from Specific Plan development at off-site sensitive land uses. The developer shall evaluate sensitive land uses situated along roadways subject to significant noise increase described in the table. Specific measures shall be incorporated into each project as determined in an acoustical analysis to be prepared as a condition of approval of any Tentative Tract Map or site plan.
- 5.8-4 Where the exterior noise standards are exceeded and berms and/or sound walls are not feasible, an acoustic study shall identify structural modifications to ensure that interior noise levels are reduced to the extent reasonably feasible or other modifications shall be made in the plan to ensure that acceptable noise levels are achieved.

Level of Significance After Mitigation: Potentially significant.

It may not be possible to mitigate exterior noise levels for existing residences located along site access routes. The construction of berms or sound walls would not be feasible where their construction would block the only access to the residence. Additionally, the necessary wall heights may have aesthetic consequences.

Furthermore, many of these residents already have sound walls. While these walls may achieve the exterior standard, the projected increases in noise presented in Table 5.8-7 would occur whether or not a wall is already present (i.e., if the traffic noise increases by 10 dBA at a specific location, the receptors will note the 10 dBA increase regardless of whether or not they already have a wall even if the resultant noise remains within the applicable land use standard.) Furthermore, in all probability, sound walls would/could not be constructed high enough to protect second story habitable living areas.



IMPACT: POTENTIAL VIBRATION-RELATED IMPACTS DUE TO PROJECT CONSTRUCTION

Impact Analysis: Another potential impact of construction is that of vibration. Groundborne vibration is typically associated with blasting operations and potentially, the use of pile drivers, neither of which would be necessary for the construction (or operation) of the project. Another typical source of vibration impact is the placement of sensitive land uses proximate to active railroad tracks. These impacts may be significant to sensitive land uses placed within about 200 feet of the rail line. No such railroad operations are located in the project area and no receptors would be subject to railroad vibration. As such, no excessive groundborne vibrations would be created by the proposed project and any impact would be ;ess than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance After Mitigation: Not applicable.

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5.9 PUBLIC SAFETY AND HEALTH

This section addresses the potential for impacts related to the presence and use of hazardous materials by existing and historical uses within the proposed Specific Plan Area and the proposed land uses. These risks are primarily associated with the potential for on-site hazards from abandoned farm chemicals, pesticide use, storage of materials categorized as hazardous under existing regulations (including pesticides and herbicides), underground and aboveground storage tanks, and the operation of facilities historically located within the boundaries of the proposed Specific Plan.

A potential exists for public health and safety impacts to occur during construction of future residential, commercial, institutional, and public facilities. Site preparation and construction activities that occur in potentially contaminated surface and subsurface soil and/or groundwater conditions could impact the health of workers at the site and persons living and working off-site. These types of impacts are addressed based on environmental studies that evaluated existing, and considered unknown, site conditions. Resources utilized in preparing this section are listed under Section 13 – Bibliography, and are highlighted below.

Future activities at the site could result in impacts to public health and safety through accidental release of hazardous materials during transport of products or wastes, fires or explosions, or process emissions. Since specific industrial uses for the project area have not as yet been identified, evaluation of specific uses will be necessary when development plans are submitted. Uses will then be evaluated to determine their potential public health and safety impacts in subsequent CEQA review, as generally described in Section 2.6 - Intended Uses of this EIR.

5.9.1 Methodology Related to Public Health and Safety

The methodology for identifying and assessing potential public health and safety impacts of the proposed project in this EIR included:

- A review of historic and recent uses of the property;
- Review of Hazardous Waste and Substances Site List (Cortese List); Department of Toxic Substances Control, October 2002.
- Review of CERCLIS Hazardous Waste Sites in California, U.S. Environmental Protection Agency, November 2002;
- Review of National Priorities List Sites in California, U.S. Environmental Protection Agency, November 2002;
- Review of Water Purveyors Quarterly Report on Methyl Tertiary Butyl Ether (MTBE), California Regional Water Quality Control Board, July 2002;
- Review of Leaking Underground Storage Tanks Quarterly Report, California Regional Water Quality Control Board, July 2002;
- Review of the Hazardous Materials Section of the Fresno County General Plan EIR, February 2002; and
- Analysis of operating procedures for the proposed project related to hazardous materials.



5.9.2 Existing Conditions Related to Public Safety and Health

Environmental Setting

The term "hazardous material" refers to both hazardous substances and hazardous waste. A material defined as hazardous if it appears on a list of hazardous materials prepared by a federal, State or local regulatory agency, or if it has characteristics defined as hazardous by any such agency.

The U.S. Environmental Protection Agency (EPA) classifies a material as hazardous material if it has one or more of the following properties:

- Ignitability: oxidizers, compressed gases and extremely flammable liquids and solids;
- Corrosivity: strong acids and bases;
- Reactivity: explosives or generate toxic fumes when exposed to air or water; and
- Toxicity: materials listed by EPA as capable of inducing systematic damage to humans or animals.

Various industrial and commercial facilities within the County of Fresno 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 fuel 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.

Hazardous waste generators in Fresno County include industries, businesses, public and private institutions, and households. Agricultural uses are the primary generators of hazardous waste in the Specific Plan project 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.

Agricultural Use

The project area has historically been in agriculture use, and future development could encroach on locations where hazardous materials and waste related to agriculture are or were handled and disposed. As a result, existing and future sensitive receptors, such as residences and schools, may be exposed to public health and safety hazards.

Currently, grapes, tree crops and vegetables are predominately grown. Cattle grazing and poultry farms are also predominant. Many of these farms rely heavily on chemical fertilizers and pesticides to produce food. The types of pesticides and methods of application will vary depending upon time of year, crop type, weather and proximity to urban areas. Among the problems that can be caused by chemical use are health risk to applicators and farm workers, contamination of groundwater and surface waters, and death and deformation of wildlife, especially birds and fish.

Levels or concentrations of pesticides currently applied to these lands and residual pesticides that are present in the soils within the project area cannot be determined until a site survey and soil tests are conducted. Testing may be appropriate for specific projects, especially residential uses and schools, or where the probability for contamination is high. Nearly all substances are soluble to some extent in water, and many chemicals wastes are highly toxic even in minute concentrations. Substances or particular concern include herbicides, pesticides and other complex organic compounds, petroleum products, and those substances that contain trace amounts of metals.

A declining groundwater quality results from the use of fertilizers and other agricultural chemicals. In addition, disposal of wastes on the land surface; in shallow excavations including septic tanks; through deep wells ands mines; storage tanks and pipelines; and animal feedlots also cause groundwater quality to decline. Cattle yards, for example, often pollute the shallow groundwater with high levels of nitrates and dissolved solids (TSD).

Contaminated Sites

In the County of Fresno, pesticide manufacturing, processing, storage and applicator facilities; Industrial manufacturing and processing, and dumps comprise most of the project areas with soil or groundwater contamination. In the County of Fresno, 32 sites have been identified as CERCLIS⁷ hazardous waste sites, which are potentially hazardous and require preliminary investigation. However, none are located within the project area. Please note that a site's inclusion on the CERCLIS inventory list does not necessarily mean that the site is contaminated. Furthermore, sites not in CERCLIS are not necessarily contaminant-free.

Of these 32 CERCLIS sites, seven of them were included on the federal National Priorities List (NPL). The EPA has investigated these sites and determined that they may present long-term threats to public health or the environment. See Table 5.9-1 for a list of the NPL sites within Fresno County, and their approximate distance from the project area. These sites are under the enforcement of the Fresno County Health Services Agency (HSA). The County HSA is designated as the Local Enforcement Agency (LEA) for hazardous waste issues, and is the lead agency for the remediation of hazardous waste sites, including for building asbestos abatement and underground storage tank (UST) remediation.



⁷ CERCLIS is a database used by the U.S. Environmental Protection Agency (EPA) to track activities conducted under its Superfund program

TABLE 5.9-1 NATIONAL PRIORITIES LIST (SUPERFUND SITES) FRESNO COUNTY

Site Name	City/ Community	Address	Distance from Project Area	Status
Atlas Asbestos Mine	Coalinga	20 miles NW of Coalinga- Los Gatos Creek Road	85 miles to SW	Clean-up complete 9/2/99; continued monitoring
Coalinga Asbestos Mine	Coalinga	Pine Canyon, 15 Miles NW of Coalinga	80 miles to SW	Deleted from NPL on 4/24/98; DTSC has assumed oversight
Fresno Municipal Sanitary Landfill	Fresno	SW Corner of Jensen & West Avenue	13 miles to SW	Remedial action is fully functional; minor issues before construction is complete
Industrial Waste Processing	Pinedate	7140 North Harrison	10 miles to W	Construction completed 9/28/99
Purity Oil Sales	Fresno	3265 South Maple Avenue	9 miles to SW	Awaiting a clean-up decision by EPA
Selma Treating Company	Selma	1735 Dockery Avenue	16 miles to S	Construction of groundwater treatment system was expected to begin in 1996.
T.H. Agricultural & Nutrition Co.	Fresno	7183 McKinley Avenue,	1 ½ miles to S	Groundwater clean-up study expected to be completed; final cleanup remedies selected in 1998.

Source: National Priorities List Sites in California, U.S. Environmental Protection Agency, www.epa.gov/superfund/sites/npt/ca.htm

In addition to the major sites, approximately 28 sites are included on the Department of Toxic Substances Control Hazardous Waste and Substances List ("Cortese List") compiled pursuant to Government Code Section 65962.5. Several of the project areas identified on the Cortese List are also on the CERCUS list. Again, none are located within the project area.

Underground Storage Tanks

Leaking underground storage tanks (LUSTs), particularly those containing petroleum products, represent the major source of soil and groundwater contamination in the project area. According to the Central Valley Regional Water Quality Control Board (CVRWQCB) Leaking Underground Storage Tank Tracking System Database (July 2002), 765 sites within Fresno County have been identified as contaminated from LUSTs. Soil or groundwater contamination due to leaking storage tanks at automobile service stations comprised almost all of the cases. Of these 765 sites, only one is located within the project area. The site, 5367 McCall Avenue, is currently being investigated for the level of potential contamination. No other LUSTs have been identified within the project area, or within a one-mile radius of the project area boundaries.

Groundwater Contamination

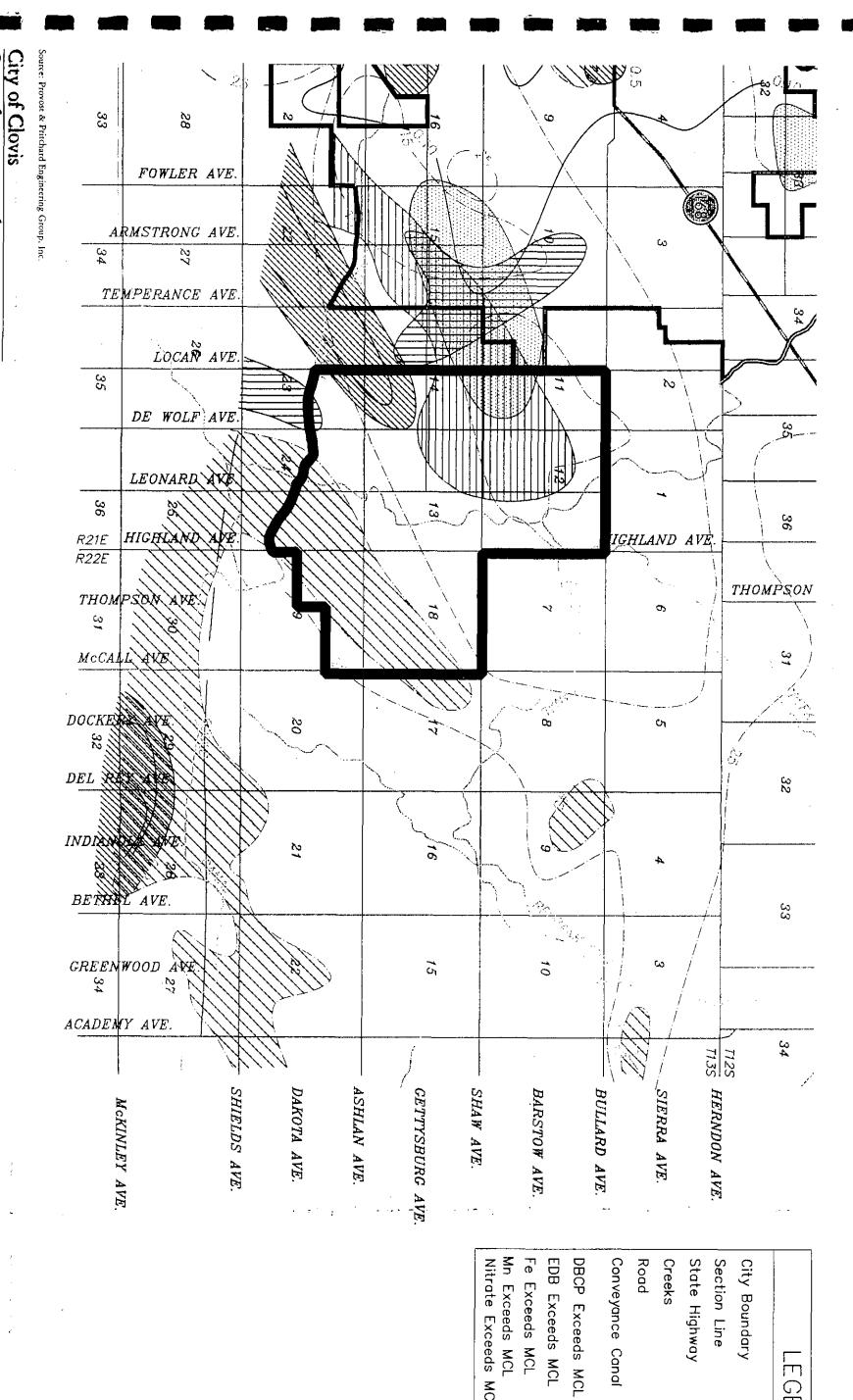
Groundwater contamination, primarily caused by the historical use of agricultural chemicals and pesticides, such as DBCP, has resulted in contamination of at least three City wells. The City of Clovis has also had to retrofit wells with granular activated carbon wellhead units. Cattle yards are another source of groundwater contamination, often polluting the groundwater with levels of nitrates and dissolved solids.

State Highway

Section Line

City Boundary

LEGEND



Nitrate Exceeds MCL Mn Exceeds MCL Fe Exceeds MCL



Southeast

Urban Center Specific Plan

P-VCLO-11.0G-(GlasisP)\EIR\SmacdackDEIR\DRAFT DEIR 12-18-02.da

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A number of constituents have been identified to exist at problem levels or to possibly be a concern in the future, including DBCP, EDP, nitrate, iron, manganese, arsenic, and radon.⁸ MTBE (fuel additive), a fairly recent addition to potential pollutants, will need to be monitored in the future, although it has not shown up in Clovis water supplies.

See Figure 5.9-1, *Groundwater Contamination*, for the location of groundwater contamination within the project area. Currently, the City of Clovis utilizes wellhead treatment for DBCP removal for the water produced from seven wells. Arsenic and radon do not currently exceed drinking water standards, but if standards are adopted in the future, these could create problems for utilizing groundwater.

Furthermore, it is important that abandoned water wells are properly destroyed. Improper abandonment of such wells presents a significant risk of contaminating the City's community water supply

Land Use Conflicts

Health-based land use conflicts can occur when certain types of industrial uses and agricultural-related uses are located in close proximity to sensitive receptors, such as residences and schools. Most conflicts are related to air emissions, both during routine operation and accidents.

State and federal Community Right-to-Know laws (Section 4313 of SARA Title III, as set forth in Title 42 of the U.S. Government Code, Section 11011 et.seq.; 40 CFR parts 300,350,355,370 and 372; Chapter 6.95 of the California Health and Safety Code; and Title 19 of the California Code of Regulations) require all businesses which generate, store, handle or dispose of hazardous materials in designated planning threshold quantities must submit to the Fresno County Environmental Health Department, Hazardous Materials Division, the following:



- An inventory of all chemicals manufactured, imported, processed or handled in any way;
- The maximum quantity of the chemical on-site at one any one time:
- The total quantity of the chemical released during the year, including accidental and routine emissions;
- Off-site locations to which the chemicals were shipped:
- Treatment methods of the chemical;
- A response and evacuation plan, should an accident occur; and
- An employee-training program.

The purpose of these regulations is to provide information to the emergency responders so that they can protect themselves and initiate a more effective response, and to provide public access to information regarding the existence of chemicals in the community.

Toxic air contaminants emitted during routine operation of a facility is primarily regulated under Sections 443000-44384 of Division 26 of the Health and Safety Code, also known as the Air Toxic Hot Spots Act of 1987. The Act established a statewide program for inventory of air toxics emissions from individual facilities. The Act also requires individual air pollution control districts to prioritize and categorize pollutant-releasing facilities as high, intermediate, or low priority for health risk assessment. Those facilities categorized as high priority must submit a health risk assessment (HRA) to the district; other facilities may be required to submit an HRA according to district priorities established pursuant to the Act. Health risk assessments provide information regarding the area around a facility that is subject to the significant health impacts due to facility emissions. A primary factor in the prioritization is the proximity to sensitive receptors. The enforcement of development on currently isolated facilities could

⁸ City of Clovis Water Master Plan Update , Phase II, Facilities Plan, page 2-11.

result in a re-prioritization of the facility, and a need for a health risk assessment. If a significant cancer risk exists, the community must be notified. There are no toxic hot spot sites within the specific plan project area or within the Fresno-Clovis Metropolitan Area⁹.

Toxic air contaminants released during hazardous materials incidents are regulated under Chapter 6.95 of the Health and Safety code. Industrial, agricultural, and commercial facilities within the project area, which involve the storage, handling, use and or disposal of acutely hazardous materials or large quantities of hazardous materials must provide a Risk Management and Prevention Plan (RMPP). Plan approvals and building permits cannot be issued until either the preparation of the RMPP has commenced or the administrative agency has exempted the business from the requirement. The RMPPs can assist City and County emergency responders with more efficient planned responses to hazardous material incidents.

Hazardous Materials Transportation

Hazardous materials are transported through Fresno County by two modes: heavy truck and rail. Major roadways located within the vicinity of the Specific Plan project area include State Route 168, which is located approximately 1 ½ miles north of the project area, and State Route 180, which is located approximately 2 miles to the south. The only major rail line in the vicinity of the project area is the Burlington Northern and Santa Fe (BNSF) and Union Pacific Railroads, which are located approximately 1.6 miles to the south of the project area. Any County road, City street, or regional and State roadway may be used to transport hazardous materials from their sources to the intended users or disposal facilities. A traffic accident could result in environmental contamination and human health effects. Spillage into waterways could damage flora and fauna. Human health impacts, however, are more likely to occur due to air emissions.

Hazardous Waste Disposal

Large quantities of hazardous wastes are generated locally by industrial and institutional activities and by clean up of contaminated sites. Depending upon the classification of the hazardous waste, it is either transported to a Level I or Level II waste disposal site. The nearest Level I and II waste site is in the Kettleman Hills in Kings County.

Hazardous waste generated by households, such as paints, oil, pesticides, and solvents, can be collectively substantial. To prevent contamination of the solid waste stream and potential contamination of soil and water, HSA coordinates semi-annual collections of household hazardous wastes.

Commercial and agricultural dischargers/disposers of larger quantities of hazardous materials must arrange for proper transport and disposal. These activities are regulated primarily by CalTrans, California Environmental Protection Agency (Cal-EPA), the California Integrated Waste Management Board (CIWMB), and/or the Central Valley Regional Water Quality Control Board.

Hazardous Material Emergencies

The County of Fresno is responsible for Hazardous material Business plan filing and Risk Management and prevention Programs. The HSA maintains a hazardous materials response team that coordinates and manages hazardous materials incidents.

⁹ Annual Air Toxics Report for the Year of 2000, San Joaquin Unified Valley Air Pollution Control District, http://www.valleyair.org/, March 2001.

The City of Clovis ensures that the requirements of the various regulatory agencies are complied with prior to the issuance of permits. The City of Clovis Fire and Police Departments often serve as the first agency of response for hazardous material incidents.

San Joaquin Valley Fever

Coccidioides immitis (commonly known as San Joaquin valley fever) is a dimorphic fungus that is part of the microbial population of the soil in the southwestern United States and northern Mexico. It flourishes primarily in areas that correspond to the Lower Sonoran Life Zone, which is characterized by arid to semi-arid climate, hot summers, few winter freezes, low altitude, and alkaline soil. The fungus exists in the first few inches of topsoil.

Most of the persons experiencing infection with "cocci" are asymptomatic, or develop an illness indistinguishable from ordinary upper respiratory infections. Persons of all ages, both sexes, and all races are susceptible to infection and recovery is usually followed by lifelong immunity. The highest incidence rates of reported cases in 1996 were in the 55-64-age group (2.40 cases per 100,000 population), followed by the 45-54 age group (1.43). There were no reported cases under the age of 18. The male-to-female ratio rate of incidence was 3.6:1. The difference is likely due to occupational and recreational exposure of males. Susceptibility to disseminated disease is greater in African Americans, Filipinos, Hispanics, pregnant women, and persons who are immuno-compromised.

Since the first reported case of coccidioidomycosls in California in 1894, cases have continued to be reported with more than half of the cases coming from the southern portion of the Central Valley, especially from Kern, Kings, Tulare, and Fresno Counties. The Antelope Valley District in LA County had the highest rate of coccidioidomycosis cases in 1996, at 2.57 per 100,000 population.

A vaccine against "cocci" is in development; until it is perfected, prevention is aimed at dust control. Methods to help prevent the disease include planting ground cover and grass, wetting down the soil, oiling roadways, and air conditioning houses. Those persons who work in occupations where dust is raised may consider wetting the soil, using respirators, wearing masks, working and sleeping upwind from the site. For those persons who are at high risk of disseminated disease, it may be prudent to avoid areas and activities involving intense dust exposure in the endemic areas. California State law (California Code of Regulations, Title 17, Public Health, Section 2500) requires all health-care providers to report cases of coccidioidomycosis to the local health department.

5.9.3 Regulatory Setting

Regulatory Agencies

Many agencies regulate hazardous materials and wastes in the project area, including:

- U.S. EPA
- Occupation Safety and Health Administration (OSHA)
- Department of Transportation (CalTrans)
- California Environmental Protection Agency
- Department of Toxic Substances Control (DTSC)
- Central Valley Regional Water Control Board
- Air Resources Board
- Fresno County Health Services Agency (HSA)
- · Fresno County Fire Department
- San Joaquin Valley Unified Air Pollution Control District
- California Department of Health Services (DHS)



Federal Laws/Regulations

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA)

Under CERCLA, owners and operators of real estate where there is hazardous substances contamination may be held strictly liable for the costs of cleaning up contamination found on their property. No evidence linking the owner/operator with the placement of the hazardous substances of the property is required.

CERCLA, also known as Superfund, established a fund for the assessment and remediation of the worst hazardous waste sites in the nation. Exceptions are provided for crude oil wastes that are not subject to CERCLA.

In 1986, Congress established the "innocent landowner defense" in the 1986 amendments to the CERCLA known as the Superfund Amendments and Reauthorizations Act (SARA). To establish innocent landowner status, the landowner "must have undertaken, at the time of acquisition, all appropriate inquiry into the previous ownership and uses of the property consistent with good commercial and customary practice in an effort to minimize liability." In an effort to clarify what constitutes "all appropriate inquiry," the ASTM has developed a standard that provides specific definition of the steps one should take when conducting a "due diligence" environmental site assessment for commercial real estate.

Federal Water Pollution Control Act of 1972 (Clean Water Act)

The Clean Water Act governs the control of water pollution in the United States. This Act includes the National Pollutant Discharge elimination System (NPDES) program, which requires that permits be obtained for point discharges of wastewater. This Act also requires that storm water discharges be permitted, monitored, and controlled for public and private entities.

Resource Control and Recovery Act of 1974 (RCRA)

RCRA was enacted as the first step in the regulation of the potential health and environmental problems associated with solid hazardous and non-hazardous waste disposal. RCRA and the formation of the U.S. Environmental Protection Agency (EPA) to implement the Act provide the framework for national hazardous waste management, including tracking hazardous wastes from point of origin to ultimate disposal.

Hazardous and Solid Waste Amendments of 1984 (HSWA)

The HSWA law was enacted to close RCRA loopholes and regulated leaking storage tanks specifically.

Asbestos Hazard Emergency Response Act of 1986 (AHERA)

This Act is the federal legislation that governs the management and abatement of asbestos-containing materials in buildings.

National Emission Standards for Hazardous Air Pollutants; Asbestos, 40 CFR Part 61

This regulation requires the assessment and proper removal of asbestos-containing materials that could release asbestos when disturbed prior to the demolition of buildings.

California Laws/Regulations

Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code)

The Porter-Cologne Act established a regulatory program to protect water quality and protect beneficial uses of the state's waters. The Porter-Cologne Act also established the State Water Resources Control Board and nine regional boards as the main state agencies responsible for water quality in the state. Discharges of wastes (including spills, leaks, or historical disposal sites) where they may impact the waters of the state are prohibited under the Porter-Cologne Act, including the discharge of hazardous wastes and petroleum products. The assessment and remediation of the wastes are regulated by the regional water board, the Central Valley Regional Water Quality Control Board, in the vicinity of the proposed project area.

California Code of Regulations, Title 14, Division 3, Oil and Gas

The California Department of Conservation, Division of Oil, Gas and Geothermal Resources (DOGGR) has regulatory authority over the drilling, re-working and abandonment of oil wells, per Public Resource Code Section 3208.1

Current oil well abandonment standards require the placement of cement plugs placed across oil or gas production zones, fresh water/saltwater interface zones, fresh water zones, and a minimum 25-foot surface plug. Abandoned well casings are required to be cut off at a minimum of five feet below ground surface, and to have a metal plate with the well number welded to the top of the remaining casing (PRC Section 1723 et seq.). DOGGR also regulates the placement of buildings over abandoned well casings.

CEQA Guidelines Section 15186

This section requires that school projects, as well as projects proposed to be located near schools, examine potential health impacts resulting from exposure to hazardous materials, wastes, and substances. Such impacts are to be examined and disclosed in a negative declaration or EIR. CEQA Guidelines Section 15186 describes three types of sites for which specific findings must be made. When a project involves the purchase of a school site or the construction of a secondary or elementary school, the negative declaration or EIR prepared for must provide information sufficient to determine whether the property is (1) the site of a current or former hazardous waste or solid waste disposal facility and, if so, whether wastes have been removed; (2) a hazardous substance release site identified by the Department of Toxic Substances Control (DTSC) in a current list adopted pursuant to Section 25356 of the Health and Safety Code for removal or remedial action pursuant to Chapter 6.8 (commencing with Section 25300) of Division 20 of the Health and Safety Code; or (3) the site of one or more buried or above ground pipelines that carry hazardous substances, acutely hazardous materials, or hazardous wastes, as defined in Division 20 of the health and Safety Code.

In developing such information, the lead agency is to consult with the county or city administering agency (as designated pursuant to Section 25502 of the Health and Safety Code) and with any air pollution control district or air quality management district having jurisdiction, to identify facilities within one-fourth mile of the proposed school site that might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous material, substances, or waste. Based on this consultation, the school board or district will determine whether such facilities exist and, if so, whether: 1) the health risks from the facilities do not and will not constitute an actual or potential endangerment of public health to persons attending or working at the proposed school; and 2) corrective measures required under an existing order by another agency having jurisdiction over the facilities will, before the school is occupied, mitigate all chronic or accidental hazardous air emissions to levels that do not



constitute any actual or potential public health danger to persons attending or working at the proposed school.

CEQA Statute (California Public Resources Code, Division 13 Environmental Protection) Section 21092.6

This section directs the lead agency to consult the lists complied pursuant to Section 65962.5 of the Government Code to determine whether the project and any alternatives are located on a site that is included on any list.

5.9.4 Thresholds of Significance

For the purpose of this EIR, a potential impact related to the presence of hazardous materials and/or risk of upset impact of hazardous materials is identified as significant based on the following thresholds:

- Creates a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- Creates a significant hazard to the public or to the environment through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- Emits hazardous emissions or handle hazardous or acutely hazardous materials within one-quarter mile of an existing or proposed school;
- Be located on a site which is located on a list of hazardous material sites compiled pursuant to Government Code section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles or a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- Expose people or structures to a significant risk or loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized area or where residences are intermixed with wildlands.

The Initial Study prepared for the proposed project (which is contained in Appendix A) examined these criteria and determined that the proposed project would generate no impact with respect to: creating a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials; located within an airport land use plan or within two miles or a public airport or public use airport; located within the vicinity of a private airstrip; and impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. In addition, it was determined that no additional information was needed for a less than significant determination as it relates to the proposed project's potential to expose people or structures to a significant risk of loss, injury or death involving woodland fires. These issues are, therefore, not addressed further in this EIR.

5.9.5 Impacts and Mitigation Measures

IMPACT: POTENTIAL IMPACTS FROM DEMOLITION

Impact Analysis: The proposed project area contains several existing residential and agricultural structures. Over time, the implementation of the Southeast Urban Center Specific Plan would either require that structures are removed prior to development of the proposed project or that residential structures are demolished. It is anticipated that asbestos-containing materials (ACM) and lead-based paint may be present in many of the existing buildings in the project area. Demolition activities could result in the accidental release of ACMs and lead-based paint if not properly handled and disposed. Asbestos and lead-based paint containing materials must be identified and disposed of in accordance with established standards and procedures set by the San Joaquin Valley Air Pollution Control District (SJVAPCD) and the California Department of Health Services (DHS) regulations. This would reduce this potential impact to less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: POTENTIAL IMPACTS FROM UNKNOWN BURIED HAZARDOUS MATERIALS ON-SITE; SOILS CONTAMINATED BY PESTICIDES

Impact Analysis: A potential impact relates to the possible use of pesticides and herbicides in agricultural areas. Although unlikely, due to the past agricultural use of the project area for grazing and an orchard, it is possible that hazardous materials may have been used or disposed of on the site without having been reported. Indications of such disposals may have been eradicated over time. Under such conditions, it may be possible that hazardous materials exist on the property and were not discovered previously. Grading and trenching activities could occur in areas of previously unknown hazardous waste deposits. Depending on substances involved, chemicals could volatize from saturated soil surfaces or from compromised containers. Chemical laden dust could also be inhaled by construction workers or be blown off-site and inhaled. Agricultural pesticides include known carcinogens and with sufficient exposure may adversely affect the health of people in contact with the contaminated medium, in this case, soil. Exposure of people to persistent pesticides at high exposure levels would represent a significant impact. Pesticides applied in accordance with manufacturer's directions are not considered to produce hazardous waste unless the affected soil is removed from the site. If soil removed from the site and found to have pesticide or herbicide concentrations in excess of regulatory limits, it is considered hazardous waste. Unfortunately, these residues are not readily discernible (such as hydrocarbon staining) during normal excavation and grading procedures. Therefore, construction specifications require that appropriate health and safety procedures be followed during any excavations. Although the risk of exposure to on-site chemicals is considered low, potentially significant impacts could occur in the event that unknown hazardous substances are discovered on-site. The following mitigation measure would reduce potential project impacts to a less than significant level.

Due to a history of agriculture and cattle grazing in the project area and the surrounding properties (see Section 5.6.2), it extremely likely that many of the properties within the project area have surface and subsurface pesticide contamination. It is recommended that a limited Phase II soil investigation for pesticides associated with surface soil be performed on properties within the project area previously used for agriculture. Samples should be collected approximately 6-inches below the ground surface and analyzed for pesticides using EPA Method 8080. If tests reveal pesticides at concentrations that would pose a significant threat to human and/or environmental receptors, remedial action plans would be



developed and implemented in accordance with Department of Toxic Substances Control (DTSC) regulations. This would reduce this potential impact to a less than significant level.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

As a condition of development evaluation a Phase I Environmental Site Assessment shall be performed for projects which have the potential to have been sites for chemical storage, batching or mixing using methodology acceptable to the Fresno County Health Service Agency.

Level of Significance After Mitigation: Less than significant.

IMPACT: GROUNDWATER CONTAMINATION DUE TO IMPROPERLY ABANDONED WELLS

Impact Analysis: The project area agricultural and rural residential uses are supplied groundwater through many private water wells. These wells are not suitable to supply a municipal potable water system and will be abandoned and destroyed as conditions of urban development.

A well that is no longer useful (including private wells for domestic or agricultural purposes must be destroyed in order to assure that the groundwater supply is protected and preserved for further use and to eliminate the potential physical hazard.

A well is considered 'abandoned' or permanently inactive if it has not been used for one year, unless the owner demonstrates intention to use the well again. Abandoned water wells must be destroyed in accordance with Department of Water Resources Water Well Standards (Bulletins 74-81 and 74-90 combined).

The standards of the DWR reduce potential impacts to a less than significant level.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: POTENTIAL IMPACTS FROM ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS
DURING TRANSPORT OF PRODUCTS OR WASTE

Impact Analysis: Commercial uses may be proposed at the project area that utilize hazardous materials and/or produce hazardous materials or waste for transport as a result of certain production processes that may be allowed in commercially zoned areas. These materials would be transported to and from the site by truck and/or rail. An accidental release of hazardous materials or waste would be possible due to an accident on the public streets and highways of the City of Clovis and surrounding jurisdictions, City of Fresno and the County of Fresno. The significance of such a release would depend on a variety of factors which would vary with individual circumstances including: the specific industrial uses at the site; the type of materials transported; the routes used; the method of transportation; and the proximity to sensitive receptors.

The method of transporting any hazardous materials and/or petroleum products as it relates to the project area will depend upon the specific commercial uses that are ultimately allowed by the City of

Clovis (e.g., gas stations, auto repair facilities, dry cleaning operations). State Route 168 is major transportation route, with potential heavy loads of hazardous material/hazardous waste. However, the transport of hazardous materials is currently regulated by the State and federal governments.

As such time as specific commercial uses are proposed, information regarding potential hazardous materials and /or petroleum products to be used and/or produced, and/or stored, and/or transported, would be subject to further CEQA review.

In the event that any commercial uses that would generate or utilize hazardous materials that are located within ¼ mile of a school site, a health risk assessments may be required, under Section 21151 of the California Public Resources Code.

As development occurs, projects will be reviewed for their specific environmental effects involving the potential for hazardous material impacts. Since all generation, transport, and treatment of hazardous materials is currently subject to federal, State, and local regulations, no significant impacts are anticipated.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: POTENTIAL IMPACTS FROM ACCIDENTAL RELEASE OF HAZARDOUS MATERIALS DUE TO UPSET OR ACCIDENT CONDITIONS

Impact Analysis: Commercial uses may be proposed within the project area that utilize hazardous materials or wastes as a result of certain production processes which may be allowed in commercially zoned areas (e.g., dry cleaners, gas stations, auto repair facilities). The significance of such an accidental release of hazardous materials or waste would depend on a variety of factors which would vary with individual circumstances including: the specific industrial uses at the site; the type of hazardous materials used and/or stored (if any); the types of wastes produced, and/or stored (if any); and the proximity to sensitive receptors. It is important to note that the Initial Study prepared for the proposed project (which is contained in Appendix A) examined certain sensitive receptors and determined that the proposed project would generate no impact with respect to being located within an airport land use plan or within two miles of a public airport or public use airport, or located within the vicinity of a private airstrip. The use of any hazardous materials and/or petroleum products as it relates to the proposed project will depend upon the specific commercial use that is ultimately allowed by the City of Clovis. As such time as specific industrial and retail uses are proposed, information regarding potential hazardous materials and /or petroleum products to be used, and/or stored, and/or transported, would be subject to further CEQA review.

Please note that in the event that any commercial uses that would generate or utilize hazardous materials that are located within ¼ mile of a school site, a health risk assessments may be required, under Section 21151 of the California Public Resources Code.

Since the use of the hazardous materials likely to be present in the project area is subject to federal, State, and local regulations, no significant impacts are anticipated.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.



Level of Significance After Mitigation: Not applicable.

IMPACT: EMIT HAZARDOUS EMISSIONS OF HANDLE HAZARDOUS MATERIALS WITH 1/4 MILE OF AN EXISTING OR PROPOSED SCHOOL

Impact Analysis: The Reagan Educational Center, consisting of a high school, an intermediate school, and a proposed elementary school, is located within the project area. Three other properties within the project area have been identified as future elementary school sites. In addition, there is an existing elementary school located immediately west of Locan Avenue, which is the western boundary of the project area. In the event that any commercial uses that would generate or utilize hazardous materials that are located within ½ mile of a school site, a health risk assessments may be required, under Section 21151 of the California Public Resources Code.

Furthermore, under California Education Code Section 17213.1, prior to acquiring a school site, the school district will prepare a Phase I environmental assessment of the proposed school site, or proceed directly to a preliminary environmental assessment (PEA). The Phase I environmental assessment will contain one of the following recommendations: (1) further investigation of the project area is not required; or (2) a PEA is needed to determine if a release of hazardous material has occurred and, if so, the extent of the release; (3) if there is a threat of a release of hazardous materials; or (4) if a naturally occurring hazardous material is present.

If it is concluded that the property has contamination that requires additional investigation and cleanup, the school district can either investigate and cleanup the property under DTSC oversight or it can elect not to proceed with the acquisition or construction of the project. Should the former be pursued, the school district is required to enter into a Voluntary Cleanup Agreement with DTSC to oversee the effort.

No significant impacts related to facilities that emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste are anticipated to occur.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: SAN JOAQUIN VALLEY FEVER

Impact Analysis: The construction of the proposed project would result in the disruption of soil on the project area, possibly disturbing the fungus that is the infectious agent for San Joaquin valley fever (Valley Fever) should it occur in site soils. The short-term disruption of soils on the project area is not expected to result in significant adverse impacts related to valley fever for two reasons. First, all site preparation, grading and construction activities require watering to reduce and minimize the creation of fugitive dust, which transmits this disease. Second, the fungus tends to occur in areas, which are particularly dry. The project area is not in a particularly dry area, due to the existence of streams, drainage channels and intermittent swales across the project area. The combination of winter rains, existing drainage areas and on-site watering is expected to substantially affect the ability of this fungus to survive, if it even exists in the soil on the project area. In the long-term, large portions of the project area would be covered with buildings, pavement, and landscaped areas. Landscaped areas would be developed with clean imported topsoil in most cases. Dust generated on-site as a result of exposed soil during long-term use of the project area would therefore be minimal, and below existing levels. Therefore, in the short-term, impacts would be reduced through on-site watering, while in the long-term,

proposed on-site development would limit the ability of this fungus to survive. No significant impacts are anticipated to result from the development of the proposed project.

Level of Significance Before Mitigation: Less than significant

Mitigation Measures: No mitigation measures are necessary

Level of Significance After Mitigation: Not applicable



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5.10 PUBLIC SERVICES AND UTILITIES

5.10.1 Methodology Related to Public Services and Utilities

The potential for adverse impacts on public services and utilities was evaluated based on information concerning current service levels and the ability of the service providers to accommodate the increased demand created by the proposed project. Service correspondence letters are provided in Appendix B of this document.

5.10.2 Existing Conditions Related to Public Services and Utilities

The proposed project area is located in the greater Fresno-Clovis Metropolitan Area in the heart of the San Joaquin Valley, encompassing approximately 3,307 acres. The proposed project area is comprised of mostly agricultural and rural residential areas. Near the center of the specific plan area is the Ronald W. Reagan Educational Center. The key public services that would be required to serve the project area are described in the following sections.

Fire Protection

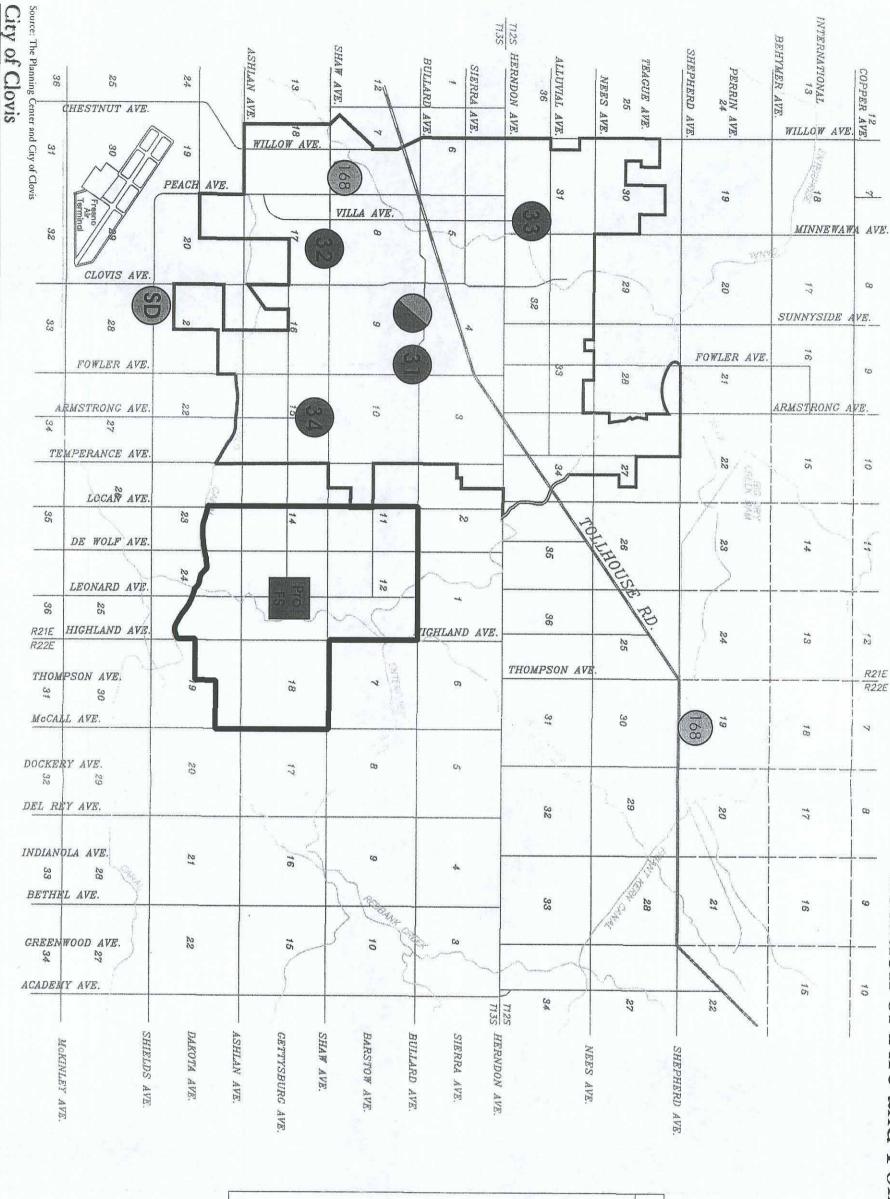
Currently, the Fresno County Fire Protection District (FCFPD) provides fire protection service to the project area via four responding fire stations, each station equipped with one fire engine and three firefighters per shift (two shifts). The closest responding fire station is the Station 86, located at 4925 N. Nelson, Clovis, CA 93612. Other stations are Station 84, 85, and 88, respectively located at 210 S. Academy Avenue, Sanger CA 93657, 1392 Nees, Clovis, CA 93612, and 5379 E. Tulare, Fresno, CA 93727. FCFPD is governed by the California Department of Forestry and Fire Protection's Fresno-Kings Unit under Fire Chief Sunderland and provides fire protection, planning, and investigating services to the region. The current response time for service call is 10-15 minutes.

Upon annexation of the Specific Plan area to the City of Clovis, the Clovis Fire Department (CFD) would be responsible for fire protection services to the project area. The CFD is a full-service fire department providing fire suppression, emergency medical services at the basic life support/defibrillation level, and prevention and education services from four fire stations and an administrative headquarters. The CFD not only manages the City's disaster planning and emergency operations programs, but also provides technical rescue and hazardous materials emergency response as well as mitigation services. The Fire Department Bureau of Life Safety and Enforcement is the responsible entity for Fire Prevention, Public Education Investigation, and Customer Relations services. Furthermore, the CFD trains and responds jointly with the City of Fresno Hazardous Materials Team for hazardous materials spills within the incorporated portion of the Project Area. Table 5.10-1, shows the location and description of each fire station. See Figure 5.10-1, Location of Fire and Police Stations within Vicinity.



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Location of Fire and Police Stations Within Vicinity



Road

Creeks

Section Line State Highway

EGEND

Conveyance Canal

(SD)

Fresno County Sheriff's Department (Area 2 Headquarters) 5717 E. Shields, Fresno, 93727

Clovis Police Department 1233 5th St., City of Clovis

Police Facilities

Gettysburg and Leonard Avenue (proposed fire station)

555 N. Villa Avenue 2427 Armstrong 2300 Minnewawa Avenue

650 Fowler Avenue

Fire Dept. Headquarters 1255 Fifth Sheet, City of Clovis

Fire Facilities



Southeast Urban Center

Specific Plan

TABLE 5.10-1 FIRE STATIONS WITHIN PROJECT VICINITY					
Locations	Description				
Fire Dept. Headquarters - 1255 Fifth Street	One Battalion Chief				
Station 31 - 650 Fowler Avenue	3-person Company w/ 1500 GPM Quint Ladder/Pumper				
Station 32 - 2300 Minnewawa Avenue	3-person Company w/ 2000 GPM Triple Combination Pumper & Two- person Company w/ 500 GPM Squad/Light Pumper				
Station 33 - 555 N. Villa Avenue	3-person Company w/ a 1500 GPM Triple Combination Pumper				
Station 34 - 2427 Armstrong 3-person company w/ 1500 GPM Triple Combination Pumper					

In addition to above fire stations, the City is considering purchasing land to build a new fire station on Nees Avenue west of Armstrong and east of Fowler, and another station near Gettysburg and Leonard Avenues is in the planning stage. This station will be equipped with one fire engine and three crewmembers. Fire stations are situated roughly in each quadrant of the City, each station covering approximately four square miles. As indicated in above table, each station is typically staffed with three persons in three shifts per day: one firefighter, one engineer, and a captain. Last year, the department responded to approximately 5,000 calls, and approximately 72% of the calls were Emergency Medical Services (EMS) calls. The response time policy within the department is five minutes or less for 90% of the time.

With the present staffing configurations, the first due Engine Company would arrive in seven minutes and second due in nine minutes. The third due would include the Fresno County Fire Protection District's Engine located at 4925 N. Nelson south of Shaw Avenue. However, after the Clovis fire station is completed and staffed at Gettysburg and Leonard, the first due response time is anticipated to be less than five minutes.



Police Protection

Currently, police protection service to the project area is provided by the Fresno County Sheriff's Department. The Sheriff's station that would serve the project area is located at 5717 E. Shields, Fresno, CA 93727. The 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.

After the project area is annexed by the City of Clovis, the Clovis Police Department (CPD) located at 1233 5th Street would serve the project area. The CPD presently provides patrol, traffic enforcement, investigations, narcotics enforcement, youth services, DARE, Neighborhood Watch, and counseling for youth, parents and victims of domestic violence services within the jurisdiction and maintains a ratio of approximately 1.3 officers per 1,000 in population. The response time for priority calls for service is five minutes or less. Furthermore, the CPD has protocol for disaster preparedness, and works with allied agencies in the event there is a disaster or major crisis.

The CPD divides the City into six areas, known as beats, for patrol response. After the project area is annexed to the City, the beats would be expanded to include the project area. There is no current plan to expand existing police facilities except for the relocation of the police headquarters into a new facility in the latter part of 2002. Instead, as the police protection needs grows in the project area and a substation for officers assigned to that beat becomes necessary, a storefront office would be established.

School Services

The Clovis Unified School District (CUSD) and Sanger Unified School District (SUSD) would serve the project area. The CUSD operates as the major service provider for the City of Clovis, with 37 educational facilities in operation: 27 elementary schools, four intermediate schools, six high schools, and a continuation school. Due to the overall growth of the Clovis area, the level of education services needs for the CUSD have increased in recent years. Past bonds have put \$600 million into district facilities, constructed 20 new schools and 38 additional facilities on existing campuses, completed 52 improvement projects and 55 modernization projects, and acquired four potential school sites.

The CUSD serves the area west of Highland Avenue with the Ronald Reagan Education Center within the project area and two other CUSD facilities immediately adjacent to the Specific Plan boundaries west of Locan Avenue. The Ronald Reagan Education Center is a 145-acre complex bound by Gettysburg Avenue to the north, Ashlan Avenue to the south, DeWolf Avenue to the west, and Leonard Avenue to the east. The Education Center houses Clovis East High School (4343 N. Leonard) which has a capacity to serve 2,600 grades 9-12 students and Reyburn Intermediate School (4300 N. DeWolf) which has a capacity to serve 1,400 grades 7-8 students.

Compared to the CUSD, the SUSD provides a smaller operation with just one high school, one middle school and ten elementary schools, but none are located within the project area. Unlike the CUSD, the level of education services needs for the SUSD have remained the same.

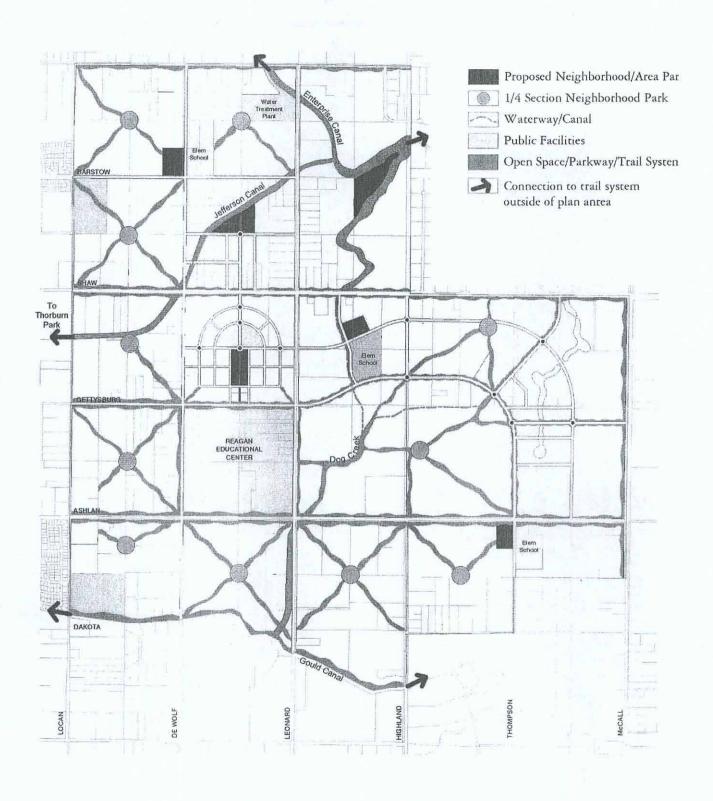
Park Services

The City currently has 78.12 acres of parkland. However, the City's General Plan identifies only twelve City owned parks totaling 37.1 acres: Treasure-Ingmire; Letterman; Sierra Bicentennial; Jefferson; San Gabriel; Villa Barstow; Rotary; 5th/Harvard; Helm/Harvard; Monte Vista 10; Monte Vista 21; and Burl Avenue.

Currently, the only recreational facilities located in the project area are found at the Reagan Education Complex at the northeast corner of Ashlan Avenue and DeWolf Avenue. The facility is a school complex owned by the Clovis Unified School District. The entire site encompasses approximately 160 acres, and is accessible to the public for recreational purposes. The site includes open fields, baseball and softball facilities, track facilities, and other amenities common to school sites.

As described in the General Plan, CUSD facilities are counted toward public open space because of an "open gate" policy adopted by the district. However, due to the fact that the school grounds are not always available to the public, the acreage is counted at 50% of the total. This results in approximately 80 acres of recreational open space at the Reagan Education Complex.

Proposed Park and Recreational Facilities

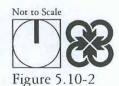


Source: City of Clovis

City of Clovis

Southeast Urban Center

Specific Plan



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The City has established a goal of 4.9 acres of parkland for each 1,000 residents. The Following table was taken from the City's 1993 General Plan, and serves as the standard for determining park needs.

TABLE 5.10-2 RECREATION STANDARDS						
Classification	Acres/1,000 Pop.	Size Range	Pop. Served	Service Radius		
Neighborhood park	1 acre/1,000	1 to 2 acres	500 - 2,500	Neighborhood 1/4 mile		
Area Park	1.0 - 2.0 acres	3 to 20 acres	2,000 - 10,000	1/4 to 1/2 mile		
Community Park	2.5 acres	15 to 100 acres	10,000 - 50,000	1/2 to 3 miles		
Regional Park	5.0 acres	100 + acres	Entire Pop.	Within 1/2 hour		
Source: City of Clovis Pla	anning Department	-				

For additional detail on park and recreational facilities within the City of Clovis, see Figure 5.10-2, Proposed Park and Recreational Facilities. A more detailed discussion of the City's park and open space services in provided in the Section 5.11, Recreation.

Library Services

The Fresno County Library District holds responsibility for the operation of library facilities for all areas in the Fresno County, including the City of Clovis. Service areas are determined by plotting registered users and establishing a service area, which generally includes incorporated and unincorporated areas around the library.



There are five types of libraries within the Fresno County Library system: the Central, Regional, Branch, Neighborhood Libraries, and Stations. The Central Library serves as a resource library for all county residents and is located at 2420 Mariposa, in Fresno. Regional Libraries are located in large rural and metropolitan cities in commercial or central locations and serve large populations of residents of the immediate and surrounding neighborhoods. Rural Regionals serve populations of 30,000 to 50,000 and Fresno/Clovis Metropolitan Regionals serve 40,000 to 75,000 people. Branch Libraries are located in mid size cities or communities and serve populations of 12,000 to 30,000. Neighborhood Libraries are located in small rural cities or unincorporated communities and metropolitan areas and serve populations of 6,000 to 12,000. Stations are located in the smallest communities and serve populations up to 6,000. In addition to the above-mentioned five types of libraries, the County Library also provides services such three bookmobiles, electronic access through the World Wide Web, and telephone reference.

There are a total of eleven library branches in the Fresno-Clovis Metropolitan area, including the Central Library, seven Metro Regionals, one Branch Library, one Neighborhood Library, and one Station Library. The Clovis Library, located at 1155 Fifth Street is one of seven Metro Regional libraries within the Library District. The Clovis Library facility of 8,627 square feet was constructed in 1976 using federal funds. The maximum occupancy of the branch is 126 persons and is open 69 hours weekly, 7 days a week. The Clovis Library houses a collection of approximately 62,000 items, including books, videos, audiobooks, DVDs and periodicals in its approximately 8,700 square feet facility. A deposit collection of approximately 1,100 items maintained by the branch is available at the Clovis Senior Center. In addition, a children's "Dial-a-Story" phone line provides a recorded story, and over 12,600 calls were received during 2001-2002, and 21 outside presentations were made. During the same year, 62 children's programs and 83 *Grandparents and Books* sessions were conducted by volunteers.

The need for library service within the Clovis has increased over the past 3 years as with the rest of the Fresno County. For example, circulation has increased by 23% from 2000-2001 to 2001-2002, and cumulative circulation in the months ending June 30, 2002 exceeded 319,000 items. Furthermore, inhouse use of materials has increased by approximately 40% since 2000, as well as reference and readers assistance transactions. This increase in library usage can be attributed to factors such as the increase in open hours, collection development, and addition of staff resulting from the passage of Measure B in 1998, which added 1/8 percent sales tax earmarked for the library for a seven-year period.

A report titled "The Heart of a Community: It's Public Library, Meeting Library Needs for Fresno County Residents: 2002-2020" was prepared on September 11, 2002 to assess the deficiencies and long term needs of library facilities as well as to develop a broad outline for the Library's facility improvement through the year 2020. The report assessed the population for the Clovis Library service area during 2000 at 91,799 persons, and projected that the population will increase to 124,201 persons, 155,326 persons, and 183,005 persons by the years 2010, 2020, and 2025, respectively. The Specific Plan project area lies within the Clovis Sphere of Influence area and is included in the population count.

Wastewater (Sewer) Services

In general, rural residential and agricultural properties in the Project Area rely on individual septic tanks and leach fields. These systems separate solids from effluent, and dispose of effluent via a leach field.

Clovis provides sewer collections services to its residents and businesses, but the City of Fresno is the designated Regional Sewer Agency for providing wastewater treatment for the Fresno-Clovis Metropolitan Area. The City of Fresno is the lead agency for the operation, maintenance, and long-term planning for the Fresno-Clovis Regional Wastewater Treatment Plant (WWTP). The WWTP operates under a Waste Discharge Requirement issues by the Central Valley Regional Water Quality Control Board. The discharge requirement governs most of the plant operations, including the quantity of wastewater that may be treated, quality of treated wastewater, operation of infiltration basins, testing and monitoring, and reporting. Through a Joint Powers Agreement with the City of Fresno, the City of Clovis has purchased a treatment capacity of 9.3 million gallons per day (MGD) previously and is anticipated to pursue the acquisition of up to 3 MGD treatment capacity in the next three to five years at the WWTP. ¹⁰

However, with the adoption of the Clovis General Plan update in 1993, which identified new growth areas to the northwest, northeast and southeast, and approval of the City's expanded sphere of influence in 2000, it is necessary to construct new sewer collection and treatment facilities to process the wastewater generated by the new growth areas. The WWTP is currently experiencing problems in disposal of the treated effluent which has resulted in a "mounding" of groundwater under the existing facility. Exporting additional flows to the plant would only serve to exacerbate the mounding problem and the water for beneficial reuse would be lost to the east side of the metropolitan area. In addition, more importantly, a treatment facility closer to the Clovis area would increase the ability to reclaim the water and reuse it in the eastern portion of the metro area for recreation and irrigation purposes. Due to the historic overdraft of groundwater in the area, it is essential that the City reclaim the wastewater for beneficial reuse within the City of Clovis.

The City of Clovis Wastewater Master Plan (Phase 1A) was prepared in April 1995. At the direction of the Clovis City Council, a range of alternatives would be examined that would provide sewer service to areas that were within the existing sphere of influence, but did not have trunk sewer service available; and provide sewer service to new development areas designated in the 1993 General Plan Update.

¹⁰ Wastewater Master Plan Update, Phase 1-B, City of Clovis, November 1996.

The alternatives included sending all of the City's wastewater flows to the WWTP; constructing Clovisonly WWTP(s) sufficient to accommodate all of the existing and future planned wastewater flows; and developing satellite treatment plants to accommodate portions of the City's projected wastewater flows. In March 1996, six alternative sewer service plans were presented to City Council for consideration, which were then approved for further study (Phase 1-B).

The City spent several years pursuing a joint construction effort of one or more regional satellite wastewater treatment plants with the City of Fresno. However, in October 2001, the Clovis City Council determined that the construction of a water reuse facility to treat the effluent generated by the proposed growth areas of the City (Northwest, Northeast, and Southeast Urban Centers) was necessary. The plant is expected to cost between \$50 and \$55 million, and is anticipated to ultimately treat about 8.4 MGD of effluent. However, due to cost and operational considerations, the plant would be constructed in phases, each sized to provide treatment of about 2.8 MGD.

Although the City has commenced the initial steps toward providing sewer collection and treatment service, there remain a number of subsequent phases that would require substantial public outreach and comment, design, and environmental evaluation under CEQA. It is anticipated that it will take at least five years to complete the site selection, design, permitting, and construction of the proposed WRF. A separate environmental document will be prepared in the future to discuss issues pertaining to site selection criteria, acceptable underlying geology, potential hydrologic impacts and more.

Site selection is not complete; however, three general areas have been identified, which are located between Leonard and McCall Avenues, north of Ashlan Avenue, and south of Gettysburg Avenue (see Figure 5.10-3, *Proposed Wastewater-Sewer Treatment Plant/Water Reuse Facility Locations*). A comprehensive analysis of the identified sites would be performed and presented to the City Council for review and approval. Following the City Council's approval of a selection of preferred sites, conceptual plans and preliminary construction estimates for the each water reuse facility would be prepared. Then the City would initiate a Program EIR dealing with plant design, permitting, and construction.

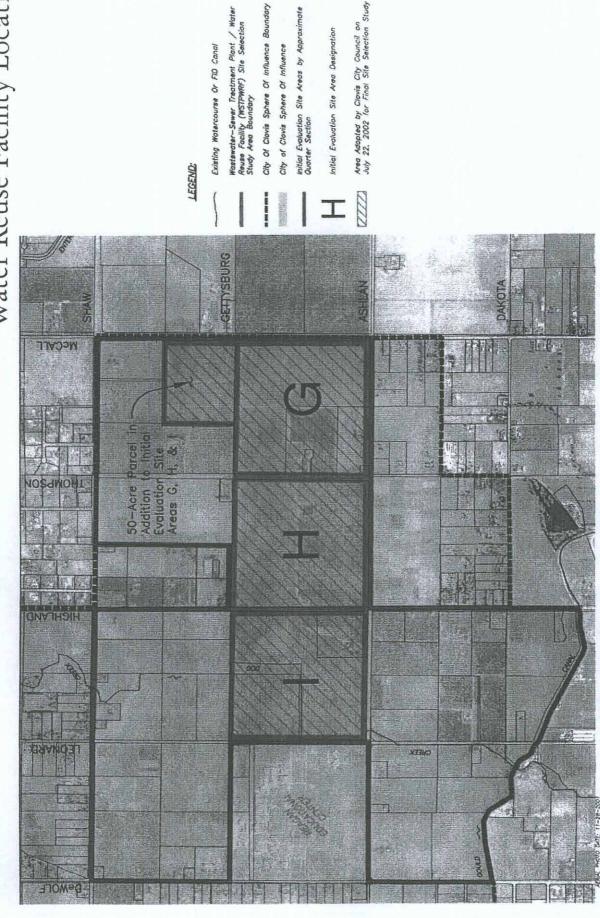
Solid Waste

Currently, residents and businesses in the project area contract out their solid waste collection and disposal services with private haulers. However, after annexation, the City of Clovis Public Works Solid Waste Division (SWD) would provide solid waste collection and disposal services, as is required by all properties within city boundaries.

The SWD transports residential and commercial waste to the Clovis Landfill, which is located at 15679 Auberry Road. As an incorporated island of the City of Clovis (the property is not contiguous with the City of Clovis proper, and is surrounded by the County of Fresno). The Clovis Landfill is owned and operated by the City of Clovis and services its residents and businesses exclusively. The landfill has life expectancy of additional 40 years, and is projected to be open through approximately 2040.



Proposed Wastewater-Sewer Treatment Plant/ Water Reuse Facility Locations



Source: The City of Clovis
City of Clovis

Southeast Urban Center Specific Plan



Within the City, approximately 39,000¹¹ tons of solid waste during 2001 were collected and disposed at the Clovis Landfill annually, where its capacity is approximately 2.1 million cubic yards. The County of Fresno operates a regional landfill, American Avenue Landfill, which received approximately 522,000 tons of solid waste in 2001. The American Avenue Landfill has adequate capacity through 2032 to 2042.

In accordance and compliance with AB 939, the City promotes source reduction, recycling, composting, and the proper disposal of household hazardous waste. Mandatory recycling and green waste service is provided to single-family residences and mandatory recycling service is provided to multi-family residences. Volunteer recycling services are provided to commercial customers by the private industry. The City adopted a Household Hazardous Waste Element (HHWE) in January 1992.

Current law, under the California Integrated Waste Management Act of 1989 (AB 939), mandates that the City reduce the existing amount of waste disposed in landfills by 25 percent prior to January 1, 1995, and by 50 percent prior to January 1, 2000. The bill imposed a penalty of \$10,000 per day for non-compliance with the Act. In order to achieve these diversion goals, the City, in cooperation with the County of Fresno, has developed a Source Reduction and Recycling Element (SRRE) and a HHWE, as required by the State of California.

The City of Clovis is one of the 170 agencies honored by the California Integrated Waste Management Board for its recycling efforts, diverting recyclable materials from the landfill. The City of Clovis diversion rate for Fiscal Year 2001-02 was 57%. Approximately, 3,700 tons of recyclables (glass, plastic, aluminum, tin and newspaper) and 14,000 tons of green waste (including Community Cleanup) were diverted from the landfill through the City mandated residential program. In addition, 140 tons of white goods (appliances) and 7,100 gallons of oil were also diverted. Of the total waste generated Citywide (more than 90,000 tons), 30% is diverted by City mandated programs. The remaining 27% is diverted by the business community through their own programs. Without the current level of diversion, the life expectancy of the Clovis Landfill would be less than twenty years. Assuming an inflow of waste to the landfill of 40,000 tons per year for 20 years at a cost of \$30 per ton, the air space made available through recycling has a commercial value of more than \$24,000,000 over a 20-year period.



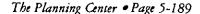
Water Services

Potable Water

The City of Clovis has relied exclusively on groundwater for meeting its water supply needs. However, in order to sustain the growth of the community other means of water supply must be identified and implemented. The City of Clovis has selected a conjunctive use approach whereby groundwater and treated surface water are used to meet its water supply needs. The recommended strategy is a phased development approach, allowing the City to provide the needed facilities just in time to serve the increasing demands of growth. The rate at which growth occurs will dictate the implementation schedule for construction of new water supply and delivery facilities. At the same time, however, facilities are also needed to reverse the current downward trends of groundwater levels.

Based upon the 1993 General Plan, the average demand for City water at a build-out year of 2030 will be 52,500 acre-feet per year. This projects out to a maximum daily demand of 66,000 gallons per minute, and a peak hour demand of 94,000 gallons per minute. As of 1997, the demands were 22,000 and 32,000 gallons per minute, respectively. Projected growth will roughly triple the current peak need for water delivery.

^{11 2001} California Landfill Summary Tonnage Report, Solid Waste Information System, California Integrated Waste Management Board.



The treated surface water will eventually provide approximately 50% of total annual supplies. Groundwater will satisfy 40 percent, and a combination of untreated surface water and/or reclaimed water for landscaping purposes will make up the difference. In the event that reclaimed water or untreated surface supplies are not viable, the availability of treated surface supplies must be increased.

Seasonal fluctuations in demand will allow the City to optimize surface water delivery so that groundwater resources can be available during extended droughts. To do so, the Surface Water Treatment Plant (SWTP) will base-loaded to maximize its water production capabilities. At or near year-round use of treated surface water will allow the City to "bank" groundwater for later use during summer months or protracted drought periods. This would be accomplished by de-activating certain wells during low demand periods. The treatment plant will either be shut down during winter canal maintenance, or operate at reduced flows due to decreased seasonal demands. The wells with granular activated carbon treatment must be operated year round to maximize their effectiveness in removing organic contaminants.

Surface Water Treatment Facility

Historically, Clovis has produced all of its potable water from municipal wells. Unfortunately, the City has almost fully developed the available well field and there are currently very limited opportunities to construct new viable municipal wells. Additionally, due to continued overdraft in the metropolitan area, the nominal water level in the City's existing wells continues to fall. This phenomenon has resulted in reduced yield of the wells and increased energy costs. Due to the continued decline of the areas groundwater levels and the limited availability of new well sites within the City, it is prudent that the City pursues the construction of a SWTP as quickly as possible. The proposed Surface Water Treatment Plant (SWTP) project is part of Clovis' strategy to ensure a consistent dependable water supply for the City's customers. Clovis has identified a need to construct a SWTP that will filter and disinfect Kings River water delivered via the Enterprise Canal making it suitable for distribution to the City's customers.

Construction of the initial phase is anticipated to begin in late February to March with a rough site grading and fencing project. The site construction project is anticipated to begin in June 2003. The plant is targeted to begin producing water by May 2004 and be completed and commissioned by September 2004.

The site plan is master-planned for 15-mgd initial, 45-mgd ultimate. The treatment process will include removal of organic matter from the canal by chemical coagulation/sedimentation. This will be followed by microfiltration which involves removal of small particles/contaminants by low-pressure membrane filtration. The next step in the treatment process involves disinfection of the water to inactivate remaining virus/contaminants with sodium hypochlorite. Residuals and waste streams are treated on-site with limited off-site (by-hauling) discharge. No liquid/either process or storm water will cross property lines.

As previously indicated, the SWTP will treat Kings River water delivered via the Enterprise Canal. The project will include some specific improvements to the Enterprise Canal to improve sanitation and capacity within the canal. In order to provide raw water of the highest possible quality to the treatment facility, several documents have been prepared to consider the condition and operations of the Enterprise Canal. These documents, will be reviewed by the Department of Health Services, and will become the basis of the operating permit for the raw water delivery system to the treatment plant. The Department of Health Services will approve the modifications as a part of their permitting process for the treatment facility. The most important such improvements will be completed prior to initial operation of the treatment facility; it is anticipated that some of the remaining improvements will be phased into place over the first 5 to 10 years of service. The Cities of Clovis and Fresno, along with the Fresno Irrigation District, will perform long-term monitoring of the improvements.

The Enterprise Canal lies within privately held property for nearly all of its length. Water quality control will necessitate operational changes to the canal in several areas, including periodic patrolling of the canal to discover potential problems, more frequent adjustments to canal operational levels, and land owner awareness training to minimize practices that could disrupt the quality of canal water. FID will maintain operational control of the flows in the canal.

Water historically has flowed in the Enterprise Canal only during the irrigation season (summer months) and as a result of storm events. Once the Cities' of Clovis and Fresno have operating surface water treatment facilities (summer 2004), the canal will operate 11 months of the year, with a scheduled outage of 3-4 weeks in late January, early February, of each year.

Because the technology chosen to be installed in the SWTP is readily automated, it is the City's intent that the SWTP will be minimally staffed and will not have operations staff on-site around the clock. The facility is being designed to operate in an automatic mode, with monitoring from the City Corporation Yard via telemetry. An operator will visit and perform visual checks/adjustments 1-2 times per 24-hour period. Full time equivalent staff for the facilities will be 4-7, and may be contracted initially to a Contract Operator.

Initially the site will not be served by a City sewer main. Sanitary waste and floor drains will initially drain to a holding tank adjacent to the Administration Building. City "Vactor" trucks will periodically empty contents and deliver to City Sewer. As the City develops near Bullard and Leonard, a sewer main will be installed and the waste flow will then be directed into the City sewer system.

Generally only minimal exterior lighting is planned for the SWTP facilities, primarily as recommended by the City Police Department for security reasons. Temporary emergency lighting can be erected for emergency work, but generally outdoor maintenance activities can be scheduled during daylight hours. Site lighting is proposed to be provided by low pressure sodium lights with 5 foot-candle capability at the unit processes and dropping to less than 1-footcandle at the property line.

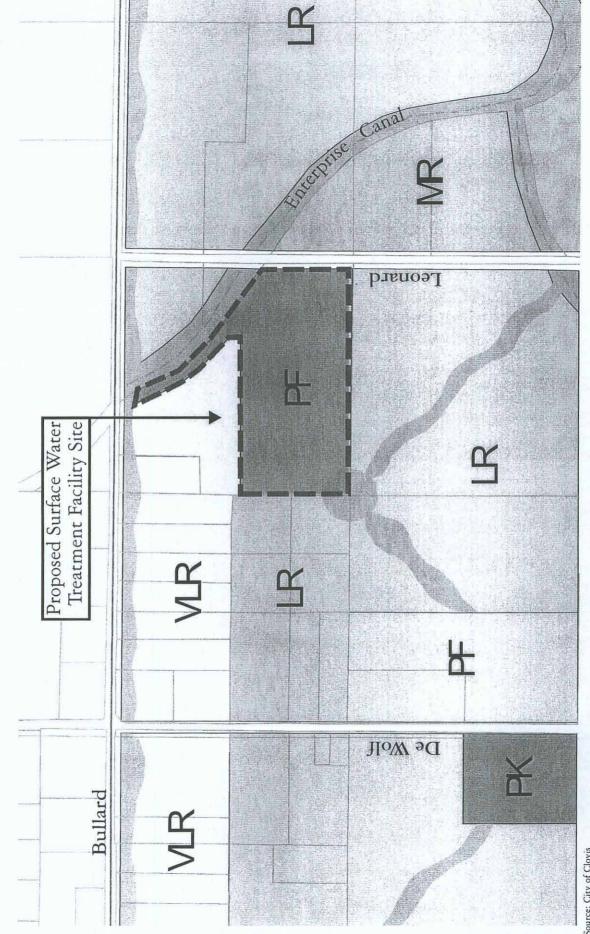
Odor potential at the proposed SWTP is minimal. Chemical storage and handling systems will be vapor sealed to prevent vapor release, and no compressed gases are proposed for the plant. Solids handling can generate odors if not adequately monitored and maintained. However, by keeping the solids acidic and promoting relatively rapid drying through drying bed design and maintenance, the potentiality of the waste solids producing odors is remote.

All significant sources our continuous noise, e.g. pumps, motors, and miscellaneous equipment will either be located indoors, or have sound attenuating enclosures around them. Under normal operation, the plant should not contribute noticeable to the ambient noise levels in the area.

The selection and development of the SWTP has been addressed previously by environmental documents (Clovis EA01-1 and EA01-12), which are incorporated by reference and available for inspection at the offices of Clovis Planning and Development Services.



Proposed Surface Water Treatment Facility Site



Source: City of Clovis

City of Clovis

Southeast Urban Center Specific Plan



Irrigation

The Fresno Irrigation District (FID), which comprises more than 245,000 acres, lies entirely within Fresno County and includes portions of the rapidly growing Fresno-Clovis area, including the project area. FID delivers surface water for irrigation to approximately 159,000 acres and to designated basins/ponds for groundwater recharge within the metropolitan area.

The King's River provides FID's main source of surface water. FID has entitlements to approximately 26% of the total annual river runoff and 142,000 acre-feet storage rights in Pine Flat Reservoir. In the last ten-year period, FID has diverted an average of 416,420 acre-feet per year from the river.

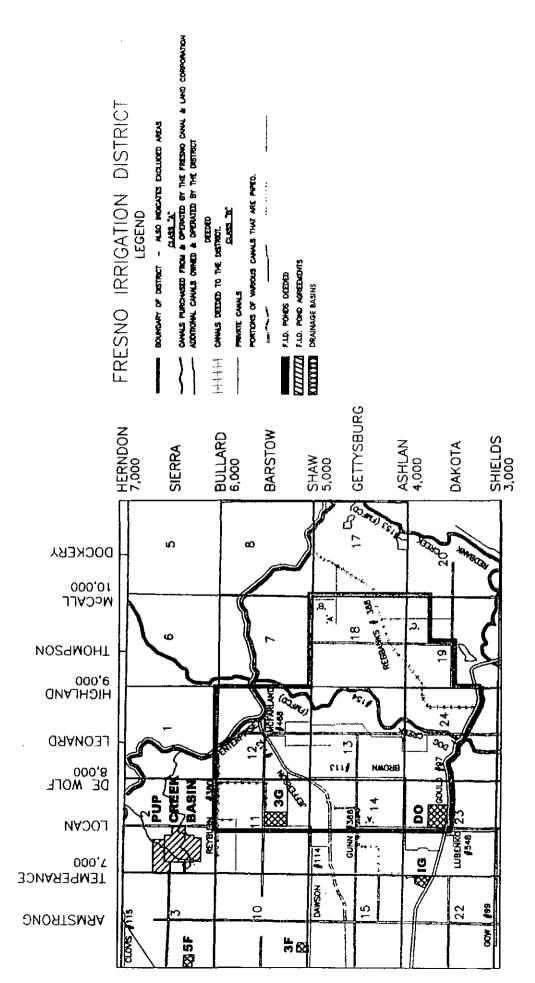
In addition to the Kings River supply, FID has a contract to purchase, when available, up to 75,000 acrefeet of Class II water annually from the Friant Division of the Central Valley Project (CVP). The City of Fresno also has a contract to purchase up to 60,000 acre-feet of Class I water annually from the CVP, which FID delivers through its canal system, for groundwater recharge within the Fresno metropolitan area. In the last ten years, the combined Class I and II diversions into the FID have averaged 79,428 acre-feet, or less than 55% of the maximum amount under both contracts.¹²

In addition to direct recharge through ponding basins, much of the water applied by farmers within the FID percolates beyond the root zone and recharges the extensive aquifer underlying the FID. Between 85% and 90% of the recharge volume of the groundwater supply can be attributed to water imported and distributed by the District. FID facilities also provide the primary method for disposal of storm water within the Fresno/Clovis metropolitan area. Table 5.10-3, Fresno Irrigation District Facilities, identifies the FID facilities within the proposed project area, including several FID canals/pipelines and several privately owned canals/ pipelines. See Figure 5.10-5, FID Facilities, for the location of the referenced FID facilities.



Facility	Туре	Size	Capacity
Enterprise No. 109 Canal	Open Channel	N/A	230 CFS 1 (approx. capacity near project area
Gould No. 97 Canal	Open Channel	N/A	200 CFS (approx. capacity near project area)
Jefferson No. 112 Canal	Open Channel & Pipeline	48" to 54" dia. existing & proposed	35 CFS
Reybum No. 380 Canal	Open Channel & Pipeline	18" to 36" dia. existing & proposed	10 CFS
Redbank No. 380 Canal	Open Channel & Pipeline	18" to 36" dia. existing & proposed	10 CFS
Brown No. 113 Canal	Open Channel & Pipeline	24" to 36" dia. existing & proposed	6 CFS
Gunn No. 386 Canal	Open Channel & Pipeline	18" to 24" dia. existing & proposed	5 CFS
McFarlane No. 468 Canal	Privately owned canal	N/A	N/A
Dog Creek	FMFCD	N/A	N/A

¹² Letter from Bill Stretch, Chief Engineer, Fresno Irrigation District, November 1, 2002.





Not to Scale

Figure 5.10-5

FID's policy regarding the delivery of water for irrigating purposes provides for:

"Each acre of land on water service within the District shall be entitled to a monthly minimum allotment of water consisting of 0.39 acre-feet per month, deliverable at the rate of one cubic foot (7.5 gallons) per second, for each ten acres of water service land for a period of 24 hours twice each month or 48 hours once each month. The District may, if operational conditions warrant, vary the time and flow rate so long as the water user id afforded a reasonable opportunity to utilize his monthly allotment of water."

In addition, delivery of water is made to the subject acreage based on annual precipitation and can vary from as little as three months per year to as high as nine months per year. FID does keep record of each canal service area, which includes the parcel number, parcel owners, acreage, irrigation days and water entitlement.

Please note that channel preservation is a key goal of the Southeast Urban Center Specific Plan. Most of the larger ditches will not be piped, nor will they be lined with concrete. The goal is to keep them open to allow for groundwater recharge, as well as to enhance them as aesthetic trail features. Armoring the banks with gabions is an option, as they allow water infiltration and preserve the appearance of the channels.

Storm Drainage/Flood Control

The Fresno Metropolitan Flood Control District (FMFCD) is responsible for storm water management within the Fresno-Clovis metropolitan area, including the Southeast Urban Center Specific Plan area. Storm water runoff produced by land developed is controlled through a system of pipelines and storm drainage retention basins.

The FMFCD is authorized to control storm waters within an urban and rural foothill watershed of approximately 400 square miles, known as the Fresno County Stream Group. The flood control program relates to the control, containment, and safe disposal of foreign storm waters that flow into the valley floor from the eastern streams. The local drainage program relates to the collection and safe disposal of storm water runoff generated within the urban and rural watersheds or "drainage areas."

The project area includes land within Drainage Area "3G", Drainage Area "DO", and proposed Drainage Area "DP" (see Figure, 5.6-1, *Project Area Storm Drainage Facilities*). A portion of the Specific Plan area northeast of the Enterprise Canal is within the Rural Master Plan area where no urban storm water drain facilities are currently planned. The proposed Drainage Area "DP" For additional detail, see Section 5.6, *Hydrology and Water Quality*, of this EIR.

Electricity/Natural Gas

Pacific Gas and Electricity Company (PG&E) supplies gas and electricity to the project area. Presently, the PG&E operates a 115 kV electric transmission wood pole line that runs along the east side of McCall Avenue and a gas distribution feeder main that runs along the north side of Shaw Avenue. Both of these facilities are in franchise locations. PG&E's three main substations providing service to the project region are in central Clovis, northern Clovis, and eastern Fresno. PG&E is a public utility and therefore functions on demand. Extensions of facilities are based on Extension Rules filed with the Public Utilities Commissions of California. The hierarchy of establishing electrical power lines from generation stations to customers is as follows: transmission distribution; sub-transmission; and service.



PG&E consumption rates for residential use are approximately 800 kilowatts per hour (kWh) in winter months, and approximately 1,100 kWh in summer months. Commercial consumption rates range from 200 to 10,000 kWh.

Telephone Services

SBC currently provides telephone services to the project area. Telephone facilities in the project area consist of aerial, buried, and underground copper and fiber cables.

5.10.3 Standards of Significance

The following criteria are extracted from the Public Services Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA). The project will, at a minimum, be considered to have a significant effect related to public services if any of the following may occur:

Result in substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objective for any of the public services:

- Fire protection;
- Police protection;
- Schools;
- Parks; or
- Other public facilities.

In addition, this section of the EIR will also address Utilities and Service Systems issues. Checklist criteria applicable to this topic include:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- Have sufficient water supplies available to serve the project from existing entitlements and resources or are new or expanded entitlements needed;
- Result in a determination by the wastewater treatment provider, which serves or may serve the
 project that it has adequate capacity to serve the project's projected demand in addition to the
 provider's existing commitments;

- Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Comply with federal, state, or local statutes and regulations related to solid waste.

The Initial Study prepared for the proposed project, which is contained in Appendix A, examined these criteria and determined that the proposed project would generate no impact with respect to the compliance with federal, state and local statutes and regulations related to solid waste. Therefore, this issue is not addressed further in this EIR.

5.10.4 Impacts and Mitigation Measures

IMPACT: INCREASED DEMAND FOR FIRE PROTECTION SERVICES

Impact Analysis: In general, impacts to fire protection service are assessed based on factors such as required fire-flow, response distance from the fire stations, and the department's judgment regarding needs in the area. Clovis Fire Department (CFD) in particular uses the service level objectives contained in the Strategic Plan and Standards of Coverage documents to determine resource requirements. The criteria are based upon providing medical intervention in less than four minutes and arrival at a fire scene with sufficient resources (six members) to make fire attacks in seven minutes. The City also established the performance goal for a fire company to arrive in five minutes or less to 90% of all emergency calls and maintains resource delivery capabilities that meet the standards established by the National Fire Protection Administration.

Implementation of the proposed project would substantially increase demand for fire protection service in the area and Improvements to existing facilities and equipments, as well as increases in staffing would be required. In attempt to meet the projected fire protection demand, CFD has identified a need to construct an additional fire station in the vicinity of Gettysburg and Leonard. Construction of a fire station would entail purchase of an additional fire engine and the hiring of nine to twelve firefighters to cover three shifts per day.

While no funding is currently budgeted for the additional fire service enhancements, it is anticipated that the revenue required to fund the needed expansion would come from tax revenues and development impact fee revenues generated by the current or future development in the project area.

Furthermore, coupled with an additional fire station within the Specific Plan area, improved circulation system will alleviate some of the fire protection services impact as it would reduce the responding time for fire and emergency service calls in the area. It should be noted that Specific Plan development would occur incrementally, where individual development application would adhere to the existing water flow requirements as provided in Uniform Fire Code, Section 903, Appendix III-A, and fire hydrant locations and distributions standards as determined by Uniform Fire Code, Section 903, Appendix III-B and Clovis Municipal Code Chapter 4.4.103(e). The required fire-flow is closely related to the type of land uses, since the quantity of water necessary for extinguish fire varies with the type of development, life hazard, occupancy, and the degree of fire hazard.

Implementation of the Southeast Urban Center Specific Plan would substantially increase the population and intensity of uses in the project area. Continued development review by the CFD will reduce the impacts to less than significant level. Each individual project is currently, and will continue to be reviewed at the time of application submittal to ensure compliance with all fire safety and structure standards as well as all applicable state and local codes and ordinances and the guidelines found in the Strategic Plan and Standards of Coverage.



Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: No applicable.

IMPACT: INCREASED DEMAND FOR POLICE PROTECTION SERVICES

Impact Analysis: The Fresno County Sheriff's Department currently serves the Southeast Urban Center Specific Plan area, however, with the future annexation, the police protection responsibility will shift over to the Clovis Police Department (CPD).

The project area is currently developed with agricultural and rural residential uses, thus generating minimal police protection services demand. Development of the Specific Plan would result in the major land use changes to the project area and create a need for additional personnel and equipment support. The CPD is committed to provide a policy of 1.3 sworn officers per 1,000 population. As the project area experiences population growth, the CPD anticipates that they would need additional support in the areas of sworn supervisors, officers, dispatchers, records, investigations, traffic, juvenile division, D.A.R.E., community service officers, vehicles, computers, and radios and other miscellaneous equipment.

Although the development of the Specific Plan would require improvements to existing police facilities, the City would closely coordinate with the police to provide timely services to the project area, aware of the fact that takes time to hire and train a police officer. Furthermore, design criteria of the Specific Plan promote quality public and private spaces design, minimizes opportunities for criminal activity. Each development would be evaluated at the time it is proposed for potential impacts. While no funding is currently budgeted for the additional police service enhancements, it is anticipated that the revenue required to fund the needed services would come from tax revenues and development impact fee revenues generated by the current or future development in the project area. Implementation of the Southeast Urban Center Specific Plan would not have a significant impact on the CPD.

Level of Significance Before Mitigation: Less than significant.

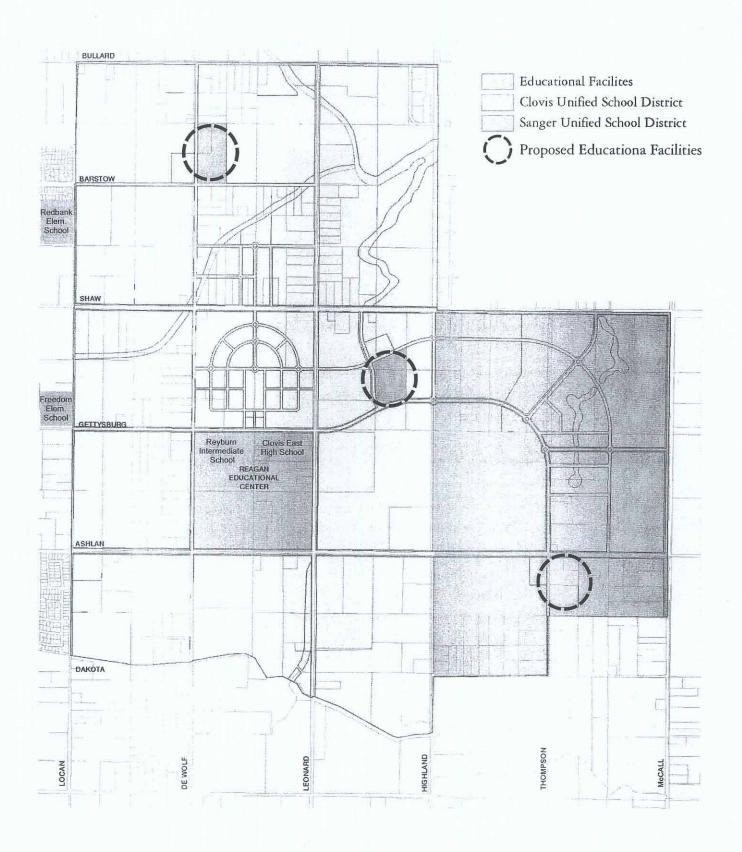
Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INCREASED DEMAND FOR SCHOOL SERVICES

Impact Analysis: The Clovis and Sanger Unified School Districts provide educational services to the project area. Based on the district wide student generation rates provided by the two school districts serving the project area, the proposed project would generate a total of 6,901 K-12 students at build-out. As shown in Table 5.10-4, CUSD and SUSD Average Student Generation Rates Per Dwelling Unit, there are 5,032 single family (SF) units and 2,936 multi-family (MF) units planned under the jurisdiction of Clovis Unified School District, each generating 3,881 and 1,185 students, respectively; and 1,993 SF units and 869 MF units under the jurisdiction of Sanger Unified School District, each generating 1,430 students and 405 students, respectively. As illustrated in the Figure 5.10-6, Educational Facilities, residences situated west of Highland will be served by Clovis Unified School District and east of Highland will be served by Sanger Unified School District.

Educational Facilities



Source: CUSD, SUSD

City of Clovis

Southeast Urban Center Specific Plan

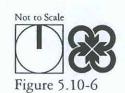


TABLE 5.10-4 CUSD AND SUSD AVERAGE STUDENT GENERATION RATES PER DWELLING UNIT

Clovis Unified School District*						
Grades	Single Family (District-Wide) 5,032 Units	Students	Multi-Family (District-Wide) 2,936 Units	Students		
K-6	0.4184	2,105	0.2603	764		
7-8	0.1268	638	0.0448	132		
9-12	0.2261	1,138	0.0983	289		
K-12	0.7713	3,881	0.4043	1,185		
	Sanger Un	ified School L	District**			
Grades	Single Family (District-Wide) 1,993 Units	Students	Multi-Family (District-Wide) 869 Units	Students		
K-6	0.405	807	0.278	242		
7-8	0.104	207	0.049	42		
9-12	0.209	416	0.139	121		
K-12	0.718	1,430	0.466	405		
Total		5,311		1,590		

Source: *Clovis Unified School District

**Sanger Unified School District (Michael Paoli & Associates, 2002)

Due to the overall growth of the Clovis area, the level of education services need at the Clovis Unified School District has increased in recent years. There are 35 schools within the CUSD that utilizes portable or temporary classrooms as little as one portable classroom per campus to as many as 20 portable classrooms per campus. Extensive use of portable classrooms within the school district suggests mounting need for additional school facilities.

In comparison, SUSD has not experienced a significant enrollment increase within its jurisdiction. Unlike the CUSD, SUSD has only two school facilities (Fairmont School and Quail Lake Charter School) within its boundaries that utilize portable classrooms. Moreover, Quail Lake Charter School's portable classrooms are only temporary since a new permanent school facility is in planning stage.

Implementation of the proposed project would substantially increase the school services demand, where approximately 6,901 K-12 students would be added to the existing school systems. However, three elementary schools are planned in the project vicinity within the CUSD attendance boundaries, including a site at the corner of Ashlan and Leonard Avenues, a site at the corner of Barstow and DeWolf Avenues, and one within the Reagan Educational Center to the east. Additionally, in attempt to balance the educational needs within the community, CUSD assesses development fees against new development at a rate of \$2.50 per square foot for residential development and \$0.34 per square foot for commercial/industrial development. SUSD does not operate any school facilities within the project area presently; however, a planned school site is located at southeastern corner of Ashlan and Thompson Avenues. New developments within the project area would be assessed with \$2.14 per square foot for residential development and \$0.34 per square foot for commercial development to provide for adequate educational services. Considering that the Southeast Urban Center Specific Plan accommodates potential sites for educational facilities and to the extent that new developments would be assessed with development fees, no significant impacts are expected from the project implementation.



CUSD has expressed concern over issues pertaining to the proposed sewage treatment plant and school sites and the zoning designation immediately surrounding those sites. These issues would be addressed in the plant's EIR for reasons previously described in this document. Evaluation of those potential impacts is speculative and premature at this time.

Adequate financial support from sources such as school bonds and development fees would ensure that education services impacts arising from converting agricultural and rural residential land uses to urban uses to be less than significant. Furthermore, developments would occur over time, ensuring that adequate public services are provided prior to construction of individual projects.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INCREASED DEMAND FOR PARK SERVICES

Impact Analysis: Implementation of the proposed Specific Plan would increase demand for park and recreation facilities, and would require the construction of new park and recreational facilities. Based on the City of Clovis parkland standard of 4.9 acres per 1,000 persons, the project would require approximately 143 acres of parkland (based on a population of 29,238 persons). Approximately 64 acres of open space and 46 acres of open space and recreational facilities have been planned for the project area. Additionally, the Reagan Center encompasses approximately 160-acre site, providing 80 acres of public open space. School facilities are created at 50 percent of useable space. Therefore, implementation of the proposed project would result in a total of 180 acres of parkland, exceeding the standard by 37 acres. Although exact acreages have not been determined, the project area includes three more proposed school sites within the CUSD attendance boundaries. Furthermore, 54 acres of drainage basin and 17 acres of open space/public are also allocated within the project area to ensure that adequate recreational facilities are available to the projected population.

A major design feature of the Southeast Urban Center Specific Plan is the extensive system, which would connect the Dog Creeks, Jefferson Canal, and Enterprise Canal together to provide a community recreational and open space amenity for future residents' use. In addition to the community-wide open space network, proposed school campuses, existing school play yards, and community and neighborhood parks serve as open space and outdoor recreation facilities. Other recreational amenities within the project area would also include sports fields and an amphitheater.

Development of the project area would provide parks and recreational facilities far exceeding the standard ratio to accommodate the projected population growth. Implementation of the proposed project would result in beneficial parks impact.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INCREASED DEMAND FOR WATER SERVICES

Impact Analysis: Currently, there is no community potable water system, in the project area. With the development of the project area, the City's potable water system will be expanded to provide service to

the developing areas. In addition, a non-potable (Purple Pipe System) distribution system that will utilize either or both reclaimed water and surface water for irrigation of public landscaped areas (e.g., medians, parks, schools, trails) can be developed as envisioned in the water master plan to reduce reliance on domestic water system for non-potable uses.

At the 2030 planning horizon, the annual water consumption of the Clovis area is expected to be approximately 52,500 af/year (see Table 5.10-5, *Projected Water Demand*). Sources of this water are as follows: treated surface water supply (27,000 AF), safe yield groundwater (8,000 AF), recharged groundwater (13,500 AF), and direct user surface water supply (4,000 AF). From this breakdown, several conclusions can be drawn:

- Groundwater must be recharged (banked) when available through ongoing efforts so that groundwater is available during drought years.
- Surface water supplies are adequate in approximately 60% of years; in approximately 10% of years a severe drought occurs and are inadequate to fully operate the SWTP.
- The use of approximately 4,000 af/year of reclaimed water and other exchanges is necessary to maintain an overall balance.
- A 30 MGD (33,600 AF/year) water treatment plant will be necessary to fully offset the shortage of water from available groundwater sources.

TABLE 5.10-5 CITY OF CLOVIS PROJECTED WATER DEMAND (2000 TO 2030)

Planning Year	City Projected Growth (EDU ¹/year)	Cumulative Growth (EDU) ²	General Plan Projection (EDU)	Incremental Demand (AF)	Estimated Total Urban Demand (AF)
2000	700	1,800	6,367	500	18,400
2005	1000	5,600	13,275	1,600	20,000
2010	1,400	11,000	20,848	2,800	22,800
2015	2,000	18,600	28,588	4,800	27,600
2020	2,700	29,300	36,592	6,100	33,700
2025	3,500	43,600	48,271	10,600	44,300
2030	-	57,600	57,384	8,200	52,500

Note: Growth projections based upon 1993 City of Clovis General Plan.

1 EDU = Equivalent Dwellings per Unit; defined as a residence with 3.1 people or 4.5 acres of office or commercial properties.

² From 1998 baseline of 550 EDU and resulting urban demand of 17,900 AF.

Source: Clovis Water Master Plan - Phase II (1999)

Table 5.10-6, Future Water Supply Facilities, below identifies the future facilities to be provided within the City of Clovis to provide adequate water supply to the entire city of Clovis area (including the urban centers).



TABLE 5.10-6 CITY OF CLOVIS ESTIMATE OF CAPITAL COSTS FOR FUTURE WATER SUPPLY FACILITIES

Phase Period	Water Supply Facilities	Estimated Cost (million))
Near Term	1 well	\$0.5
To 2005	Surface Water Treatment Plan (5 MGD 1) 40 acre Recharge Basin	14.7
To 2010	2 wells Letterman Park Pump Station Alternate System (1000 AF)	4.6
To 2020	1 million gallon Storage Tank and Booster Station 9 wells Surface Water Treatment Plant Expansion (15 MGD) Ashlan Booster (2500 GPM ²) 60 acre Recharge Basin	32.5
To 2030	15 wells Surface Water Treatment Plant Expansion (10 MGD)	39.0
Total		\$91.3

Millions of gallons per day

The City of Clovis will have several water sources available to supply the future demands. Design of facilities is contingent on the priority that is placed on each of these separate sources of supply. Based upon the City of Clovis Water Master Plan, the following priorities have been determined:

- 1. Surface water treatment plant supply
- 2. Wells with DBCP removal facilities (i.e., carbon filters)
- 3. Groundwater supplies and recharged groundwater as necessary.

Based on this prioritization, the following recommendations were made in the water master plan regarding water source, delivery, and distribution:

- The City shall pursue the purchase of recharge sites;
- The City shall select and pursue a site for Surface Water Treatment Plant (SWTP);
- 3. The City shall establish policies to encourage the use of untreated surface water and/or reclaimed water where feasible.

The project area is the only project area where allowance is made for reclaimed water from a satellite sewage treatment/water reuse facility. In addition to this water supply, the area is entirely within the Fresno Irrigation District, and therefore has a substantial water entitlement. The growth within the project area is anticipated to rely heavily on treated water for potable needs. The amount of groundwater available would be dependent on groundwater quality and recharge capability. As indicated in Table 5.10-7, Southeast Urban Center Water Supply and Water Demands, the project area would operate on a surplus of water supply at build-out.

² Gallons per minute.

Source: Clovis Water Master Plan - Phase II (1999)

TABLE 5.10-7 SOUTHEAST URBAN CENTER WATER SUPPLY AND WATER DEMANDS

Water Supply				
7,755				
7,755				
nds				
5,801				
0				
5,801				
1,954				

¹ At bulld-out of 2030

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures: In addition to complying with the recommendations outlined in the Water Master Plan (see above), the following additional mitigation measures will reduce the potential impacts of water supply to a level less than significant:

- 5.10-1 The surface water treatment facility shall be used to its maximum capacity whenever possible to allow optimal use of surface water supplies and maximum recharge of the aquifer.
- 5.10-2 Reclaimed water will be used whenever feasible to achieve a water balance.
- 5.10-3 Continue to recharge the aquifer through deliveries to flood control basins whenever possible.
- 5.10-4 Continue water conservation and enforcement actions.

Level of Significance After Mitigation: Less than significant.

IMPACT: INCREASED DEMAND FOR WASTEWATER SERVICES

Impact Analysis:

Demand

Clovis' flow capacity to the Regional Wastewater Treatment Facility is estimated at approximately 8.36 MGD (average day annual flow). At full build-out of the existing sewer service areas of Clovis within the 1993 spheres of influence, the capacity requirement is projected to grow by 4.67 MGD to a total of 13.03 MGD. Development of the three urban centers will add an additional 10.39 MGD of required capacity, resulting in a total projected requirement for wastewater capacity of 23.42 MGD at year 2030.¹³ As such, the existing trunk sewer mains are suitable to serve only the old (i.e., 1993) sphere of influence, and are too small to serve current 2000 sphere of influence.



Source: Clovis Water Master Plan - Phase II (1999)

¹³ Wastewater Master Plan Update, Phase 1-B, City of Clovis, November 1996.

Capacity

As stated above, Clovis previously has acquired a total useable capacity in the regional system of 9.30 MGD and is expected to acquire additional 3.00 MGD in the next three to five years. Under previous regional planning, this could be expanded to 15.87 MGD by purchasing additional treatment capacity and participating in completion of the regional trunk system previously planned to serve Clovis (see Table 5.10-8, Clovis' Current Useable Capacity in the Regional System). Achieving this maximum capacity would require full efficient utilization of all four existing regional trunk sewers serving Clovis: the Peach (3.0 MGD planned maximum capacity), Herndon (2.80 MGD), Fowler (9.57 MGD), and Sierra (0.50 MGD).14

TABLE 5.10-8 CLOVIS' CURRENT USEABLE CAPACITY IN THE REGIONAL SYSTEM					
Sewer Service Area	Trunk Sewer Capacity	Treatment Capacity at WWTP	Useable Capacity		
Peach	3.00	3.00	3.00		
Fowler 1	9.57	3.00	3.00		
Herndon	2.80	2.80	2.80		
Sierra	0.50	0.50	0.50		
Total	15.87	9.30	9.30		

Clovis possesses a capacity of only 3.00 MGD in the North American Trunk Sewer downstream of Maple Avenue for Fowler Trunk Sewer flows. The acquisition by Clovis of treatment capacity of 3.00 MGD has been previously agreed upon.

Source: Wastewater Master Plan, Phase 1-B, City of Clovis, 1996

Achieving the scheduled maximum capacity of 15.87 MGD in the regional system is sufficient only to provide the old SOI of Clovis, and falls short of being sufficient to meet the current SOI of Clovis. Development of three Urban Centers, including the proposed project area will increase the total demand to 23.42 MGD, exceeding the available capacity at the regional system. Therefore, it is necessary to create additional capacity to treat wastewater, either through expansion of the regional system (the Fresno-Clovis Regional Wastewater Treatment Plant) or through construction of a new facility.

As described in Section 5.10.2, Existing Conditions, under Wastewater Services, the existing regional WWTP is experiencing problems in disposal of the treated effluent. On the other hand, the development of a sewage treatment/water reuse facility within the project area will provide adequate capacity to serve three Urban Centers and will not exacerbate the regional system. Additionally, the proposed sewage treatment/water reuse facility would require a grid of 12-inch diameter water lines in major streets to provide access of reclaimed or nonpotable water to direct users.

Most of the project area cannot be served on a permanent basis by the City's existing sewer collection system. However, the development of a WWTP would provide the needed treatment services for the anticipated growth and reduce the impacts associated with wastewater services to a less than significant level. The facility is not currently part of the proposed project, and thus will be required to undergo environmental compliance per the California Environmental Quality Act (CEQA).

1	evel of Sig	nificance	Refore	Mitigation:	Potentially	significant
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¹⁴ Ibid.

Mitigation Measures: Goal 3 and Policy 3.1 from the Public Facilities Element will guide the provision of wastewater services in the project area. In addition, the following mitigation measures will reduce the potential impacts to less than significant:

- 5.10-5 The City shall select an alternative in their Wastewater Master Plan to provide the necessary wastewater facilities to serve the project area.
- 5.10-6 The City shall ensure the provision of adequate trunk sewer and collector main capacities to serve the project area.
- 5.10-7 The City shall ensure that adequate trunk sewer capacity exists or can be provided to serve proposed development prior to the approval of any discretionary approvals, so that capacities of wastewater facilities are not exceeded.

Level of Significance After Mitigation: Less than significant.

IMPACT: POTENTIALLY DISRUPT DELIVERY OF SURFACE WATER FOR IRRIGATION

Impact Analysis: Per the Fresno Irrigation District (FID), if there are any potential deficiencies with the FID system, should be eliminated as part of the proposed development. FID has several policies in place that address when properties adjacent to, or potentially impacted by, canals or pipelines owned by FID are proposed for urban, commercial, or industrial development. FID will require the developer to pipeline the open canal, replace an existing older pipeline with a new pipeline and/or concrete line large open canals.

Per current practices which will be continued as the specific plan develops, The developer of any future urban, commercial, and industrial development adjacent to, or potentially impacted by, canals or pipelines owned by the FID, shall pipeline the open canal, replace an existing older pipeline with a new pipeline and/or concrete line large open canals

FID does not anticipate any adverse environmental impacts associated with current or future provision of water service to the project area, providing that the FID policies are adequately addressed regarding any and all future urban, commercial, and industrial development when properties adjacent to, or potentially impacted by, canals or pipelines owned by the FID.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INCREASED DEMAND FOR NEW STORM WATER DRAINAGE FACILITIES OR EXPANSION OF EXISTING FACILITIES

Impact Analysis: As stated above, the FMFCD is currently working to identify for an additional facility, Basin DP, within or adjacent to the Specific Plan boundary to accommodate future drainage needs. Once an appropriate site has been identified, the Fresno Metropolitan Flood Control District (FMFCD), as lead agency of that project, will complete the necessary CEQA environmental review, and will mitigate environmental impacts if necessary.

Each property is required to contribute its pro-rata share of the cost of the public drainage system. It is the form of participation in the cost and/or construction within the project area that will mitigate the



impact of development. Future developments within the Southeast Urban Center Specific Plan area shall pay drainage fees pursuant to the Drainage Fee ordinance prior to approval of improvement plans, at the rates in effect at the time of such approval. Developers should contact the FMFCD for a final drainage fee obligation prior to approval of improvement plans.

Permanent drainage service is available for some parts of Drainage Areas "DO" and "3G". The FMFCD recommends temporary facilities be required for those areas without permanent drainage service, until permanent service is available. The construction of facilities as shown in Figure 5-10-7, FMFCD Facilities, will provide permanent drainage service to Drainage Areas "DO" and "3G" under the existing land use plan. The design of the Master Plan for Drainage Area 'DO" is currently being updated. The design of the Master Plan for Drainage Area "DP" is currently in progress. The Master Plan design for both Drainage Areas "DO" and "DP" will be based on the proposed land uses of the Southeast Urban Center Specific Plan.

The cost of construction of Master Plan facilities, excluding dedication of storm drainage easements, is eligible for credit against a developer's drainage fee within the drainage area served by the facilities. Developers are required to execute a Development Agreement with the FMFCD to affect such credit. Reimbursement provisions, in accordance with the Drainage Fee Ordinance, will be included to the extent that the Developer's Master Plan costs for an individual drainage area exceed the fee of said area. Should the facilities cost for such individual area total less than the fee of said area, the difference shall be paid upon demand to the City of Clovis or FMFCD.

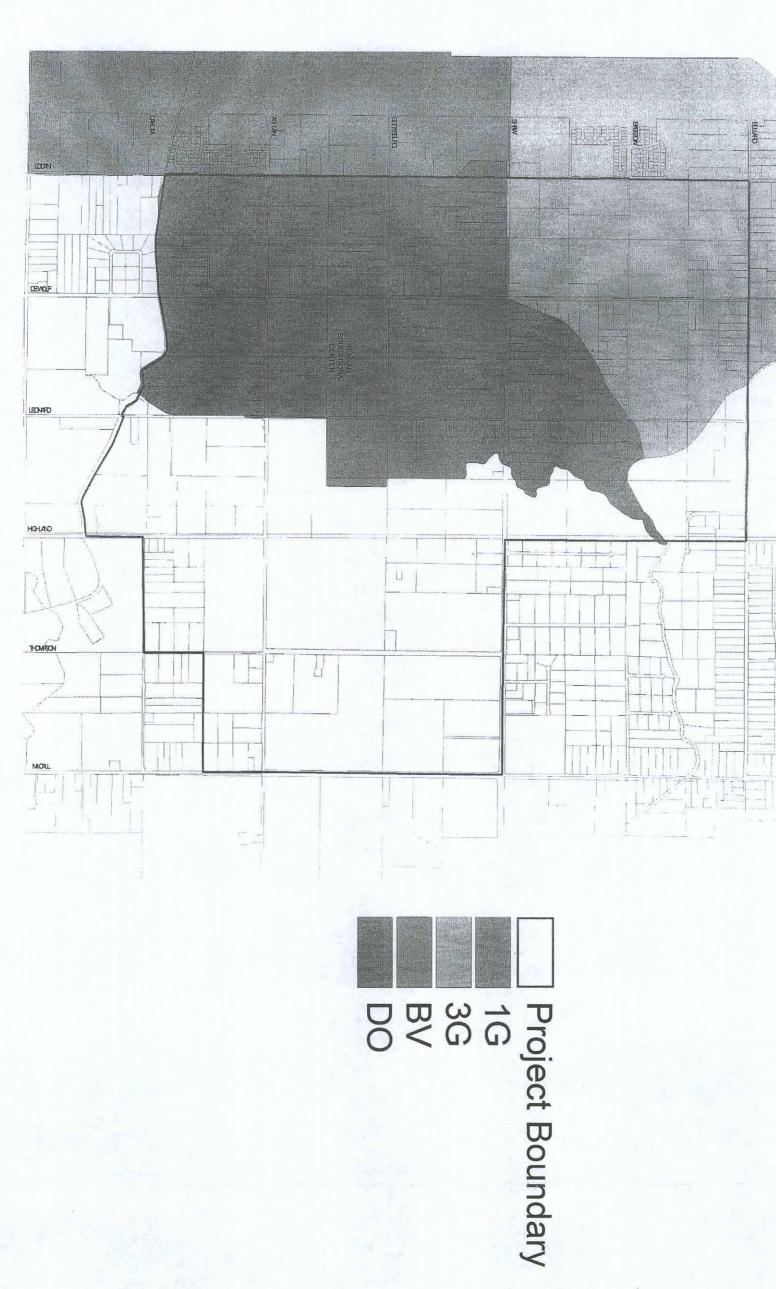
Adherence to Policies 5.1, 5.2, and Policies 5.3 of the Public Facilities Element in the City of Clovis General Plan (1993) will help reduce the potential impacts regarding storm drainage facilities (see Section 5.5.7, Land Use and Relevant Planning). The mitigation measures below, in conjunction with implementation of the Drainage Fee Ordinance, will reduce the potential impacts to a level less than significant.

Level of Significance Before Mitigation: Potentially significant.

Mitigation Measures:

- 5.10-8 Development in drainage areas DO and 3G that may result in storm water runoff in excess of designed or constructed drainage facilities may be approved subject to the following conditions:
 - Construction of on-site detention ponds to reduce the peak flows from the development to that anticipated in the design of the FMFCD Master Plan for Storm Drainage;
 - 2. Implementation of landscaping and open space areas of sufficient size to make the runoff characteristics of the project area equivalent to those anticipated by the design of the FMFCD Master Plan for Storm Drainage facilities;
 - Construction of non-Master Plan facilities to increase the system capacity of the FMFCD system; or
 - 4. Other as approved by FMFCD.

Level of Significance After Mitigation: Less than significant.



Source: Fresno Metropolitan Flood Control District

Southeast Urban Center
Specific Plan



IMPACT: INCREASED DEMAND FOR SOLID WASTE SERVICES

Impact Analysis: There are no current solid waste service deficiencies and existing solid waste disposal sites are considered to be adequate to service the project area. Solid waste services can be provided to the proposed project without significantly impacting existing solid waste services. ¹⁵ The project area population projections are included in the landfill life expectancy projections. Long-term generation rates for the various land uses would not differ significantly from the current rates. Projections of solid waste generation would be per capita based.

Intensification of land uses and population increases in the project area would result in an increase in the amount of solid waste generated. Although there will be significant increase in the amount of solid waste generated by the project area, because the local landfills are not near capacity, this increase is not considered significant. The General Plan contains policies and actions that help alleviate impacts associated with increased demand on solid waste providers and facilities.

Level of Significance Before Mitigation: Less than significant

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: INCREASED DEMAND FOR ELECTRICITY AND NATURAL GAS SERVICES

Impact Analysis: Implementation of the proposed Specific Plan will increase demand for gas and electricity services in the area, and reinforcement to existing facilities would be required. In the past, the PG&E had indicated that an additional electrical substation and related facilities including power lines in the project vicinity would be required to service the growing population in the area. However, a representative from the PG&E indicated that the overall growth in the area has been stagnant in the past year and the improvements to existing facilities would be evaluated with development application submittal. Additionally, the proposed Armstrong substation is in the site acquisition stage, and once in operation, the Armstrong substation would be available to serve the project area. However, the proposed substation is still under the planning stage and the start of construction is yet to be determined.

As a public utility company, PG&E is required to provide gas and electrical services to accommodate demand resulting from new developments. While there are no current plans for improvements, necessary expansion of on-site and off-site gas distribution lines and substations will be identified when development is proposed. The City of Clovis will continue to cooperate with PG&E to ensure adequate gas and electric facilities are provided prior to construction and permitting of each project.

It is anticipated that the improvements to existing infrastructure would occur at a later time with individual application submittal.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.



¹⁶ Alan Weaver, Public Works Director, City of Clovis Public Work Department.

IMPACT: INCREASED DEMAND FOR TELECOMMUNICATION SERVICES

Impact Analysis: No policy with regard to the provision of telephone service was identified in the City of Clovis General Plan.

Telephone service in the vicinity of the project area is provided by SBC, which provides telephone service to other residential uses in the area. SBC would expand telephone facilities to the project area. The construction of the proposed project could result in short-term impacts associated with delays in service provision if telephone lines are damaged during construction. However, any potential damage to telephone lines can be avoided through required coordination between the project applicant and SBC when construction activities occur in the vicinity of telephone lines.

Prior to development of the Southeast Urban Center Specific Plan, coordination with SBC would be necessary. This process would ensure that there are facilities with the capacity to serve the project prior to approval of any development plan.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

5.11 RECREATION

5.11.1 Methodology Related to Recreational Impact Assessment

The potential for adverse impact on recreation was evaluated based on information contained in the City of Clovis General Plan and a services questionnaire completed by the service provider to accommodate the increased demand created by the proposed project. Service correspondence letter concerning parks and recreational services is provided in Appendix B of this document.

5.11.2 Existing Conditions Related to Recreation

The Clovis General Plan indicates that a combination of parklands, CUSD facilities, Clovis Memorial District facilities, and Fresno Metropolitan Flood Control District (FMFCD) water basins are considered as the City's available recreational lands. Because the CUSD has followed an open gate policy, which has allowed extensive use of the schools recreation facilities by the public after normal hours and during the summer, CUSD facilities are counted toward public open space. However, due to the fact that the school grounds are not always available to the public, the acreage is counted at 50% of the total per General Plan policy. The primary purpose of FMFCDs retention basins are flood control and water conservation. However, during dry periods, the basins provide open space and recreation opportunities. Recreational programming is provided through the FMFCD by means of contractual agreement with the City of Clovis. The City has established a goal of 4.9 acres of parkland for each 1,000 residents.

The City currently provides approximately 78.12 acres of parkland, and approximately 585 acres of public facilities (including public schools), which means that 292.5 acres can be counted toward available recreational lands. Based upon these numbers, the total amount of open space recreational land equals 370.62 acres. With a population of approximately 72,000, the City standard calls for 352.8 acres of open space recreation area, resulting in a surplus of 17.82 acres.



5.11.3 Standards of Significance

The following criteria are extracted form the Recreation Environmental Checklist form contained in the most recent update of the California Environmental Quality Act (CEQA) Guidelines. The project will, at a minimum, be considered to have a significant effect related to recreational facilities if any of the following may occur:

- Increase the use of existing neighborhood and regional parks or other recreational facilities, such
 that substantial physical deterioration of the facility would occur or be accelerated.
- Include recreational facilities or require the construction or expansion of recreational facilities, which
 might have an adverse physical effect on the environment.

5.11.4 Impacts and Mitigation Measures

IMPACT: INCREA

INCREASE THE USE OF EXISTING NEIGHBORHOOD AND REGIONAL PARKS OR OTHER RECREATIONAL FACILITIES, SUCH THAT SUBSTANTIAL PHYSICAL DETERIORATION OF THE FACILITY WOULD OCCUR OR BE ACCELERATED

Impact Analysis: Implementation of the proposed Specific Plan would increase demand for park and recreation facilities, and would require the construction of new park and recreational facilities. Based on



the City of Clovis parkland standard of 4.9 acres per 1,000 persons, the project would require approximately 143 acres of parkland (based on a population of 29,238 persons). Approximately 64 acres of open space and 46 acres of open space and recreational facilities have been planned for the project area. Additionally, the Reagan Center encompasses approximately 160-acre site, providing 80 acres of public open space. Therefore, implementation of the proposed project would result in a total of 180 acres of parkland, exceeding the standard by 37 acres. Although exact acreages have not been determined, the project area includes three more proposed school sites within the CUSD attendance boundaries. Furthermore, 54 acres of drainage basin and 17 acres of open space/public are also allocated within the project area to ensure that adequate recreational facilities are available to the projected population.

A major design feature of the Southeast Urban Center Specific Plan is the extensive system which would connect the Dog Creeks, Jefferson Canal, and Enterprise Canal together to provide a community recreational and open space amenity for future residents' use. In addition to the community-wide open space network, proposed school campuses, existing school play yards, and community and neighborhood parks serve as open space and outdoor recreation facilities. Other recreational amenities within the project area would also include sports fields and an amphitheater.

Development of the project area would provide parks and recreational facilities far exceeding the standard ratio to accommodate the projected population growth. Implementation of the proposed project would result in beneficial impact toward the rest of City residents.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: REQUIRE THE CONSTRUCTION OR EXPANSION OF RECREATIONAL FACILITIES, WHICH MIGHT HAVE AN ADVERSE PHYSICAL EFFECT ON THE ENVIRONMENT

Impact Analysis: Agricultural and rural residential land uses dominate the project area currently. Implementation of the proposed Specific Plan would require construction of recreational facilities. Implementation of the proposed project would provide at least 180 acres of parkland within the Specific Plan area. Some of the open space features included in the design principles of the Specific Plan are pocket parks, plazas, and paseos that would help support human interaction and provide visual relief. Other major recreational feature would be the extensive trail system that would tie the project area together. The City anticipates that Dog Creek would be realigned to simulate its original channel and to be utilized as a community recreational and open space amenity for the inhabitants of the surrounding residential areas. As such, construction of new recreational facilities within the project area would employ quality design concepts and features to minimize any adverse effects from modifying the existing environment. However, more detailed analysis on potential impacts, focusing on the noise, light and glare, traffic, and air quality impacts, may be necessary at the time of individual application submittal for recreational facilities such as an amphitheater or lighted athletic fields. No significant physical effect on the environment is anticipated from the proposed project.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

5.12 SOCIOECONOMICS

This section examines the potential socioeconomic implications of the proposed project, including alteration in population, employment generation, and demand for housing. The relationships of the proposed project to the regional planning policies of the Council of Fresno County Governments (COG) and the City of Clovis General Plan are also discussed.

5.12.1 Methodology Related to Socioeconomics

The examination of socioeconomic impacts relies on the "Baseline Economic and Market Analysis" report prepared by Public Economics, Inc. in October 2001 for the Southeast Urban Center Specific Plan. The market report assessed the potential impacts of the proposed project relative to the following conditions and characteristics in the area. In addition, specific data sources are identified where appropriate, if more updated data was available.

- Demographic characteristics including population and housing, and the relationship between growth associated with the project and overall projected growth;
- Socio-economic characteristics including employment by industry, income and the potential types of jobs to be created in the project;
- Potential impacts on the supply of affordable housing located within the vicinity of the proposed project; and
- Potential impacts on population growth in the vicinity of the proposed project.

5.12.2 Existing Conditions Related to Socioeconomics

The project area located in unincorporated Fresno County, but within the City of Clovis' sphere of influence. The City of Clovis is located near the geographic center of the State of California and is directly adjacent to the northeast portion of the City of Fresno in central Fresno County. The project vicinity includes the cities of Fresno, Fowler and Sanger. For regional planning and forecasting purposes, the City is considered to be part of the San Joaquin Valley subregion, the third largest region in California. The San Joaquin Valley is located in northern California and consists of seven counties, including Kern, Kings, Fresno, Madera, Merced, Stanislaus, and San Joaquin Counties. Within San Joaquin Valley, Fresno County is the most populated county and greatest contributor to regional growth. According to the Center for Continuing Study of California Economy in *California County Projections*, the San Joaquin Valley is expected to see the highest rate of population growth through 2010.

Table 5.12-1 summarizes demographic information on the City of Clovis compared to the City of Fresno, the project area, the County of Fresno and the State of California.



TABLE 5.12-1 CHARACTERISTICS OF THE COUNTY OF FRESNO, THE CITY OF CLOVIS, THE CITY OF FRESNO, THE PROJECT AREA AND THE STATE OF CALIFORNIA

Demographic Area	California	Fresno County	Fresno	Clovis	Southeast Urban Center
Population	33,871,648	781,740	427,652	67,988	29,238
Housing Units	12,214,549	270,767	149,025	25,250	10,829
Civilian Labor Force	15,829,202	341,640	179,876	33,552	N/A
Number Employed	14,718,928	301,306	159,776	31,486	12,466
Unemployment Rate	4.3%	7.1%	6.7%	4.2%	N/A
Average Household Income (1999)	47,493	\$34,725	\$32,236	\$42,283	N/A
Jobs-Housing Balance	1.21	1.11	1.07	1.25	1.15

Based on the job/housing ratio figures, the City of Clovis appears to be more housing rich than the City of Fresno and the State of California as a whole. The job/housing ratio within the project area would be slightly less than the City average at 1.15, however, it will sill be greater compared to the City as well as the County of Fresno. Therefore, the project area job/housing balance could be considered consistent with the surrounding jurisdictions.

Existing Population Characteristics

Population Trends and Forecasts

The City of Clovis is a significantly growing population center. This is due to its proximity to job markets The City of Clovis and the City of Fresno are the Fresno County's two largest cities, and over 60 percent of the County's total population resides in these two cities. This is due to its proximity to job markets within the City of Clovis and the City of Fresno, which between them contain nearly 80 percent of all jobs in Fresno County.

The City has grown significantly in population and it is expected to continue doing so in the near-term and long-term. Between 1990 and 2000, population in Clovis increased by 17,855 persons, from 50,322 to 68,468, representing an increase of 26 percent, capturing 14.1 percent of the County of Fresno population growth.

According to findings by Public Economics, Inc. (PEI)¹⁶, future population in Clovis is expected to reach between 142,473 to 151,335 by the year 2025, representing population growth between 74,485 and 83,347 persons, more than doubling the City's 2000 population. This accounts for approximately 78 percent to 83 percent of the General Plan build out of 182,775 persons. During the same period, the Countywide population growth is projected to increase by 466,380 persons. This means that approximately 16.0% to 17.9% of the County's population growth would be captured by the City of Clovis. Table 5.12-4 5.12-2 summarizes projected population growth for the City of Clovis and the County of Fresno from 2000-2025.

¹⁶ Source: City of Clovis "Baseline Economic and Market Analysis Proposed Southeast Urban Center Specific Plan" dated October 2001, prepared by: Public Economics, Inc.

TABLE 5.12-2 FRESNO COUNTY POPULATION PROJECTIONS							
Adjusted Population Projections	2000	2005	2010	2015	2020	2025	Growth 2000-2025
California State Department of Finance (June 2001)	799,407	893,300	970,900	1,043,100	1,134,600	1,234,126	435,719
Central California Futures Institute (April 2000)	799,407	883,590	974,849	1,066,360	1,162,894	1,265,787	466,380
Fresno County of Governments (circa 1998)	799,407	881,431	972,646	1,064,859	1,161,617	1,264,644	465,237

Families Below Poverty Level

Based on the 2000 U.S. Census, Report, the City of Clovis showed the lowest percentage of families classified as below the poverty level among jurisdictions compared. The City of Clovis, the City of Fresno, the County of Fresno, and the State of California respectively showed 1,340 (7.6%), 20,325 (20.5%), 33,175 (17.6%), and 845,991 (10.6%) families classified as below the poverty level.

Existing Housing Characteristics

Trends and Forecasts

In 2000, the City of Clovis had a population of 68,468 living in 25,250 dwelling units (DUs), representing an average population of 2.71 persons per household (2.95 for owner-occupied units and 2.56 for rented units). The Countywide average (excluding Clovis) is 2.91 persons per household. Having a smaller average household size, the City of Clovis captures a relatively larger percentage of households compared to other locations in the County in order to absorb an equal number of new residents. Between 1990 and 2000, the City captured 18.1 percent of housing growth and 14.1 percent of population growth. The differences between the capture rate of population and housing are directly related to the differences between average household size within the City and elsewhere in the County. Table 5.12-3 summarizes population and housing trends in Fresno County and the City of Clovis.



TABLE 5.12-3 POPULATION AND HOUSING TRENDS FRESNO COUNTY AND CITY OF CLOVIS 1980, 1990, AND 2000

. Population	1980	1990	2000	Avg. Annual Growth
Fresno County	504,769	654,970	781,740	2.21%
Clovis	32,871	50,133	67,988	3.70%
Population Growth	<u>_</u>	1980-1990	1990-2000	<u> </u>
Fresno County		150,201	126,770	SHIP OF BUILDING
Clovis		17,262	17,855	
Percentage Captured by Clovis	建筑线线线	11.5%	14.1%	THE RESIDENCE OF THE PARTY OF T
Housing (Units)	1980	1990	2000	Avg. Annual Growth
Fresno County	193,653	235,563	270,767	1.69%
Clovis	13,360	18,888	25,250	3.23%
Housing Growth	_ _	1980-1990	1990-2000	
Fresno County	C. B. C. C.	41,910	35,204	
Clovis		5,528	6,362	
Percentage Captured by Clovis		13.2%	18.1%	
Fresno County (Except Clovis)		2.79	2.91 pop.	
			Per DU	
Clovis		2.65	2.69 pop.	
CICTE			Per DU	

PEI predicts that, between 2000 and 2025, housing demand will reach the point that housing within Clovis can increase by 25,249 to 30,869 DUs, to a total of 51,577 to 57,197 DUs. This compares to a buildout capacity of 62,435 DUs shown in the General Plan. Therefore this cumulative new housing demand is consistent with the City's General Plan. The demand for new housing in Clovis will range from approximately 805 to 998 new DUs per year during 2000-2005 and from 1,193 to 1,448 new DUs per year during 2020-2025. Table 5.12-4 summarizes the Capture Rates, Population, and Housing Demand Projections from 2000-2025 for the City of Clovis.

TABLE 5.12-4 CAPTURE RATES, POPULATION, AND HOUSING DEMAND PROJECTIONS FROM 2000-2025 FOR THE CITY OF CLOVIS

	2000	2000- 2005	2005- 2010	2010- 2015	2015- 2020	2020- 2025	2000- 2025
City-Wide Growth Projections: Lo	w Range					正多错误的	
Incremental City Projections:							
Countywide Population Growth	NA	84,183	91,259	91,511	96,534	102,893	466,380
Clovis Capture Rate	NA	14.1%	15.1%	16.1%	17.1%	17.1%	16.09
Clovis Population Growth	NA	11,870	13,780	14,733	16,507	17,595	74,485
Clovis Population per Unit	NA	2.95	2.95	2.95	2.95	2.95	2.95
Clovis Housing Growth	NA	4,024	4,671	4,994	5,596	5,964	25,249
Annual Demand for Housing	NA	805	934	999	1,119	1,193	
Cumulative City Projections:						alla par a	
Clovis Population Growth	67,988	79,858	93,638	108,371	124,879	142,473	
Clovis Population Growth Rate	NA	3.27%	3.23%	2.97%	2.88%	2.67%	3.00%
City-Wide Growth Projections: His	gh Range						
Incremental City Projections:							
Countywide Population Growth	NA	84,183	91,259	91,511	96,534	102,893	466,380
Clovis Capture Rate	NA	16.0%	17.0%	18.0%	19.0%	19.0%	17.9%
Clovis Population Growth	NA	13,469	15,514	16,472	18,342	19,550	83,347
Clovis Population per Unit	NA	2.70	2.70	2.70	2.70	2.70	2.7
Clovis Housing Growth	NA	4,989	5,746	6,101	6,793	7,241	30,869
Annual Demand for Housing	NA	998	1,149	1,220	1,359	1,448	
Cumulative City Projections:							
Clovis Population Growth	6,362	81,457	96,971	113,443	131,785	151,335	
Clovis Population Growth Rate	NA	3.68%	3.55%	3.19%	3.04%	2.81%	3.25%

As projected in Table 4.3-3, Land Use Plan Statistics, the proposed project will add a total of 10,829 new dwelling units to the City of Clovis.

Existing and Projected Employment Characteristics

Trends and Forecasts

Between 1990 and 1998 the number of jobs in Clovis increased at an average rate of 4.5 percent per year, capturing 16.7 percent of job growth in the County, where jobs grew at an average rate of 1.7 percent per year. PEI projects that between 2000 and 2025, the number of jobs in the City of Clovis will increase by 24,000 to 27,500. This will increase the total number of jobs in the City to between 45,400 and 49,300 by 2025. This represents an increase at an average rate of 3.2 to 3.5 percent per year, capturing 16.7 to 16.9 percent of job growth in the County, where jobs are expected to grow at an average rate of 2.0 to 2.2 percent per year.

Based on figures provided by the U.S. Census Bureau, in 2000, 35.2% of the employed population in Clovis worked in management, professional, and related occupations; 14.6% worked in service occupations; 29.6% worked in sales and office operations; 1.2% worked in farming, fishing, and forestry occupations; 9.4% worked in construction, extraction, and maintenance occupations; and 10% worked in production, transportation, and material moving occupations.



As shown in Table 5.12-5 projections of job growth by the Council of Fresno County Governments (FCOG) estimate that job growth from 2001 to 2025 for Fresno County is anticipated to reach 32,348 new Retail jobs, 80,822 new jobs in Services, and 51,758 new Basic/Other jobs, representing a growth rate of 2.1% in Retail, 3.2% in Services and 1.2% in Basic/Other. This signifies a total of 164,928 new jobs in the County for this time period.

Job growth from 2001 to 2025 for the City is anticipated to reach 8,505 new jobs in Retail, 9,085 new jobs in Services, and 9,954 new Basic/Other jobs, representing a growth rate of 4.0% in Retail, 4.3% in Services, and 2.7% in Basic/Other. This represents a total average job growth rate of 3.5%. This signifies a total of 27,544 new jobs in the City for this time period.

In summary, total County job growth by 2025 is projected to reach 164,928 new jobs based on FCOG figures. Projections for the City of Clovis anticipate that growth rates between 2005 and 2010 are expected to start at higher-than-average levels and then decrease from 2015 through 2025. Total City of Clovis growth by 2025 is projected to reach 27,544 new jobs based on FCOG figures. Annual growth rate in the City of Clovis is projected to average 1,001 to 1,148 new jobs per year from 2001-2025, including retail trade, services, and basic industries.

TABLE 5.12-5 PROJECTED JOB GROWTH BY SECTOR FRESNO COUNTY AND CITY OF CLOVIS 2001-2025

Growth Rate	New Jobs 1	Annual Job Growth
企业的	Fresno County	特色原理的影響的影響
2.1%	32,348	NA NA
3.2%	80,822	NA
1.2%	51.758	NA
2.0%	164,928	NA
	City of Clovis	米爾·克爾 45 / 1868
4.0%	8,505	354
4.3%		
2.7%	9,954	415
3.5%	27,544	1,148

^{1 &}quot;Basic/Other" includes agriculture and F/I/RE and excludes government and education. Source: Council of Fresno County Governments (FCOG)

As demonstrated in Table 4-3.3, *Land Use Plan Statistics*, the proposed project will create an additional 12,466 jobs to the City. This figure is comprised of 3,786 commercial jobs, 218 neighborhood commercial jobs, 1,834 office jobs, and 6,628 jobs at the business campus. It is estimated that the proposed project will add an additional 13,116 workers to the City.

The City has adopted an Economic Development Strategy, designed to increase the City's capture of jobs in high-tech industry sectors. This has led to the opening of a SBC support center (60,000 sq. ft located on seven acres) that supports between 250 and 400 new jobs, and retention of a Federal Express facility that is anticipated to create 10 new jobs per year.

A Research and Technology Business Park (RTBP) has also been opened in order to attract targeted industries. The Park has 180 acres that are available for development within immediate proximity to Highway 168. The City anticipates that RTBP will add over 1,000 new jobs between 2001-2003.

Jobs Housing Balance

The balance of jobs and housing in an area, both in terms of the total number of jobs and housing units as well as the type of jobs versus the price of housing, has implications on mobility, air quality and the distribution of tax revenues.

Data obtained from the FCOG and Claritas Inc. Business Facts indicate that in 2001, between 21,400 to 22,800 jobs existed in the City of Clovis. Based on the data provided by the U.S. Census Bureau (2000), the jobs/housing ratio for the City of Clovis was 1.25.

PEI estimates that 24,019 to 27,544 new jobs will be created within the City of Clovis by (approximately 1,000 to 1,150 new jobs per year). These new jobs will more than double the estimated number of jobs found within the City in 2001. The number of projected jobs for the same time period exceeds the number of projected new dwellings with between 1.07 and 1.14 new jobs being added for each DU. These figures represent a significant improvement in current jobs-housing balance, although it is less than the 1.43 ratio of jobs to DUs shown in the current General Plan at build out.

As shown in Table 5-12-1 above, it is anticipated that the project area will have a jobs/housing ratio of 1.19. The proposed project area appears to be more housing rich than the rest of the City of Clovis and the State of California in general.

Labor Force, Unemployment and Occupation

The job market in the San Joaquin Valley has traditionally leaned more towards agricultural and related industries, but recently, manufacturing, service, and technology industries have become increasingly important. From 1990 to 2001, jobs in the City of Clovis increased by 8, 565 jobs. The market share of service jobs in the City increased during this period, while the market share of all other jobs decreased. Included in the service sector are "business services" such as data processing, call centers, and information services

According to the 2000 U.S. Census, the City of Clovis' employed labor force, for the population aged 16 years and over, totaled 31,100. Data provided the State of California Employment Development Department, The unemployment rate in the City of Clovis in November 20002 was 9.6%, compared to 15.3% for Fresno County as a whole.



5.12.3 Standards of Significance

There is no standard methodology for the assessment of socioeconomic impacts under CEQA. The project would however, be considered to have significant socioeconomic impacts on the physical environment if it resulted in any of the following effects:

- Induce substantial population growth in an area, either directly or indirectly, which is not already anticipated in planning programs or projections;
- Creates substantial adverse impacts to local unemployment rate; or
- Substantial conflicts to the attainment of local affordable housing policy goals.

CEQA Guidelines (Section 15131) states the following:

Economic or social effects of the project shall not be treated as significant effects on the
environment. An EIR may trace a chain of cause and effect from a proposed decision on a
project through anticipated economic or social changes resulting from the project to physical
changes caused in turn by the economic or social changes.

5.12.4 Impacts and Mitigation Measures

IMPACT: EMPLOYMENT GENERATION

Impact Analysis: The proposed project would generate a number of new jobs at the project area. Table 5.12-6 provides estimates of jobs of various types, based on the estimated distribution of space, and standard ratios of square feet per employee.

TABLE 5.12-6 SOUTHEAST URBAN CENTER ESTIMATED EMPLOYMENT GENERATION

Land Use Type	Minimum Non-Residential Square Footage	Maximum Non-Residential Square Footage	Square Feet Per Employee	Jobs
Residential Planned Community		STATES DE PRESE	Manufacture 64	
Commercial	60,984	73,181	500	146
Neighborhood Commercial	65,340	108,900	500	218
Community Center	Conservation and the conservation		Line State of the State	6.00
Commercial	916,938	1,375,407	500	2,751
Office	366,775	550,163	300	1,834
Commercial	370,260	444,312	500	889
Business Campus	2,783,920	3,977,028	600	6,628
Total	4,564,217	6,528,991		12,466

The project area would contain two Community Centers and a Business Campus that would generate a total of 12,466 jobs. The Community Centers will function as the traditional social, retail, local, civic, service, and entertainment hub. One Community Center will contain a traditional mixture of locally

serving commercial and retail uses such as grocery stores, banks, gas stations, restaurants, bookstores and video stores, thereby generating commercial employment in service and retail. The second Community Center will provide a pedestrian-oriented environment for the adjacent business campus and the surrounding residential community. The Business campus will provide for the development of professional offices, research and development, corporate headquarters, light assembly and warehousing uses, generating office, warehouse and light manufacturing jobs. The Business campus will also contain limited commercial retail uses such as delis, drycleaners, restaurants, banks and gas stations, generating additional employment in service and retail. In addition, a sewage treatment plant/water reuse facility is also planned for the project area, to serve both the Center and other growth areas around the City. This facility will likely generate additional employment.

The unemployment rate in the City of Clovis (9.6 percent) in November 2002 was below unemployment rates for the City of Fresno (13.8 percent), Fresno County (15.3 percent), but above the rate for the State of California (6.4 percent). The proposed project would provide new job opportunities for the existing unemployed residents of the City of Clovis and Fresno County. The employment opportunities for existing residents provided by this project are considered to be beneficial impacts of the proposed project because additional jobs will be added to the City of Clovis and to the county.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: HOUSING DEMAND AND JOBS/HOUSING BALANCE

Impact Analysis: According to a market study conducted by PEI, a possible total of about 17,200 dwelling units could be developed outside of the Urban Center areas. This figure is based on the fact that the City's General Plan provides for roughly 62,000 dwelling units at build out. As of July 31, 2001, roughly 27,800 dwelling units were existing or under construction within the City. Approximately 18,400 dwelling units may be developed in the three Urban Center areas, leaving a possible total of about 17,200 dwelling units which can be developed outside of the Urban Center areas (mostly in "rural" and "very low" density land use categories). Based on the foregoing, the proposed project's addition of 10, 829 dwelling units over a nine to ten year period appears to be feasible and consistent with the City's General Plan. Therefore, the proposed project is not anticipated to have a significant impact on the jobs/housing balance.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance Before Mitigation: Not applicable.



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5.13 SOILS AND GEOLOGY

This section presents a description of the geologic, soils, and seismic conditions within the project area and expected impacts with the implementation of the proposed Specific Plan.

5.13.1 Methodology Related to Soils and Geology

The methodology for identifying and assessing potential hydrology and water quality impacts of the proposed project in this EIR included the review of the following documents:

- Section 4.13, Seismic and Geologic Hazards, of the Fresno County General Plan Update EIR, February 2000.
- Section 4.1, Geology and Seismic Hazards, City of Clovis General Plan EIR, December 1992.
- Safety Element, City of Clovis General Plan, April 1993.

5.13.2 Existing Conditions Related to Soils and Geology

Existing Geological Setting

The City of Clovis is located in the eastern Fresno metropolitan area, which comprises the central third of Fresno County. Fresno County is close to the geographic center of California, and occupies part of the San Joaquin Valley and the western slope of the Sierra Nevada foothills. The regional area is bounded on the west-by the Fresno Slough, by the sierra and Sequoia national Forests to the east, the San Joaquin River and Madera County to the north, and by Kings and Tulare Counties to the south.



The project area is located within the southern portion of the Great Valley Geomorphic Province. Geologically, the Great Valley (also known as the Central Valley) area is a large, asymmetrical, northwestwardly-trending structural trough consisting of several thousand feet of marine and non-marine sedimentary rocks resulting from the erosion of the Coast Ranges and the Sierra Nevada over the last 200 million years.

The project area contains soils which range from: (1) excessively drained to somewhat poorly drained soils of recent alluvial fans and flood plains; (2) somewhat excessively drained to moderately well-drained soils of young alluvial fans; (3) well-drained soils of low alluvial terraces; and 94) well-drained soils of high alluvial terraces.

The Eastern Fresno soil survey lists several general soil associations. These associations have been divided into series, and these series have been further divided into soil types. A soil association has a distinctive proportional pattern of soil and is tied to the Central Valley geomorphic province. An association generally consists of one or more major soils. In many instances, soils in one association occur in another. The project area has four associations:

- <u>Hanford-Tujunga Association</u> Deep, well-drained to excessively drained, dominantly loamy sand to fine sandy loams
- Greenfield-Atwater Association Well-drained loamy sands and sandy loans that are moderately deep or deep to compact sandy material, partly wind modified.

- <u>San Joaquin-Exeter-Ramona</u> Sandy loams to loams that are shallow or moderately deep to a hardpan and deep sandy loans and loams.
- <u>Academy-Yokohl Association</u> Loams that are moderately deep to a compact layer and soils of similar texture that are shallow to a cemented hardpan.

For additional detail on soil types within the project area, see Figure 5.13-1, Soil Types Classification.

Faulting and Seismicity

Seismic Shaking

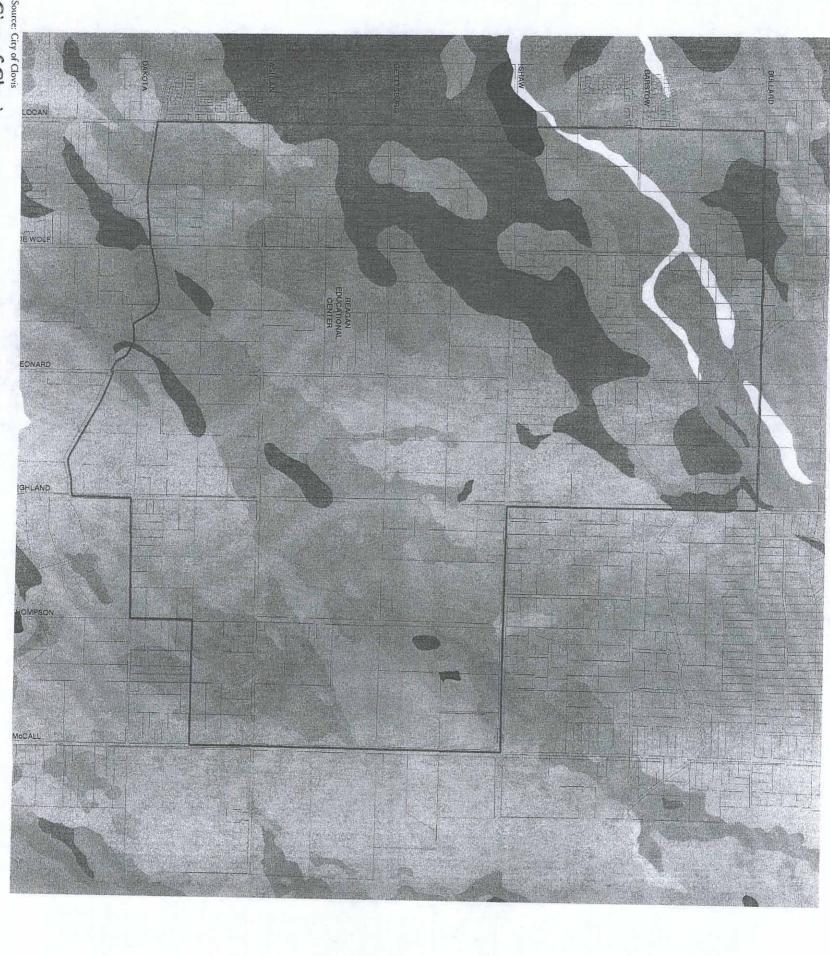
Groundshaking is the primary seismic hazard in Fresno County, because of the County's seismic setting and record of historical activity. Most of the already urbanized locations in the East Valley, including the City of Clovis, and Sierra Nevada Foothills areas are subject to less intense seismic effects than locations in the Coast Range Foothills and Sierra Nevada Mountain areas.

The potential groundshaking produced by earthquakes is generated on regional faults lying outside the immediate vicinity of the project area. The intensity of ground shaking at a given location depends primarily upon the earthquake magnitude, faulting mechanism, distance from the source (epicenter) and the site response characteristics. Thrust and reverse-oblique faults have been observed to generate higher peak ground accelerations than strike-slip faults. The intensity of shaking is generally amplified in areas underlain by deep deposits of loose, unconsolidated soils. The most common effects of strong seismic shaking include liquefaction and its related ground deformations, dynamic settlement, and landslides.

Nearby Active Faults

Numerous faults have been mapped within the region, one of which is within about 62 miles (100 km) of the project area (the CDMG requires that those faults within 100 km that could affect a proposed project be identified). The major active and potentially active fault systems that could produce significant ground shaking at the proposed project area include the Owens Valley, San Andreas, and the White Wolf faults. The locations of and distance to these faults from the project area are shown in Figure 5.13-1.

Two active faults, which are located near Coalinga and Panoche in the West Valley, have been designated Alquist-Priolo Earthquake Fault Zones (EFZ). The project area is located in Seismic Zone 3, as defined by the California Building Code (Title 24), 2001 Edition.



City of Clovis
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Soil Types Classification

ACADEMY LOAM

ALAMO CLAY

ATWATER CANDY LOAM

ATWATER SANDY LOAM

ATWATER LOAMY SAND
ATWATER SANDY LOAM
CENTERVILLE CLAY
CHINO LOAM
CHINO SANDY LOAM

CHINO LOAM
CHINO SANDY LOAM
COMETA LOAM
COMETA SANDY LOAM
DELHI LOAMY SAND
DELHI SAND

EXETER LOAM

EXETER SANDY LOAM

GREENFIELD SANDY LOAM

HANFORD COARSE SANDY LOAM

HANFORD FINE SANDY LOAM

HANFORD SANDY LOAM

HILDRETH CLAY

LOS ROBLES LOAM
MADERA CLAY LOAM
MADERA LOAM
NORD LOAM
PACHAPPA LOAM
POLLASKY SANDY LOAM
RAMONA SANDY LOAM

TUJUNGA LOAMY SAND
VISALIA SANDY LOAM
YOKOHL LOAM

SAN JOAQUIN LOAM



San Andreas Fault

This fault is widely recognized as the longest and most active fault in California. Its activity is known from historic earthquakes, some of which have caused rupture of the ground surface, and from many fault studies that have shown that the San Andreas Fault offsets or displaces recently-deposited sediments. This fault has been mapped from Cape Mendocino to an area near the Mexican border, a distance of about 625 miles. Recent work indicates that large earthquakes have occurred along this fault at intervals averaging about 160 years, and that during these major earthquakes, the fault breaks along distinct segments.

TABLE 5.13-1 EARTHQUAKE FAULTS						
Fault name	Distance/Direction from Project Area	Maximum Historic (Date)	Maximum Probable			
Coalinga Fault	60 miles to W	6.4 (1983)	Unknown			
San Andreas Fault	80 miles to SW	7.9 (1857)1	7.71			
Owens Valley Fault	70 miles to NE	7.8 (1872)1	7.41			
White Wolf Fault	120 miles to S	7.9)1952) ²	7.21			

¹ Moment Magnitude

Note: The Richter magnitude is the scale originalty developed by Charles Richter for earthquakes occurring in southern California. The scale is based on the maximum amplitude of the seismic waves recorded on a Wood-Anderson seismograph. The scale has been adopted worldwide despite the fact that other regions will differ in their wave propagation characteristics and the use of other types of seismographs. The moment magnitude scale is a relatively recent development that better reflects the size of an earthquake because it is computed from the seismic moment. The moment is a measurable quantity of the area involved in the fault rupture and the amount of fault displacement that occurred in the earthquake.

Source: City of Clovis General Plan DEIR (1992)

The San Andreas Fault is probably the most important fault in determining the potential of groundshaking in the project area. However, the fault is not located within the project area, and thus, is not a hazard with respect to ground rupture.

Owens Valley Fault Group

The Owens Valley Fault Group is a complex group of faults located along or near the base of the steep, east slope of the Sierra Nevada. All known active or potentially active faults within the group are northeast of the project area, and do not present a hazard from ground rupture in the area. However, historically this group has been the source of numerous earthquakes, including the "great" earthquake of 1872, and it must be considered as second only to the San Andreas Fault as a source of earthquakes that could cause damage in the area.

White Wolf Fault

The active White Wolf Fault is also located outside the project area and does not appear to be a hazard with respect to ground rupture. This fault was little known until 1952, when movement along it generated the damaging series of earthquakes in the Bakersfield area. The groundshaking from this series of shocks was the most severe in the project area since detailed compilation of intensity data was begun by the Coast and Geodetic Survey in 1928.



² Richter Magnitude

Local Faulting

In May 1983, a seismic event registering 6.4 on the Richter scale occurred in the Coalinga Fault; however, no surface rupture was evident. The peak maximum ground acceleration for an event occurring on the fault is a force of 0.19 gravity. The 1983 Coalinga earthquake occurred in the eastern flank of the Coalinga anticline apparently on a previously unmapped thrust fault.

The ground motion parameter most frequently used for seismic engineering is maximum ground acceleration given as a percent of the acceleration of gravity (g). In general, maximum ground acceleration is a function of the distance from the earthquake source and the depth of unconsolidated alluvial deposits. Ground acceleration generally decreases with increasing distance from the earthquake source and increases with increasing thickness of unconsolidated alluvium. Unconsolidated alluvium generally amplifies the magnitude of groundshaking.

Liquefaction Potential

The liquefaction effect of ground shaking occurs when loose, cohesionless, water-saturated soils (generally fine-grained sand and silt) are subjected to strong seismic ground motion of substantial duration. These soils essentially lose their bearing strength and behave like liquids. Structures built on these soils may tilt or sink when the soils liquefy. 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. In addition to the necessary soil conditions, the ground acceleration and duration of the earthquake must be of sufficient energy to induce liquefaction.

There are no areas within the project area where the water table is less than 30 feet below the surface, and thus the project area is not susceptible to liquefaction. Additionally, subsurface information on the project area indicates that the soil types in the project area are not conducive to liquefaction because they are either too coarse or too high in clay content. Furthermore, the maximum ground surface acceleration (0.1) anticipated from potential earthquakes in the geographic region is too low on the west side of the Valley to produce the shock necessary to initiate liquefaction.

Seismically-Induced Settlement

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. The only area within Fresno County that has been affected by settlement is Coalinga, approximately 70 miles west of the project area.¹⁷ Furthermore, the Five County Seismic Safety Element (1974) determined that there are no areas within the project area which are at risk for settlement.

Subsidence

In California, subsidence related to mankind's activities has been attributed to withdrawal of subsurface fluids such as oil and ground water, oxidation of subsurface organic material such as peat and coal, and by hydroconsolidation (from excessive irrigation) of loose, dry soils in a semi-arid climate. Withdrawal of ground water has occurred in the project area for agricultural purposes. Although subsidence has occurred in parts of western Fresno County, it has not been an issue within or in the vicinity of the project area. In general, groundwater decreases have been minor within the project area, and given the

¹⁷ Fresno County General Plan Update DEIR, February 2002.

proposed surface water treatment facility, the future extraction of groundwater is anticipated to decrease. There are no areas of the project area than contain a risk for subsidence.

Landslides and Avalanches

Certain areas in Fresno County are more prone to landsliding than others. 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 could be affected by landslides in the event of an earthquake or heavy rain. There is no risk of large landslides in the project area due to its relatively flat topography. There is, however, the potential for small slides and slumping along the steep banks or river or creeks.

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.

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. No areas of expansive soil have been identified in the project area.

Slope Stability and 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, and generally coincide with land slope areas that exceed 30 percent.

The City of Clovis has a very minor gradient from northeast to southwest. The highest elevation is 460 feet at the Friant/Kern Canal north of Tollhouse Road. The lowest elevation is 335 feet near the intersection of Winery and Ashlan Avenues. This translates to a gradient of approximately .001 feet per foot. Therefore, slope stability is not a concern with the project area. However, it should be noted that even though slope stability is not an issue, even a slope with a slight gradient can make the control of drainage runoff problematic. Contributing to the difficulty are the many natural depressions within the flat topography that collect and pond storm water runoff. Thus, 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 and sedimentation are summarized in Section 5.6, Hydrology and Water Quality.



5.13.3 Standards of Significance

An impact of the proposed project related to soils and geology is considered to be significant if it:

- Exposes people or structures to major geologic hazards.
- Exposes people, structures or property to major geologic hazards such as earthquakes, landslides, mudslides or ground failure.
- Results in unstable earth conditions or changes in geologic substructures.
- Results in disruptions, displacements, compaction or over-covering of the soil.
- Contains substrate consisting of material that is subject to liquefaction or other secondary seismic hazards in the event of ground shaking.

The Initial Study prepared for the proposed project, which is contained in Appendix A, examined these criteria and determined that the proposed project would have no impact with respect to soil capability to adequately support the use of septic tanks. It was also determined that the proposed project would generate a less than significant impact with respect to: expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, and landslides; soil instability potentially resulting in landslides, lateral spreading, subsidence, liquefaction or collapse; and expansive soil creating substantial risks to life or property. These issues are, therefore, not addressed further in this EIR.

5.13.4 Impacts and Mitigation Measures

IMPACT: EROSION

Impact Analysis: Development of the proposed project area would require construction and construction-related activities such as grading and excavation for new building foundations, roads, and driveways, and trenches for utilities. Temporary impacts from the project could include increased erosion during construction, which could eventually be transported into nearby creeks and storm drains with storm runoff. The potential also exists for spills and leaks of lubricants and other fluids associated with equipment during the construction phase.

Contractors will be required to file a Notice of Intent (NOI) to be covered under the California General Construction Activities Storm Water NPDES Permit (Order No. 99-08-DWQ) for project construction sites greater than 5 acres. Before construction begins, an NOI to comply with the permit must be submitted to the State Water Resources Control Board. Coverage under the permit will not occur until the applicant develops an adequate Storm Water Pollution Prevention Plan (SWPPP) for the construction project. Upon completion of construction and when final stabilization of the project area has been achieved, a Notice of Termination (NOT) will be filed. For construction activities that begin after March 2003, an NPDES permit will be required for construction sites greater than 1 acre.

Required elements of a SWPPP would include a site description addressing the elements and characteristics specific to the project area, descriptions of BMPs for erosion and sediment controls, BMPs for construction waste handling and disposal, implementation of approved local plans, proposed post-construction controls (including a description of local post-construction erosion and sediment control requirements), and non-storm water management.

BMPs to eliminate or reduce non-storm water discharges to receiving waters include (1) scheduling or limiting activities to certain times of year, (2) prohibiting certain construction practices, (3) implementing equipment maintenance schedules and procedures, (4) implementing other management practices to prevent or reduce pollution, such as using straw bales, dikes, silt fences, sediment traps, mulching, or vegetation maintenance, and (5) implementing a monitoring program. Because the proposed project area would be required by state law to comply with construction management procedures as stipulated in the CVRWQCBs General Construction Activity Storm Water Permit, the water quality effects associated with construction activities are considered to be less than significant.

Level of Significance Before Mitigation: Less than significant.

Mitigation Measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable



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5.14 TRAFFIC AND CIRCULATION

5.14.1 Methodology Related to Traffic and Circulation

This section of the EIR analyzes the traffic generation and circulation issues associated with the proposed Southeast Urban Center Specific Plan, based on the Traffic and Circulation Study pre Associated Transportation Engineers (ATE) in December 2002. The complete ATE Traffic Study, including technical appendices, is available at the City Planning Services Department, 1533 5th Street, Clovis, CA.

The project proposes to develop a mix of land uses on approximately 3,307 acres located adjacent to and east of Locan Avenue, south of Bullard Avenue, west of McCall Avenue, and north of the Gould Canal. The concept of the Southeast Urban Center Specific Plan consists of four planned communities. The analysis presented in this chapter assumes 10,829 residential dwellings, 2,001,800 square feet of commercial and retail space, 550,163 square-feet of office space, a 183-acre business park, 236 acres of public facilities, 64 acres of recreational open space, and 46 acres of passive open space.

The traffic analysis identifies current roadway systems, operating levels, projects traffic generation associated with the project and then determines potential impacts from project and cumulative conditions.

5.14.2 Existing Conditions Related to Traffic and Circulation

Existing Conditions

•To assess future operating conditions, both with and without the proposed project, existing traffic conditions within the traffic study area were evaluated. The following paragraphs provide a brief description of the characteristics of the existing roadways that comprise the circulation network of the traffic study area.

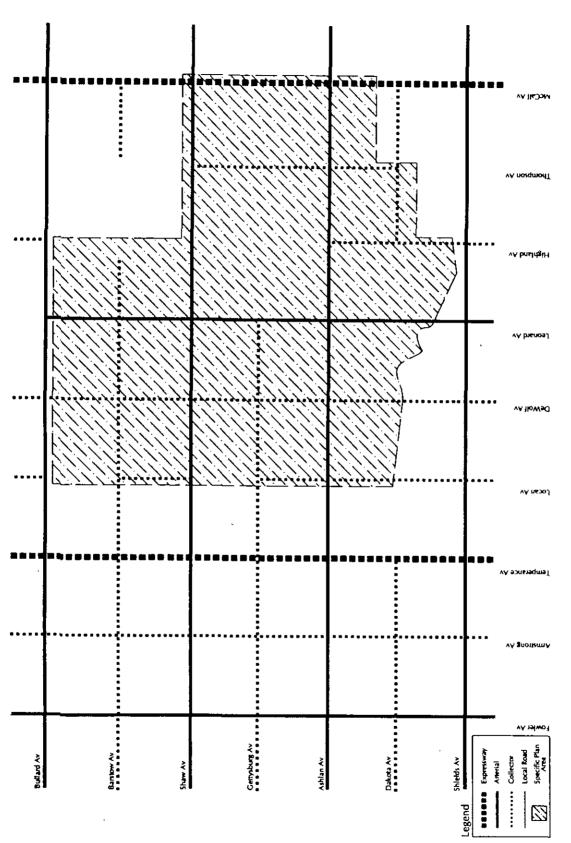
Street Network

The circulation system adjacent to the project area is comprised of arterial and collector streets. Figure 5.14-1, *Existing Street Classification*, illustrates the existing street network and street classifications within the traffic study area. The traffic study area was developed based on the Specific Plan's sphere-of-influence and in consultation with City of Clovis staff.

The street system in the Southeast Urban Center Specific Plan area is generally a traditional north/south/east/west grid pattern. Two limited access facilities serve the Specific Plan area: Shaw Avenue, which runs on an east-west alignment, and Mc Call Avenue, which runs on a north-south-alignment. Streets and highways are grouped into categories according to the type of vehicular acithey provide or functional classification. Typical functional classification categories are as follows:

 Expressway: A "limited access" high-speed and high-volume highway with at-grade cross-traffic signalized intersections. Direct access to adjacent land uses is limited and subject to the contro ingress, egress, and curb use.





Source: Associated Transportation Engineers

City of Clovis

Southeast Urban Center

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- Arterial: Streets or highways serving major urban activity centers and providing through traffic
 movement between and across urban areas, along with limited direct access to abutting land uses.
 Direct access to adjacent land uses limited and subject to the controls of ingress, egress, and curb
 use.
- Collectors: Streets that collect and channel local traffic to arterial streets. The collector system
 primarily provides service access and carries local traffic movements within residential
 neighborhoods, commercial and industrial areas.

The following text describes the roads that will provide access to the Southeast Urban Center Specific Plan Area:

- Bullard Avenue is a 2-lane east-west primary arterial roadway with two-three foot shoulders on both sides. The Clovis General Plan indicates that the road will ultimately be a 4-lane divided facility.
 Bullard Avenue is a designated bike route. The existing average daily traffic (ADT) is approximately 3,000 vehicles per day (vpd).
- Barstow Avenue is a 2-lane undivided roadway that runs along an east-west alignment. The road is currently classified as a collector in the Clovis General Plan and will ultimately be a 4-lane undivided facility. The roadway is designated as a bike route. The existing ADT is approximately 2,800 vpd.
- Shaw Avenue is a 2-lane east-west primary arterial roadway with two-three foot shoulders on both sides. The Clovis General Plan indicates that the road will ultimately be a 6-lane divided facility.
 Shaw Avenue is a designated bike route. The existing ADT is approximately 9,300 vpd.
- Gettysburg Avenue is a 2-lane undivided roadway that runs along an east-west alignment. The road
 is currently classified as a collector in the Clovis General Plan and will ultimately be a 4-lane
 undivided facility. The road is fully improved with 4-lanes in the area adjacent to the Reagan
 Educational Complex. Gettysburg Avenue is designated as a bike route. The existing ADT is
 approximately 1,000 vpd.
- Ashlan Avenue is a 2-lane east-west roadway with no shoulders or bicycle lanes. It is classified as an
 arterial street in the Clovis General Plan, which indicates it will ultimately be developed as a 4-lane
 divided roadway. The road is fully improved adjacent to the Reagan Educational Complex. Ashlan
 Avenue is designated as a bike route. The existing ADT is approximately 4,400 vpd.
- Fowler Avenue is a 4-lane divided roadway that runs along a north-south alignment. It is classified as
 an arterial street in the Clovis General Plan and is currently built-out to its ultimate roadway section.
 There are bicycle lanes on Fowler Avenue in the traffic study area. The ADT is approximately 17,000
 vpd.
- Armstrong Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The roadway
 is classified as a collector street in the Clovis General Plan, which indicates it will ultimately be
 developed as a 4-lane undivided roadway. Armstrong Avenue is designated as a bike route. The
 existing ADT is approximately 4,200 vpd.
- Temperance Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The road
 is currently classified as an expressway in the Clovis General Plan, which indicates it will ultimately
 be developed as a 4-lane, divided expressway. A portion of Temperance Avenue is currently built to
 expressway standards. The roadway is designated as a bike route. The existing ADT is
 approximately 3,000 vpd.



- Locan Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The roadway is
 currently classified as a collector street in the Clovis General Plan and will ultimately be built-out to a
 4-lane undivided roadway. Locan Avenue is designated as a bike route. The existing ADT is
 approximately 300 vpd.
- DeWolf Avenue is a 2- to 4-lane, north-south roadway with no shoulders or bicycle lanes. The
 roadway is currently classified as a collector in the Clovis General Plan and will ultimately be built-out
 to a 4-lane divided roadway from the southern urban area boundary to Shaw Avenue. The road is
 fully improved with 4-lanes adjacent to the Reagan Educational Complex. The existing ADT is
 approximately 2,200 vpd.
- Leonard Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The roadway is
 currently classified as an arterial in the Clovis General Plan and will ultimately be built-out to a 4-lane
 divided roadway from the southern urban boundary to Ness Avenue. The road is fully improved
 adjacent to the Reagan Educational Complex. Leonard Avenue is designated as a bike route. The
 existing ADT is approximately 500 vpd.
- Highland Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The alignment
 is currently classified as a collector road in the Clovis General Plan and will ultimately be built-out to
 a 4-lane undivided roadway. The existing ADT is approximately 500 vpd.
- Thompson Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The road is currently classified as a collector road in the Clovis General Plan and will ultimately be built-out to a 4-lane undivided roadway. Thompson Avenue is designated as a bike route. The existing ADT is approximately 500 vpd.
- McCall Avenue is a 2-lane, north-south roadway with no shoulders or bicycle lanes. The road is
 currently classified as an expressway in the Clovis General Plan and will ultimately be built-out to a 4lane divided expressway. The roadway is designated as a bike route. The existing ADT is
 approximately 3,800 vpd.

Roadway Operations

In the following analysis, average daily traffic (ADT) volumes are discussed. Existing ADT volumes for the roadway segments in the traffic study area were taken from the Fresno Regional Traffic Monitoring Report, published by the Council of Fresno County Governments. The Regional Traffic Monitoring Report provides ADT volumes for selected roadway segments.

The operational characteristics of the roadways within the traffic study area were analyzed based on roadway classification system and their corresponding design capacities. This analysis methodology examines average daily traffic volumes and determines volume-to-capacity ratios based on functional roadway classification and corresponding design capacity. A summary of the roadway design capacities is contained in the Technical Appendix of the ATE Traffic Study.

In rating a roadway's operating condition with existing or future traffic volumes, "Levels of Service" (LOS) A through F are used, with LOS A indicating very good operation and LOS F indicating poor operation. The City of Clovis' current traffic impact policy considers LOS D as the minimum acceptable standard. However, there are no "thresholds of significance".

Table 5.14-1, Existing Roadways Level of Service, shows the existing ADT volumes, roadway classifications, roadway capacities, and existing levels of service along major roadway sections. Figure 5.14-2 shows the existing ADT volumes on roadway sections throughout the traffic study area.

TABLE 5.14-1 EXISTING ROADWAYS LEVEL OF SERVICE						
Roadway Segment	Roadway Classification	ADT Capacity	Existing ADT	Existing LOS		
Bullard Avenue	2-Lane Arterial	12,500	3,000	Α		
Barstow Avenue	2-Lane Collector	12,500	2,800	Α		
Shaw Avenue	2-Lane Arterial	12,500	9,300	С		
Gettysburg Avenue	2-Lane Collector	12,500	1,000	Α		
Ashlan Avenue	2-Lane Arterial	12,500	4,400	Α		
Fowler Avenue	4-Lane Arterial	30,000	17,900	B		
Armstrong Road	2-Lane Collector	12,500	4,200	Α		
Temperance Avenue	2-Lane Expressway	12,500	3,00	Α		
Locan Avenue	2-Lane Collector	12,500	2,200	A		
DeWolf Avenue	2-Lane Collector	12,500	2,200	Α		
Leonard Avenue	2-Lane Arterial	12,500	500	Α		
Highland Avenue	2-Lane Collector	12,500	500	Α		
Thompson Avenue	2-Lane Collector	12,500	500	A		
McCall Avenue	2-Lane Expressway	12,500	3,800	Α		

The data presented in Table 5.14-1 shows that all of the roadways within the traffic study area are operating well within the City of Clovis' acceptable level of service D range with existing volumes.

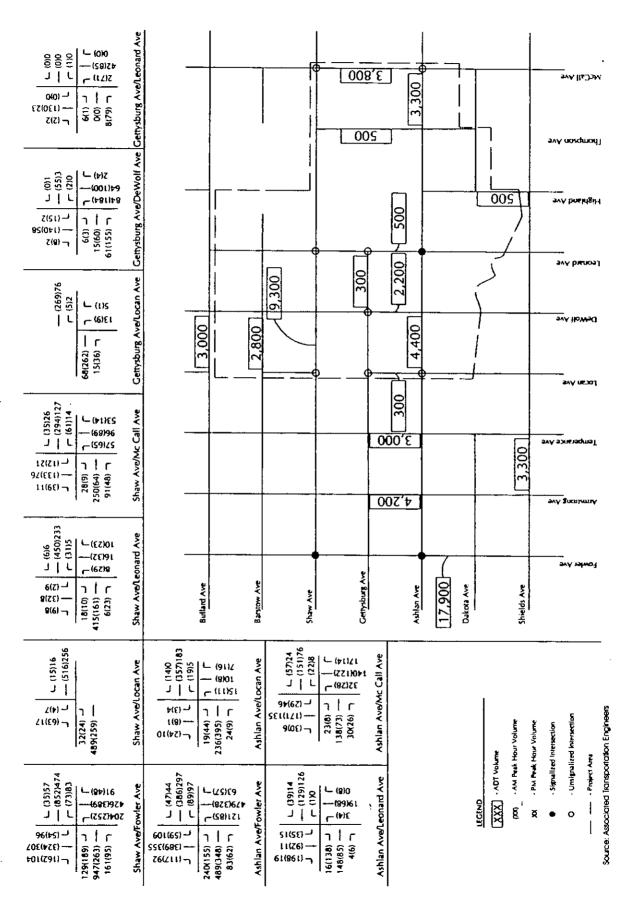
Intersection Operations

Because street network traffic flow is most restricted at intersections, a detailed traffic impact analysis must examine the existing operating conditions of critical intersections during peak travel periods. The level of service grading system (LOS A-F) discussed previously for roadway operations is also used in rating intersection operations.

Existing peak hour traffic counts were collected for the traffic study area intersections by ATE in August of 2001. The existing A.M. and P.M. peak hour volumes are shown on the intersection count sheets, located in the Technical Appendix of the ATE Traffic Study. Levels of service for the unsignalized traffic study area intersections were calculated based on the Highway Capacity Manual methodology for unsignalized intersections. The delay ranges contained in the updated Highway Capacity Manual¹⁸ for stop sign controlled intersections were used to assign a level of service. Existing levels of service for the signalized traffic study area intersections were calculated using the "Synchro 5.0" traffic analysis software program. This software program implements the level of service calculation procedures based on average delay in seconds per vehicle, as outlined in the updated Highway Capacity Manual. Table 5.14-2 lists the type of control and existing A.M. and P.M. peak hour levels of service for each of the traffic study area intersections.



¹⁸ <u>Highway Capacity Manual</u>, Transportation Research Special Report 209, National Research Council, Sixth Edition, Updated 1997.



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TABLE 5.14-2 INTERSECTIONS LEVELS OF SERVICE							
INIE	42ECHON2 LEVE	A.M. Peak H		P.M. Peak	Hour		
Intersection	Control Type	Delay (sec)	LOS	Delay (sec)	LOS		
Shaw Avenue/Fowler Avenue	Signal	19.9	В	38.9	D		
Shaw Avenue/Locan Avenue							
Eastbound left/through	Stop Sign	8.7	A	7.9	Α		
Southbound approach	Stop Sign	13.4	В	12.1	В		
Shaw Avenue/Leonard Avenue							
Eastbound left/through/right	Stop Sign	8.4	Α	7.8	Α		
Westbound left/through/right	Stop Sign	7.7	Α	8.3	Α		
Northbound approach	Stop Sign	17.8	С	15.7	С		
Southbound approach	Stop Sign	16.6	C	15.1	С		
Shaw Avenue/McCall Avenue							
Eastbound left-turn	Stop Sign	8.0	Α	7.6	Α		
Westbound left-turn	Stop Sign	7.6	A	8.1	Α		
Northbound approach	Stop Sign	29.0	D	21.6	С		
Southbound approach	Stop Sign	21.1	С	18.3	С		
Gettysburg Avenue/Locan Avenue			•				
Westbound left/through/right	Stop Sign	7.9	Α	7.4	Α		
Northbound approach	Stop Sign	12.7	В	9.3	Α		
Gettysburg Avenue/DeWolf Avenue		-					
Eastbound left/through/right	Stop Sign	7.3	Α	7.2	Α		
Westbound left/through/right	Stop Sign	7.7	Α	7.4	Α		
Northbound approach	Stop Sign	18.4	С	10.4	В		
Southbound approach	Stop Sign	13.1	В	9.9	Α		
Gettysburg Avenue/Leonard Avenue				-	· · · · · ·		
Northbound left/through	Stop Sign	7.6	Α	7.3	Α		
Eastbound approach	Stop Sign	9.4	A	8.7	Α		
Ashlan Avenue/Fowler Avenue	Signal	15.4	В	18.2	В		
Ashlan Avenue/Locan Avenue	<u> </u>		-`		-		
Eastbound left-turn	Stop Sign	8.2	Α	7.7	Α		
Westbound left-turn	Stop Sign	8.3	A	7.8	Α		
Northbound approach	Stop Sign	17.1	С	12.4	В		
Southbound approach	Stop Sign	14.1	В	10.6	В		
Ashlan Avenue/Leonard Avenue	Signal	12.9	В	13.4	В		
Ashlan Avenue/McCall Avenue	Stop Sign	10.5	В	10.0	В		



The data presented in Table 5.14-2 show that all of the traffic study area intersections currently operate at LOS D or better during the A.M. and P.M. peak hour periods.

Planned Roadway Improvements

Inner Beltway/McCall Avenue

McCall Avenue, which is the eastern boundary of the project area, is part of the regional transportation and circulation system. In both the *Clovis General Plan* and the *2001 Regional Transportation Plan*, Mc Call Avenue is identified as the proposed alignment of the regional inner beltway. This inner beltway will play a major role in the local and regional circulation system. The inner beltway will have connections to both State Route 180 to the south and State Route 168 to the north. In addition, the alignment and

design of the inner beltway will have an impact on the development of the proposed Specific Plan. Properties within the Specific Plan will have to dedicate right-of-way to allow for the future construction.

Expressways/Arterials/Collector Streets

Throughout the Specific Plan area are existing expressways, arterials and collector roads that are not built to their ultimate street sections. As the adjacent properties are developed, these roadways will be improved to their ultimate street sections as per City of Clovis design standards. In addition to improving the streets to their full street sections, major intersections should be signalized when traffic conditions warrant signalization.

Within the Specific Plan area, Shaw Avenue and Mc Call Avenue have been designated as Arterial/Expressway roadways. Arterial/Expressway roadways will be divided facilities with up to 6 travel lanes and bicycle lanes within 133 to 164 foot right-of-ways. Arterial roadways will have 4 to 5 travel lanes and bicycle lanes within 105 to 140 foot right-of-ways. Collector roadways will be undivided facilities with 2 to 5 travel lanes, bicycle lanes, and some on-street parking within 68 to 116 foot right-of-ways. Local roads will be divided or undivided facilities with 2 travel lanes, bicycle lanes, and on-street parking within 100 foot right-of-ways.

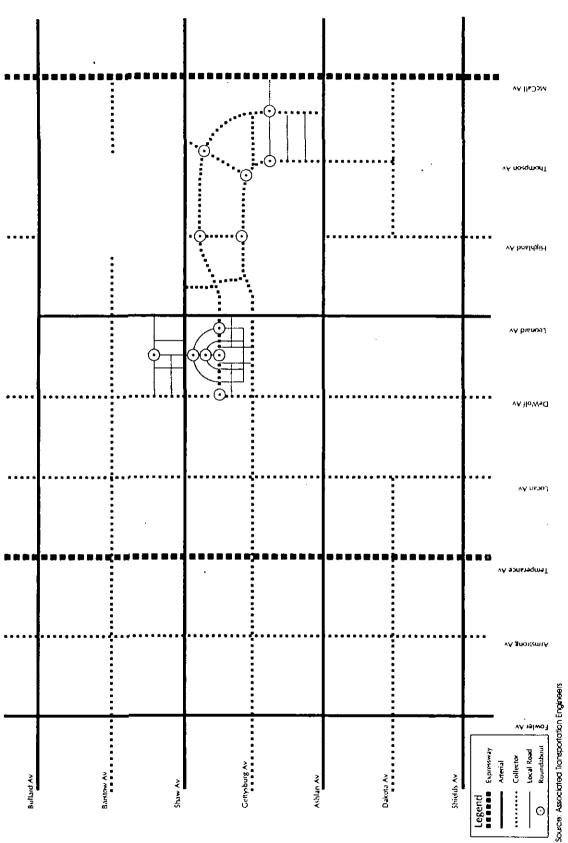
Detailed street cross-sections for the major arterials, collectors, and local internal streets serving the Specific Plan area are included in the Technical Appendices of the ATE Traffic Study. A review of the planned cross-sections indicated that they are appropriate for the Specific Plan area. These sections provide adequate pavement for moving cars, parked cars, and bicyclist. Roadway improvements, with related traffic controls, are assumed to be in place prior to build-out of the Specific Plan area. Figure 5.14-3, Southeast Urban Center Specific Plan Circulation Plan, illustrates the planned circulation system for the Specific Plan area.

Roundabouts

In addition to the roadway improvements, roundabouts are proposed within the planned community areas of the Southeast Urban Center Specific Plan at several locations. Studies of roundabouts have determined that they offer advantages over the more traditional forms of traffic control such as stop signs and traffic signals. For example:

- Roundabouts have achieved a 50 to 90 percent reduction in collisions compared with intersections with 2- or 4-way stop sign control or traffic signals.
- The occurrence of pedestrian/vehicle and bicycle/vehicle collisions is rare at roundabouts.
- The construction and maintenance cost of roundabouts compared to signalized intersections are substantially less.
- The capacity of an intersection controlled by a roundabout is usually higher than a signalized intersection. Higher intersection capacity results in reduced vehicle delays and better levels of service, which translates into improved air quality.

Southeast Urban Center Specific Plan Circulation Plan



City of Clovis

Southeast Urban Center

Specific Plan

Figure 5.14-3

However, roundabouts have, or may have, an impact on coordinated signal systems by dispersing or rearranging platoons of traffic. The creation of a subsystem with their own cycle lengths would offset these potential effects. If not properly designed to accommodate the traffic volume, roundabouts can be pacted by vehicle queues and delays at adjacent signalized intersections.

e roundabout intersections shown on the site plan should be designed as modern roundabouts with sign speeds of 15 to 18 miles per hour (mph). At single-lane roundabouts, the circulatory roadway ould accommodate the standard Surface Transportation Assistance Act (STAA) or California design hicle. The circulatory roadway width can be reduced with a truck apron, placed behind a mountable in on the central island to accommodate larger vehicles. The center island can be landscaped and adscaping can be provided outside of the circulating roadway, providing that the landscaping does not terfere with driver sight distance. A conceptual roundabout design is included in the Technical spendix of the ATE Traffic Study.

... affic Calming

Traffic calming measures should be developed as part of the on-site circulation system. Internal roadway sections could be designed with the following features intended to promote traffic calming:

- The use of traditional narrow pavement sections for neighborhood roadways; (Minimum paved street width of 36 feet with parking on both sides or 32 feet with parking on one side.)
- · The use of median islands along the main entry corridor roadways;
- The use of roundabouts at intersections within the planned communities;
- The use of relatively short blocks and multiple parallel through streets to disburse traffic.

Should additional traffic calming measures be necessary or required in the future, the following measures could be incorporated at the tentative tract map stage or into the final improvement plans (engineered street plans):

- The use of north/south surface cross gutters where appropriate for both drainage and traffic;
- The use of additional intersection landscape features, or enhanced paving, where feasible.

Transit

There are currently two public transit operations in the Clovis General Plan Area: Clovis Transit (Stageline and Roundup) and Fresno Area Express (FAX).

Clovis Transit

Clovis Transit operates a total of 16 buses with 22 drivers between the fixed route service and the paratransit service. The Stageline fixed-route service offers 4 routes and transports approximately 100,000 trips per year. The Roundup para-transit service provides approximately 33,000 demand response trips to the senior and disabled residents of Clovis. Clovis is proud that most Roundup trips can be accommodated on a next-day basis. Trips to and from Fresno are also offered for Clovis' senior and disabled residents.



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Fresno Area Express

The City of Clovis contracts with the City of Fresno for Fresno Area Express (FAX) service to and from Fresno. FAX operates route (Line 9) to Clovis during the morning and afternoon. Clovis residents also have access to FAX Lines 28 (at Winery and Shaw) and Line 45 (at Clovis Avenue and Ashlan). Pending adoption of a Transit Facilities Master Plan, the City's evaluation of transit facilities would be guided by the Fresno Area Express Transit Facilities and Development Standards. In addition to FAX service, Handy Ride provides service into Clovis. This demand response service is operated by the City of Fresno in both Fresno and Clovis.

5.14.3 Impacts and Mitigation Measures

Southeast Urban Center Specific Plan Trip Generation

For the purpose of estimating the number of new trips that would be generated by the Specific Plan, trip rates published in the Institute of Transportation Engineers, <u>Trip Generation</u>, 6th Edition, were used. This manual is a standard reference used by jurisdictions throughout the country, and trip rates are based on actual trip generation studies performed for various land uses.

As discussed previously, the proposed Specific Plan would consist of a mixed-use development including residential, retail/commercial, office, public facilities, open space, and recreational uses. The jobs/housing mix provided by the Specific Plan, would reduce vehicle miles traveled and encourage alternative modes of transportation. The mixed-uses proposed by the project will result in a considerable amount of internal trips within the project boundaries (home-work, home-shopping, and work-shopping trips). In order to estimate internal versus external trip interactions, the National Cooperative Highway Research Program Report No. 255, "Highway Traffic Data for Urbanized Area Project Planning and Design" was used. This document provides information on the types of trips occurring at various developments and how far they are likely to travel. The trip generation analysis determined that approximately 46 percent of all trips generated by the Specific Plan would be internal and the remaining 54 percent of the trips would be external to the Specific Plan area.



	TABLE 5.14-3 SOUTHEAST URBAN CENTER TRIP GENERATION							
			A.f	M. Peak Ho	ur	P.M	f. Peak Ho	ur
Land Use	Size & Unit	Total	Entering	Exiting	Total	Entering	Exiting	Total
Single Family Residential	6,074 DU	58,250	1,139	3,417	4,556	3,926	2,209	6,135
Multi Family Residential	4,755 DU	31,335	447	1,788	2,235	1,820	938	2,758
Elementary School	700 Students	714	120	83	203	122	88	210
Middle School	1,400 Students	2,030	367	277	644	105	119	224
High School	2,600 Students	4,654	837	359	1,196	156	234	390
Commercial	2,001,800 SF	81,414	1,237	825	2,062	3,663	3,663	7,326
Office	550,163 SF	6,057	755	103	858	139	681	820
Business Park	183 Acres	35,705	4,318	376	4,694	776	4,399	5,175
Golf Course	46 Acres	232	7	3	10	5	9	14
Open Space	81 Acres	129	3	3	6	7	6	13
Total		220,520	9,231	7,233	16,464	10,720	12,345	23,065



As shown in Table 5.14-3 above, the Southeast Urban Center Specific Plan will generate 220,520 average daily trip ends, 16,464 A.M. peak hour trips and 23,065 P.M. peak hour trip ends. For trip generation purposes, total trip ends for a land use is the sum of all trips entering and all trips exiting a site during a designated time period.

Southeast Urban Center Specific Plan Trip Distribution/Assignment

Traffic modeling conducted by the Fresno COG for the classified major street system in the Clovis area for the future was utilized in this study. The trips generated by the Southeast Urban Center Specific Plan were distributed and assigned to the traffic study area street network by the Fresno COG Traffic Model.

IMPACT: SOUTHEAST URBAN CENTER SPECIFIC PLAN TRAFFIC GENERATION (EXISTING PLUS PROJECT)

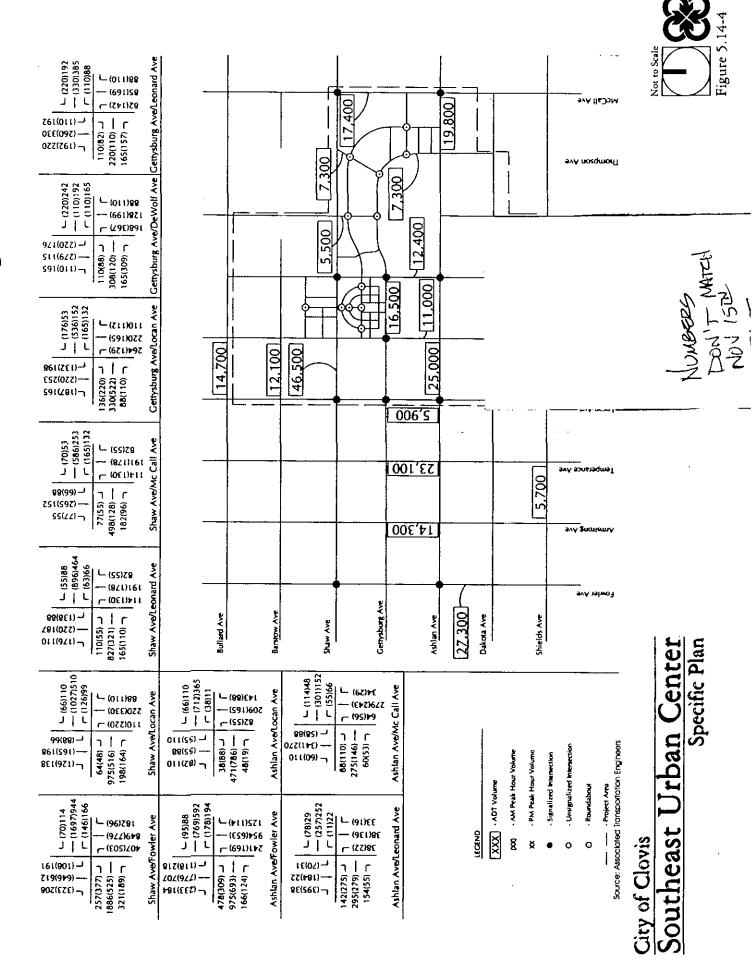
Impact Analysis: The Southeast Urban Center Specific Plan proposes to amend the roadway cross-sections identified in the Circulation Element of the City's adopted General Plan; those cross-sections are used to evaluate the traffic impacts associated with the Specific Plan.

Existing plus Southeast Urban Center Specific Plan Roadway Operations

Figure 5.14-4, Existing Plus Traffic Volumes, illustrates the existing plus Southeast Urban Center Specific Plan ADT volumes on roadway segments throughout the traffic study area. Table 5.14-4 shows the existing plus Southeast Urban Center Specific Plan ADT volumes, roadway classifications, roadway capacities, and levels of service along major roadway sections. As noted under the planned roadway improvements section, the traffic study area roadways would be built to their full street sections as proposed by the Specific Plan.

TABLE 5.14-4 EXISTING PLUS SPECIFIC PLAN ROADWAY LEVELS OF SERVICE						
			Existing + Spec	cific Plan		
Roadway Segment	Roadway Classification	ADT Capacity	ADT	LOS		
Bullard Avenue	4-Lane Arterial	32,200	14,700	A		
Barstow Avenue	2-Lane Collector	11,700	12,100	F		
Shaw Avenue	6-Lane Arterial	51,200	46,500	D		
Gettysburg Avenue	4-Lane Collector	25,300	16,500	В		
Ashlan Avenue	4-Lane Arterial	32,200	25,000	C		
Fowler Avenue	4-Lane Arterial	32,200	27,300	D		
Armstrong Road	4-Lane Collector	25,300	14,300	Α		
Temperance Avenue	4-Lane Expressway	34,200	23,100	В		
Locan Avenue	2-Lane Collector	11,700	5,900	A		
DeWolf Avenue	4-Lane Collector	25,300	11,000	Α		
Leonard Avenue	4-Lane Arterial	32,200	12,400	A		
Highland Avenue	2-Lane Collector	11,700	5,000	Α		
Thompson Avenue	2-Lane Collector	11,700	7,300	В		
McCall Avenue	4-Lane Expressway	34,200	17,400	Α		

Existing Plus Traffic Volumes



The data presented in Table 5.14-4 show that generally, all of the roadways within the traffic study area are expected to operate at LOS D or better with existing plus Specific Plan volumes. Again, this assumes that the roads are built-out to their proposed full street sections. The 2-lane with continuous left-turn lane section of Barstow Avenue is forecasted to operate at LOS F.

It should be noted that traffic generated from the buildout of the project area effectively represents the General Plan buildout traffic volumes for the area. Currently, the area is generally underdeveloped. It is not expected that this area will see a significant growth in cut-through or background traffic. Future traffic growth will be directly related to the development of the land-uses identified in the Specific Plan. As those land-uses are developed, the area will then experience growth in traffic. The growth in traffic will be the result of trips attracted from external sources and trips generated by internal sources.

Potential Local Roadway Impacts

DIX LANS BULLIF

According to the Specific Plan, the internal streets would be improved as the adjacent land is developed. It is expected that by buildout of the Specific Plan all the streets would be improved to their full street sections, thus reducing any potentially significant impacts to a less than significant level. Based on the roadway analysis, the proposed 2-lane section for Barstow Avenue should be widened to provide 4-lanes. The remaining street sections, as proposed, were determined to be appropriate for the forecasted traffic volumes. Based on future forecasted traffic volumes, 6 lanes would be appropriate for the segment of Shaw Avenue, east of Highland Avenue. This segment of Shaw Avenue is adjacent to both the City of Clovis and Fresno County and is expected to carry regional traffic destined for the proposed McCall Avenue expressway. As indicated by the roadway analyses, the planned street sections would generally provide better LOS than the City's minimum LOS D standard.

Existing Plus Southeast Urban Center Specific Plan Intersection Operations

Figure 5.14-4 shows the existing plus Specific Plan A.M. and P.M. peak hour volumes. Table 5.14-5 lists the type of control and existing plus Southeast Urban Center Specific Plan A.M. and P.M. peak hour LOS area intersections. LOS worksheets are contained in the Technical Appendix

LUS SPE	TABLE 5.14-5 LUS SPECIFIC PLAN INTERSECTION LEVELS OF SERVICE						
,		Dela	y/LOS				
	Control Type	A.M. Peak Hour	P.M. Peak Hour				
ie	Signal	47.0 sec./LOS C	29.8 sec./LOS C				
e	Signal	32.4 sec./LOS C	24.4 sec./LOS C				
1ue	Signal	25.9 sec./LOS C	25.8 sec./LOS C				
Shaw Avenue/McCall Avenue	Signal	26.5 sec./LOS C	27.1 sec./LOS C				
Gettysburg Avenue/Locan Avenue	Signal	24.8 sec./LOS C	26.6 sec./LOS C				

25.7 sec./LOS C

21.5 sec./LOS C 23.0 sec./LOS C Gettysburg Avenue/Leonard Avenue Signal Ashlan Avenue/Fowler Avenue Signal 31.2 sec./LOS C 50.0 sec./LOS D Ashlan Avenue/Locan Avenue Signal 25.4 sec/LOS C 23.2 sec./LOS C 20.4 sec./LOS C 25.6 sec./LOS C Ashian Avenue/Leonard Avenue Signat 27.0 sec./LOS C Ashlan Avenue/ McCall Avenue Signal 25.6 sec./LOS C

Signal

Gettysburg Avenue/DeWolf Avenue

21.2 sec./LOS C

The data presented in Table 5.14-5 show that all of the traffic study area intersections will operate at LOS D or better during the A.M. and P.M. peak hour period with existing plus Southeast Urban Center Specific Plan volumes.

Potential Intersection Impacts

The traffic study area intersections would be improved as part of the roadway improvements. Intersection improvements should include the provision of exclusive left-turn and right-turn lanes at the major signalized intersections through out the Specific Plan area. Figure 5.14-5 illustrates the future intersection geometry for the traffic study area intersections.

The existing plus Southeast Urban Center Specific Plan analysis found that the project has the potential to impact several of the traffic study area roadways and intersections. Implementing the planned roadway improvements, as shown on the street sections located in the Technical Appendix of the ATE Traffic Study, would mitigate potential project impacts to a less than significant level. Though there are many more roadways, intersections, and roundabouts throughout the Specific Plan area, it is assumed that since the major facilities will operate at acceptable levels of service, the minor facilities would also. The impacts to facilities outside the traffic study area are mitigated due to the increased employment opportunities and job/housing mix within the Specific Plan area. As discussed in the trip generation section only 54 percent of the project traffic would be external to the Specific Plan area.

Level of Significance Before Mitigation: Less than significant.

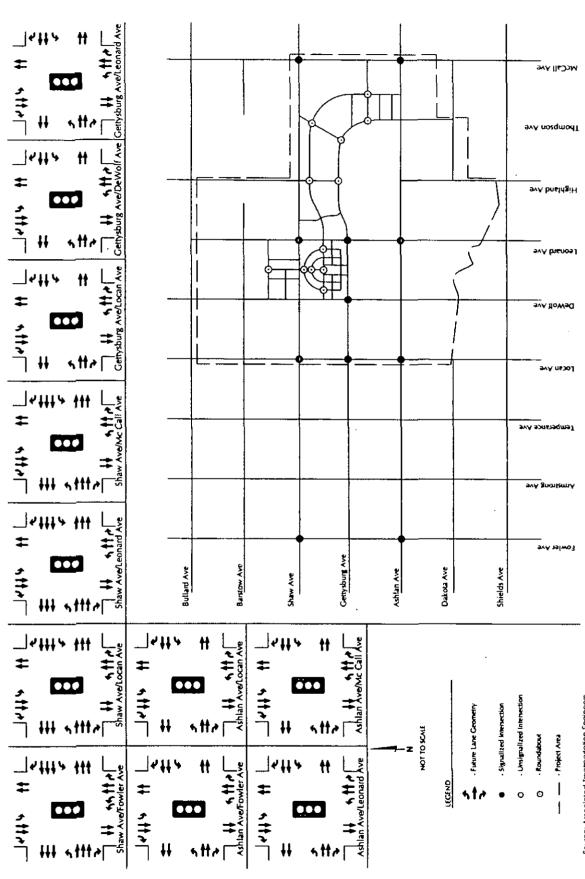
Mitigation measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: GENERAL PLAN BUILDOUT ANALYSIS

Impact Analysis: General Plan buildout traffic volume forecasts for the traffic study area roads and intersections were developed using the Fresno COG Traffic Model assuming development in accordance with the City of Clovis General Plan adopted in April of 1993. The traffic from the future development was assigned to the traffic study area street network. The ADT volumes developed by the Fresno COG Traffic Model were reduced to A.M. and P.M. peak hour turning movements by applying a reduction (8 and 10 percent respectively) factor, and then assigned to the future circulation system. It was assumed for the analysis that all the study area roadways and intersections would be fully improved as identified in the Circulation Element of the City's adopted General Plan. The Southeast Urban Center Specific Plan, however, proposes to amend the roadway cross-sections identified in the Circulation Element. Those cross-sections are used to evaluate the traffic impacts associated with the Specific Plan.





Source: Associated fransportation Engineers

City of Clovis
Southeast Urban Center
Specific Plan

Not to Scale
Figure 5.14-5

General Plan Buildout Roadway Operations

Figure 5.14-6 shows the General Plan buildout ADT volumes on roadway segments throughout the traffic study area. Table 5.14-6 shows the General Plan buildout volumes, roadway classifications, roadway capacities and levels of service for the major roadway sections.

TABLE 5.14-6 GENERAL PLAN BUILDOUT ROADWAY LEVELS OF SERVICE							
			Year 202	20			
Roadway Segment	Roadway Classification	ADT Capacity	ADT	LOS			
Bullard Avenue	4-Lane Arterial	32,200	10,900	Α			
Barstow Avenue	4-Lane Collector	25,300	8,600	Α			
Shaw Avenue	6-Lane Arterial	51,200	34,700	В			
Gettysburg Avenue	4-Lane Collector	25,300	11,600	A			
Ashlan Avenue	4-Lane Arterial	32,200	13,900	A			
Fowler Avenue	4-Lane Arterial	32,200	24,800	С			
Armstrong Road	4-Lane Collector	25,300	10,000	A			
Temperance Avenue	4-Lane Expressway	34,200	21,100	В			
Locan Avenue	4-Lane Collector	25,300	5,400	A			
DeWolf Avenue	4-Lane Collector	32,200	7,300	A			
Leonard Avenue	4-Lane Arterial	32,200	8,000	Α			
Highland Avenue	4-Lane Collector	25,300	3,700	Α			
Thompson Avenue	4-Lane Collector	11,700	6,600	Α			
McCall Avenue	4-Lane Expressway	34,300	14,000	Α			



The data presented in Table 5.14-6 show that all of the roadways within the traffic study area are forecast to operate in the LOS A to C range with General Plan buildout traffic volumes.

General Plan Buildout Traffic Volumes (with Current Land Uses)

ciil Land	L (140)160 L (189)240 L (160)140 L (180)64	20(68) 1 (60(80) 1 (60(10) 1 (60(10) 1 (60(10) 1 (60(10)	Gettysburg Ave/Leonard Ave					14,000		10,000					201	A no≎qr	
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	28888888888888888888888888888888888888	20(40) 20(34) 20(34) 	Shaw Ave/Leonard Ave	Bulland Ave		Barstow Ave	Shaw Ave	Getryburg Ave		Ashlan Ave	24,800	Dakota Ave		Shiekds Ave		 	Fowl
	(45)100 (1700)144 (1700)144 (1700)144 (1700)144 (1700)144 (1700)144	709(176) 144(120) 160(120) 160(120) 160(120) 160(120) 160(120)	Shaw Ave/Locan Ave	3 5 2 -	343(572) 343(572) 16(120) - 150(120) - 100(60) -	Ashlan Ave/Locan Ave	(44)80 (248)36 (220)33 (40)48	2000 2000 600 2000 1000 1000 1000 1000 1	Ashlan Ave/Mc Call Ave				- I	- AM Peak Hour Volume	. PM Peak Hour Volume . Stemalized Internation	- Unignalized Intersection	res alton Engineers
	L (236)152 L (179)140 L (179)140 C (1235)687 (103131	2372(38) 2372(382) 2372(382) 236(364) 236(364) 236(364)	Shaw Ave/Fowler Ave	9935	7-6120 1 (62) 1 (62) 1 (62) 1 (7) 1 (1) 1	Ashlan Ave/Fowler Ave	C (2868)28 C (134)16 C (52)23 T (198)184 T (30)16	215(204) - 12(204) - 12(40) - 12(40) - 12(40) - 12(40) - 12(40)	Ashlan Ave/Leonard Ave				XXX - ADI Volume	pop - AM Posk	XX · PM Feak XX · FM Feak	lengin O	Source: Associated Transportation Engineers





5. Environmental Analysis

General Plan Buildout Intersection Operations

The General Plan buildout A.M. and P.M. peak hour volumes are shown in Figure 5.14-7. Table 5.14-7 lists the type of control and General Plan buildout peak hour LOS for each of the traffic study area intersections. LOS calculation sheets are shown in the Technical Appendix of the ATE Traffic Study.

TABLE 5.14-7 GENERAL PLAN BUILDOUT INTERSECTION LEVELS OF SERVICE						
		Delay/LOS				
Intersection	Control Type	A.M. Peak Hour	P.M. Peak Hour			
Shaw Avenue/Fowler Avenue	Signal	22.3 sec./LOS C	22.9 sec./LOS C			
Shaw Avenue/Locan Avenue	Signal	28.4 sec./LOS C	16.5 sec./LOS B			
Shaw Avenue/Leonard Avenue	Signal	26.7 sec./LOS C	17.7 sec./LOS B			
Shaw Avenue/McCall Avenue	Signal	25.0 sec./LOS C	21.1 sec./LOS C			
Gettysburg Avenue/Locan Avenue	Signal	24.2 sec./LOS C	27.7 sec./LOS C			
Gettysburg Avenue/DeWolf Avenue	Signal	18.7 sec./LOS B	20.7 sec./LOS C			
Gettysburg Avenue/Leonard Avenue	Signal	23.5 sec./LOS C	22.7 sec./LOS C			
Ashlan Avenue/Fowler Avenue	Signal	27.2 sec./LOS C	31.5 sec./LOS C			
Ashlan Avenue/Locan Avenue	Signal	26.4 sec./LOS C	17.9 sec./LOS B			
Ashlan Avenue/Leonard Avenue	Signal	25.1 sec./LOS C	20.8 sec./LOS C			
Ashlan Avenue/ McCall Avenue	Signal	24.1 sec./LOS C	17.9 sec./LOS B			

The data presented in Table 5.14-7 show that all of the traffic study area intersections are forecasted to operate at LOS C, or better, during the A.M. and P.M. peak hour periods. This analysis assumes that the intersections improvements, as shown on Figure 5.14-5, are in place.

General Plan Buildout with Specific Plan Roadway Operations

Figure 5.14-7 shows the General Plan buildout ADT volumes on roadway segments throughout the traffic study area. Table 5.14-8 shows the General Plan buildout plus Specific Plan traffic volumes, roadway classifications, roadway capacities, and levels of service for the major roadway sections. The proposed Specific Plan roadway cross-sections are assumed for the following roadway evaluation.



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(with Southeast Hrhan Center Specific Plan Land Hses)	ומוז דמוות	(192)220 (192)220 (193)220 (193)382	100(82) 22001100 - (5201109) - (520128) - (601158) - (601109)	Ave Gettysburg Ave/Leonard Ave				300	17,400		19,800] .	-			MV III	modī
Specific P	Therman	C(110)165 - (220)242 - (220)242 - (110)192 - (110)193	10(88) 108(120) 1 (90) 10(1) 10(1) 10(1) 10(1) 10(1) 10(1) 10(1)	Gettysburg Ave/DeWolf Ave				5.500 7.3		200,7	000 (12,400	_	(<u>)</u> /			A bre	
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heast IIrh		(265) 53 (265) 53 (265) 53 (66) 53 (66) 132 (165) 132	498(128) - 182(96) - 182(96) - 182(96) - 182(96) - 182(96)	Shaw Ave/Mc Call Ave			:			00	<u>ι'ε</u> ζ				5.700		CE YM	guons	
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		12.65138 12.65138 1 - (102.71510 1 - (126)99	97.5(516) - (84.164) - (84.1	Shaw Ave/Locan Ave	2868110 2868110 1 (68)110 1 (68)110 1 (18)11 1 (18)11	471(786) - (819) - (82)58 - (83)5P1	Ashlan Ave/Locan Ave	(60)110 (60)110 (114)48 (114)48 (115)65	88(110) 275(146) - (6(53) - (6(53) - (6(5)) - (6(5)) - (6(5))	Ashlan Ave/Mc Call Ave			Jue	- AM Peak Hour Volume	- P.M. Peak Hour Volume	- Signalized Intersection	- Unsignalized Intersection	2	ation Engineers
		2023(223) 16(169) 16(169) 16(169) 16(169) 16(169)	257(525) 1886(525) 1886(525) - (602)(0) - (602)(0) - (802)(0)	Shaw Ave/Fowler Ave	6 7 5 -	975(693) 166(124) 166(1145) 165(1114) 125(1114)	Ashlan Ave/Fowler Ave	(184)22 (184)22 (185)29 (195)28 (1)22	142(275)- 295(279) — 295(279) — 206(259) — 154(55) — 154(16)	Ashlan Ave/Leonard Ave		IEGEND	XXX - ADT Volume	pog - AM Peak	XX - PM Peak	• Signafize	Onsignal	O - Roundabout	Source: Associated fransportation Engineers

General Plan Buildout Traffic Volumes





TABLE 5.14-8 GENERAL PLAN BUILDOUT PLUS SPECIFIC PLAN ROADWAY LEVELS OF SERVICE

			Year 2020			
Roadway Segment	Roadway Classification	ADT Capacity	ADT	LOS		
Bullard Avenue	4-Lane Arterial	32,200	14,700	Α		
Barstow Avenue	2-Lane Collector	11,700	12,100	F		
Shaw Avenue	6-Lane Arterial	51,200	46,500	D		
Gettysburg Avenue	4-Lane Collector	25,300	16,500	В		
Ashlan Avenue	4-Lane Arterial	32,200	25,000	С		
Fowler Avenue	4-Lane Arterial	32,200	27,300	D		
Armstrong Road	4-Lane Collector	25,300	14,300	A		
Temperance Avenue	4-Lane Expressway	34,200	23,100	В		
Locan Avenue	2-Lane Collector	11,700	5,900	A		
DeWolf Avenue	4-Lane Collector	25,300	11,000	A		
Leonard Avenue	4-Lane Arterial	32,200	12,400	A		
Highland Avenue	2-Lane Collector	11,700	5,000	A		
Thompson Avenue	2-Lane Collector	11,700	7,300	В		
McCall Avenue	4-Lane Expressway	34,200	17,400	A		

The data presented in Table 5.14-8 show that generally all of the roadways within the traffic study area are forecast to operate at LOS D, or better, with General Plan buildout plus specific plan traffic volumes. The 2-lane section of Barstow Avenue is forecast to operate at LOS F.

Potential Roadway Impacts

According to the Specific Plan, the internal streets would be improved as the adjacent land is developed. By General Plan buildout all the streets would be improved to the full street sections, thus reducing any potentially significant impacts to a less than significant level. ATE's evaluation of the proposed street sections determined that they would be appropriate for the forecasted traffic volumes.

General Plan Buildout with Specific Plan Intersection Operations

The General Plan buildout with Specific Plan A.M. and P.M. peak hour volumes are shown in Figure 5.14-7. Table 5.14-9 lists the type of control with Specific Plan A.M. and P.M. peak hour LOS for each of the traffic study area intersections. LOS calculation sheets are shown in the Technical Appendix of the ATE Traffic Study.



TABLE 5.14-9 GENERAL PLAN BUILDOUT PLUS SPECIFIC PLAN INTERSECTION LEVELS OF SERVICE

		Delay/LOS					
Intersection	Control Type	A.M. Peak Hour	P.M. Peak Hour				
Shaw Avenue/Fowler Avenue	Signal	47.0 sec./LOS D	29.8 sec./LOS C				
Shaw Avenue/Locan Avenue	Signal	32.4 sec./LOS C	24.4 sec./LOS C				
Shaw Avenue/Leonard Avenue	Signal	25.9 sec./LOS C	25.8 sec./LOS C				
Shaw Avenue/McCall Avenue	Signal	26.5 sec./LOS C	27.1 sec./LOS C				
Gettysburg Avenue/Locan Avenue	Signal	24.8 sec./LOS C	26.6 sec./LOS C				
Gettysburg Avenue/DeWolf Avenue	Signal	25.7 sec./LOS C	21.2 sec./LOS C				
Gettysburg Avenue/Leonard Avenue	Signal	23.0 sec./LOS C	21.5 sec./LOS C				
Ashlan Avenue/Fowler Avenue	Signal	31.2 sec./LOS C	50.0 sec./LOS D				
Ashlan Avenue/Locan Avenue	Signal	25.4 sec./LOS C	23.2 sec./LOS C				
Ashlan Avenue/Leonard Avenue	Signal	20.4 sec./LOS C	25.6 sec./LOS C				
Ashlan Avenue/McCall Avenue	Signal	25.6 sec./LOS C	27.0 sec./LOS C				

The data presented in Table 5.14-9 show that all of the traffic study area intersections are forecasted to operate at LOS D or better during the A.M. and P.M. peak hour periods.

Potential Intersection Impacts

According to the Specific Plan, the traffic study area intersections would be improved as part of the roadway improvements. Intersection improvements should include, the provision of exclusive left-turn and right-turn lanes at the major signalized intersections through out the Specific Plan area. Signalization and the planned roadway improvements would reduce any potentially significant impacts to a less than significant level.

The General Plan buildout plus specific plan analysis found that with the planned roadway improvements in place, project impacts would be mitigated. Though there are many more roadways and intersections throughout the Specific Plan area, it is assumed that since the major facilities will operate at acceptable levels of service, the minor facilities would also. The impacts to facilities outside the traffic study area are mitigated due to the increased employment opportunities and job/housing mix within the Specific Plan area. As discussed in the trip generation section only 54 percent of the project traffic would be external to the Specific Plan area.

Level of Significance Before Mitigation: Less than significant.

Mitigation measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.

IMPACT: TRANSPORTATION DEMAND MANAGEMENT

Impact Analysis: Transportation Demand Management (TDM) refers to programs and policies intended to reduce travel demands and congestion on the roadway system through various means, particularly during peak hour periods. TDM programs involve methods to reduce the number of single occupant vehicle trips made in the project area by promoting alternative modes of travel such as ridesharing, transit and bicycling. TDM policies can be used to reduce or delay the need for more expensive conventional road improvements, such as adding travel lanes or constructing new roads. TDM

5. Environmental Analysis

strategies emphasize productivity, efficiency, and modification of individual transportation choices. They are typically designed to promote alternative mode choices, both voluntary and through trip reduction ordinances.

Land use planning strategies can also be implemented to reduce dependence on the automobile. For instance, residential communities, commercial center, and employment bases can be located and designed in ways that reduce the need to drive. Land use policies and standards can also be developed that require development to mitigate their impacts on the circulation system. TDM measures are most frequently directed at commute trips made by employees because this group comprises the bulk of the peak hour volumes. Most effective opportunities for trip reductions occur among these commute trips.

It should be noted that the Southeast Urban Center Specific Plan contains land uses that are complementary, with a mix of residential, commercial/retail, educational, and recreational land-uses. As discussed in the trip generation section, the jobs/housing mix provided by the Specific Plan, would reduce vehicle miles traveled and encourage alternative modes of transportation. The mixed-uses proposed by the project will result in a considerable amount of internal trips within the project boundaries (home-work, home-shopping, and work-shopping trips). And, the configuration of the land uses, with a mixed use "village center" area at the center, make for a unique opportunity to provide minimum distances for pedestrian and bicycle linkages.

Fresno County recommends a number or policies that promote the use of alternative transportation instead of single occupancy vehicles (SOVs). These policies would be expected to increase the use of various alternative transportation modes in the project area, including transit, carpooling, bicycling, and walking.

The Southeast Urban Center Specific Plan provides for the development of pedestrian pathways, bicycle paths, golf car paths, and equestrian trails. Many of the pedestrian pathways in the project area are within the street right-of-way, planned as separate 5 to 8 foot paved sidewalks. As part of the project's internal circulation system, the project will also complete portions of the citywide bicycle route and those sections of the regional bikeway that run through the Specific Plan area. The bikeway sections will be constructed to City of Clovis design standards with the appropriate signage. Most of the bike paths are within the street right-of way. A separate community collector trail would provide linkage between the planned communities, the Reagan Educational Center, and the business park.

Level of Significance Before Mitigation: Less than significant.

Mitigation measures: No mitigation measures are necessary.

Level of Significance After Mitigation: Not applicable.



5. Environmental Analysis

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6. Impacts Found Not To Be Significant

6.1 INTRODUCTION

As the Lead Agency for the proposed project, the City of Clovis prepared an Initial Study/Notice of Preparation (IS/NOP) for the preparation of an EIR. In accordance CEQA requirements, the NOP was sent to potential responsible and trustee agencies to determine if these agencies had any concerns regarding the potential impacts on the environment. This IS/NOP provided a brief analysis of environmental impacts by using the Environmental Checklist form contained in the Appendix G of the CEQA Guidelines and it identified environmental issues that warranted further review in the EIR.

The IS/NOP determined that the proposed Southeast Urban Center Specific Plan would not be low within an area subject to, or result in significant impacts related to conditions listed below.

Consequently, no further evaluation has been provided in Section 5, *Environmental Analysis* of this for the following environmental parameters that were found not to be significant and adverse. For additional discussion on items listed below, refer to the IS/NOP for the Southeast Urban Center Spelan, as contained in Appendix A of this Draft EIR:

- · Create objectionable odors
- Conflict with any local policies or ordinances
- Conflict with the provisions of any habitat conservation plan
- Exposure to any known earthquake fault
- Exposure to seismic ground shaking
- · Seismic related ground failure
- Landslide
- Expansive soil
- Soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems
- Create significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials
- Located on a site listed as hazardous materials sites
- Located within an airport land use plan, or within two miles of a public airport or public use airport
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area
- Impair implementation of or physically interfere with an adopted emergency response or evacuation plan
- Expose people or structure to a significant risk of loss, injury or death involving wildland fires
- Place housing within a 100-year flood hazard area
- Place within 100-year flood hazard area structures which would impede or redirect flood flows
- Expose people or structures to a significant risk of loss, injury or death involving flooding
- Innundation by seiche, tsunami, or mudflow
- Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks
- Substantially increase hazards due to a design feature or incompatible uses
- Result in inadequate emergency access
- Result in inadequate parking capacity
- Conflict with adopted policies, plans, or programs supporting alternative transportation
- Comply with federal, state, and local statutes and regulations related to solid waste

In addition to the impacts found less than significant as listed above, the Draft EIR identified a number of additional issues that were found less than significant after a more in-depth review in the EIR. These environmental issues were found to be less than significant after further review or after mitigation



6. Impacts Found Not To Be Significant

measures were imposed (refer to Section 5 of this document). The following impacts were found less than significant:

- Potential visual effect on a scenic vista or resource (see Section 5.1.6)
- Potentially degrade existing visual character or quality of the project area and its surroundings (see Section 5.1.6)
- Conflict with existing zoning for agricultural use, or Williamson act Contract (see Section 5.2.4)
- Consistency with air quality plan (see Section 5.3.5)
- Create a substantial adverse effect on any special status species (see Section 5.4.4)
- Create a substantial adverse effect on riparian habitat or other sensitive natural community (see Section 5.4.4)
- Create a substantial adverse effect on jurisdictional waters (see Section 5.4.4)
- Interfere substantially with the movement of any wildlife species or corridors (see Section 5.4.4)
- Cause a significant adverse change in the significance of a historical resource (see Section 5.5.4)
- Cause a significant adverse change in the significance of an archaeological resource or site (see Section 5.5.4)
- Cause a significant adverse change in the significance of a paleontological resource or site or unique geological feature
- Disturbance of human remains, including those interred outside of formal cemeteries (see Section 5.5.4)
- Increased storm water runoff and erosion associated with short-term construction activities (see Section 5.6.4)
- Surface water and storm water discharge as a result of an increase in impervious surfaces (see Section 5.6.4)
- Project impact on water quality of groundwater and surface waters
- Decrease in groundwater supply (see Section 5.6.4)
- Flood hazards (see Section 5.6.4)
- Alteration of site drainage patterns (see Section 5.6.4)
- Physically divide an established community (see Section 5.7.4)
- Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (see Section 5.7.4)
- Conflict with compatibility of land uses in surrounding jurisdictions (see Section 5.7.4)
- Temporary increase in noise levels due to construction (see Section 5.8.4)
- Potential noise-related impacts to on-site sensitive receptors due to long-term traffic generation (see Section 5.8.4)
- Potential vibration-related impacts due to project construction (see Section 5.8.4)
- Potential impacts from demolition (see Section 5.9.5)
- Potential impacts from unknown buried hazardous materials on-site
- Soils contaminated by pesticides (see Section 5.9.5)
- Groundwater contamination due to improperly abandoned wells (see Section 5.9.5)
- Potential impacts from accidental release of hazardous materials during transport or products or waste (see Section 5.9.5)
- Potential impacts from accidental release of hazardous materials due to upset or accident conditions (see Section 5.9.5)
- Emit hazardous emissions of handle hazardous materials with ¼ mile of an existing or proposed school (see Section 5.9.5)
- San Joaquin Valley Fever (see Section 5.9.5)
- Increased demand for fire protection services (see Section 5.10.4)
- Increased demand for police protection services (see Section 5.10.4)
- Increased demand for school services (see Section 5.10.4)

6. Impacts Found Not To Be Significant

- Increased demand for park services (see Section 5.10.4)
- Increased demand for water services (see Section 5.10.4)
- Increased demand for wastewater services (see Section 5.10.4)
- Potentially disrupt delivery of surface water for irrigation (see Section 5.10.4)
- Increased demand for new storm water drainage facilities or expansion of existing facilities (see Section 5.10.4)
- Increased demand for solid waste services (see Section 5.10.4)
- Increased demand for electricity and natural gas services (see Section 5.10.4)
- Increased demand for telecommunication services (see Section 5.10.4)
- Increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated (see Section 5.11.4)
- Require the construction or expansion of recreational facilities, which might have an adverse
 physical effect on the environment (see Section 5.11.4)
- Employment generation (see Section 5.12.4)
- Housing demand and jobs/housing balance (see Section 5.12.4)
- Erosion (see Section 5.13.4)
- Southeast Urban Center Specific Plan traffic generation (see Section 5.14.4)
- General plan buildout analysis (see Section 5.14.4)
- Transportation demand management (see Section 5.14.4)



6. Impacts Found	l Not	To	Be	Significant
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7. Significant Irreversible Environmental Changes

7.1 INTRODUCTION

In accordance with Section 15126.2(c) of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must analyze the extent to which uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes reversal or nonuse thereafter unlikely. Primary and secondary impacts of the proposed specific plan will commit nonrenewable resources to uses that future generations will probably be unable to reverse.

The project area and much of Fresno County were previously transformed in the late 1880s. The discovery of gold, the advent of sheep and cattle ranching, the lumber industry, the building of railroads and the construction of irrigation systems transformed the project area and the surrounding area from its Indian pastoral ways. A major factor in the development of the land was the building of canals, which revolutionized Fresno County's economy. Before irrigation transformed the land, the plains were green only in winter and spring, and desert-like in winter and fall. In the late 1800s the increase in farming prompted the expansion of some irrigation systems and the creation of others. The Enterprise Canal, which touches the project area at the corner of Bullard and Leonard Avenues, was constructed during this period. The Gould Canal, which provides the southern boundary for this area, was constructed in the early 1870s.

Implementation of the proposed project would result in a second major transformation of the project area from farming operations to urban development. These changes involve the following reversible and irretrievable commitments:

- Construction of the proposed project would require the commitment of moderate amounts of various building materials such as concrete, steel, asphalt and other materials used for the construction of commercial buildings, parking areas, and streets. Because these types of building materials are considered to be readily available and in sufficient quantity in the region, these impacts are not considered significant.
- Construction and operation of the proposed project would require the commitment of moderate
 amounts of energy resources including gasoline, diesel fuel and electricity. Servicing utilities have
 indicated the ability to serve the project without any adverse impacts to physical systems or
 capacities. In addition, these types of energy resources are considered to be readily available and in
 sufficient quantity in the region. These impacts are not considered significant.
- Construction of the proposed project would result in a permanent change in on- and off-site views in the project area. While the project area is primarily undeveloped, and presently offers visual open space, it has no unique physical features, scenery or scenic qualities characteristic of visual and aesthetic resources. Consequently, impacts to surrounding areas from the visual alteration of the project area would not be a significant adverse impact. However, the transition of this area from an agricultural and rural residential environment to an urbanized area represents an irreversible change in the visual character of the project area. However, this impact is not considered significant.
- The construction and operation of the proposed project would result in the conversion of existing agricultural operations in the project area to urban uses. Given regional pressures for development and housing, the continued agricultural use of the project area is not considered economically feasible in the long-term. Nonetheless, the loss of agricultural land is considered a significant adverse effect (see Section 5.2, Agricultural Resources for additional discussion). The conversion to urban use is considered an irreversible change.



7. Significant Irreversible Environmental Changes

• The construction and operation of the proposed project would result in the conversion of existing habitats in the project area to a variety of urban uses. This EIR has analyzed biological impacts that would result from project implementation, and found that notwithstanding the existing project area's disturbed habitat condition, the proposed land uses have the potential to adversely impact the biological resources. However, individual projects would comply with all applicable permit programs with the appropriate agency at the time of application submittal. In addition, mitigation measures have been proposed to address all potentially significant impacts and reduced to level below significant. While the loss of biological resources is irreversible, these impacts are considered less than significant (see Section 5.4 Biological Resources for additional discussion).

The change from farmland to urban use will involve irreversible changes and irretrievable commitments of resources as described above. However, the magnitude of the commitment of resources identified is not unusually large or excessive given the level of development planned. The project is efficient in its use of resources relative to the proposed uses. As explained in much of Section 5, the project area is not particularly sensitive and its conversion to urban use will not involve the loss of unique resources.

8.1 INTRODUCTION

In accordance with Section 15126.2(d) of the California Environmental Quality Act (CEQA) Guidelines, an Environmental Impact Report (EIR) must discuss the ways in which a proposed project could directly or indirectly foster economic or population growth, or the construction of additional housing. In addition, when discussing growth-inducing impacts of a proposed project, "it must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environmental." Two issues must be considered when assessing the growth-inducing impacts of a project:

- Promotion of Economic Growth: 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 strategy developed by the City of Clovis Community Development Department, and indirect or
 secondary effects, such as increased commercial activity needed to serve the project area; and
- Elimination of Obstacles to Growth: The extent to which additional infrastructure capacity or a change in regulatory structure will allow development of the County and region.

Direct growth inducing impacts are generally associated with aspects of a project that could remove obstacles to population or other growth such as the construction of the sewage treatment/water reuse facility or upgrading of regional master plan infrastructure and facilities that would allow more construction in a service area. The extension of services and facilities to an individual site can also reduce development constraints to other nearby areas and serve to induce further development in the vicinity if excess service capacity is created in the local area. Indirect or secondary growth inducing impacts consist of growth induced in the region by the demand for additional housing as a result of employment generation, and demand for goods and services associated with population increases caused by, or attracted to an area as a result of new development.



8.2 PROMOTION OF ECONOMIC GROWTH

Direct Effects

Based on population forecasts approved by the COG, the City of Clovis' population will increase from 67,988 in 2000 to approximately 125,000 by the year 2020, an increase of approximately 84%. This population growth 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. Rather, the Southeast Urban Center Specific Plan would direct the manner in which the anticipated increase in population occurs.

Future development in the vicinity outside of the City's sphere of influence, and thus their General Plan Area, will depend on market conditions as well as local and regional planning decisions made at the City and County level. Furthermore, the inducement of growth within adjoining areas would be indirect and subject to the approvals of applicable government agencies.

8. Growth-Inducing Impacts of the Project

While the project would not alter the amount of population growth, it would induce growth in non-residential sectors. As shown in Table 4.3-3, *Land Use Plan Statistics*, there would be substantial increases in office and commercial uses associated with the proposed project (when compared to the existing conditions of the project area). The generation of employment would be a direct effect of the proposed project. The environmental effects of the projected increase in population and economic activity are addressed in Section 5, *Environmental Analysis*.

Indirect Effects

The indirect growth inducement impact of this project is an issue of concern that should be carefully monitored by the City as pressures for growth and expansion intensify in the area. Increased commercial and residential development typically generates a secondary or indirect demand for other services. The City's growing population will require additional goods and services that will stimulate economic activity. Because the project area will not alter the COGs population projections, the secondary effects of increased residential demand for goods and services is independent of the proposed project. The Southeast Urban Center Specific Plan will result in greater employment-generating uses that could generate a secondary demand for good and services to support new and expanding businesses. Therefore, the proposed project has the potential to be growth-inducing.

8.3 ELIMINATION OF OBSTACLES TO GROWTH

The elimination of either physical or regulatory obstacles to growth is considered to be a growth-inducing impact. 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/facilities, 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 City of Clovis plans to develop a surface water treatment facility (SWTP), so that the reliance on groundwater will be diminished. The initial phase of the SWTP will have a capacity of 15 MGD. The City of Clovis Water Master Plan Update recommended an ultimate capacity of 30 MGD to accommodate build-out of the General Plan.

A wastewater-sewer treatment/water reuse facility is currently under review in a separate study. The facility is expected to provide a capacity of 8.3 MGD at its ultimate build-out and will serve not only the project area, but eventually the future Northwest and Northeast Urban Centers, as well. Although the site selection process is not complete, three general areas have been identified, which include the areas between Leonard and McCall Avenues, north of Ashlan and south of Gettysburg Avenue.

The project area does not include specific development plans for new infrastructure beyond those described in sewer and water master plans, and it would not remove any regulatory or physical obstacles to growth. However, the Southeast Specific Plan, a mechanism of General Plan implementation, provides for the expansion of infrastructure to accommodate new growth within the project area.

The proposed project would involve the extension of new roads, water lines, and sewer facilities into a primarily undeveloped area. Development of the proposed project would bring new electric, natural gas and telephone lines into a previously under-developed area. These utilities have potential to be more easily extended into outlying areas as a result of the proposed project. However, the provision of these utilities is not typically an obstacle to growth.

8. Growth-Inducing Impacts of the Project

To the extent that new infrastructure is sized to serve only existing and planned development (including growth related to the project area), growth inducement will not be considered detrimental to the environment. However, if infrastructure was oversized, it could induce growth by making available additional capacity for new development. In this instance, the water and wastewater treatment plants are to be sized to accommodate growth already included the Clovis General Plan. The proposed project and the other planned infrastructure improvements are not expected to induce growth beyond what has been planned since adoption of the 1993 General Plan.



8. Growth-Inducing Impacts of the Project

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9.1 OVERVIEW

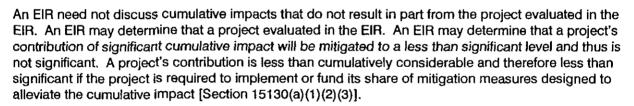
Section 15355 of the California Environmental Quality Act (CEQA) Guidelines defines cumulative impacts as:

"...Two or more individual effects which when considered together, are considerable or which compound or increase other environmental impacts."

Section 15355 further describes potential cumulative impacts as follows:

- *(a) The individual effects may be changes resulting from a single project or a number of separate projects.
- (b) The cumulative impacts from several projects are the change in the environment that results from the incremental impact of the project when added to other closely related past, present and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

An EIR must discuss the cumulative impacts of a project when the project's incremental effect if cumulatively considerable. When a Lead Agency is examining a project with an incremental effect that is not "cumulatively considerable," a Lead Agency need not consider that effect significant, but must briefly describe its basis for concluding that the incremental effect is not cumulatively considerable [Sections 15064(i) and 15130(a)].



In contrast to the Initial Study stage of CEQA, at the EIR stage a Lead Agency must prepare a more detailed evaluation of cumulative impacts. An EIR must contain a reasonable analysis of the significant cumulative impacts of a project. The EIR's cumulative impact analysis must identify related projects through a "list" or "projection" approach, summarize effects of the related projects, and reasonably analyze the cumulative impacts of the proposed project and recommended mitigation measures for the significant cumulative impacts [Section 15130(b)].

The discussion of cumulative impacts must reflect their severity and likelihood of occurring, but the discussion need not be as detailed as the discussion of a project's direct effects. The discussion should focus on the cumulative impact to which the identified other project's contribute to the cumulative impact. For example, if another project contributes only to the cumulative water supply problem, its impacts on air quality need not be discussed [Sections 15064(i) and 15130(b)].



Previously approved land use documents such as general plans, specific plans, and local coastal plans may be used in cumulative impact analysis. A pertinent discussion of cumulative impacts contained in one or more previously certified EIRs may be incorporated by reference pursuant to the provisions for "tiering", Master EIRs, and program EIRs. No further cumulative impact analysis is required when a project is consistent with a general, specific, master or comparable programmatic plan where the Lead Agency determines that the regional or area-wide cumulative impacts of the project have already been adequately addressed in a certified EIR for that plan [Section 15130(d)].

Further, if a cumulative impact was adequately addressed in a prior EIR for a community plan, zoning action, or general plan, and the project is consistent with that plan or action, then an EIR for such a project should not further analyze that cumulative impact [Section 15130(e)].

Since the project being considered is a large-scale Specific Plan, and not a specific development project, the analysis contained in this EIR is, to some degree, cumulative by nature. It should also be noted that the timing of project build-out is not likely to occur until quite some time in the future.

This section describes other approved and proposed projects in the vicinity of the proposed project area and the potentially significant adverse combined impacts of those projects. Then the potential cumulative impacts of those projects and the proposed project are discussed.

Please note that in some cases, the identified cumulative impacts are considered unavoidable even if the affected jurisdictions were to apply all mitigation that is currently practical and feasible. These unavoidable impacts are identified below.

9.2 OTHER PROJECTS CONSIDERED IN THE CUMULATIVE IMPACTS ANALYSIS

City of Clovis Urban Centers

There are two other proposed urban center specific plans within the 1993 Clovis General Plan area: Northwest Urban Center and Northeast Urban Center (see Figure 5.7-1, *Proposed Urban Center Specific Plan Areas*)¹⁹. The Northwest Urban Center is located in the northwest corner of the Clovis General Plan area, adjacent to unincorporated lands within the County of Fresno. The Northwest Urban Center extends south from the northwest-most tip of the General Plan area (at the junction of Copper Avenue and Willow Avenue), along the old rail right-of-way transit corridor to Nees Avenue, easterly along Nees Avenue to Clovis Avenue, and northerly from Clovis Avenue along the Dry Creek Canal to the juncture of the canal and inner beltway. The area consists of approximately 3,356 acres. Existing land uses consist of agricultural, rural residential, vacant and a limited amount of very low-density residential uses. Residential uses will range from rural to very low to high with the majority designated low and medium. Higher density residential is located in close proximity to the village centers.

¹⁹ Please note that the 1993 General Plan study area includes land currently outside the City of Clovis sphere-of-influence (as last updated in 2000). The General Plan represents a long-term vision of the City of Clovis, and acknowledges that the approval of the Local Agency Formation Commission (LAFCO) will be necessary to implement the General Plan (including the Northwest and Northeast Urban Centers). In the event that the required sphere-of-influence modifications are not approved, the complete buildout of the 1993 General Plan, as well as the development of the future urban centers, will not be possible.

The Northeast Urban Center is approximately 6,522 acres with a relatively low development intensity proposed. The Friant-Kern and Dog Creek Canals form the eastern boundary of the Urban Center, Herndon Avenue the far southern edge, the outer beltway (Copper Avenue) is the northern border, and the 1993 sphere of influence line comprises the western perimeter. Existing land uses are predominantly vacant, with some rural residential and agricultural pockets. The intent of this Urban Center is to provide a mix of residential, industrial, agricultural, mixed-use and open space uses. It will contain substantial proportion of agriculture and very low-density residential land uses.

Other City of Clovis Projects

The City of Clovis plans to develop a sewage treatment plant within project area and a surface water treatment facility to support future development in the project area, as well as future growth in the Northwest and Northeast Urban Centers.

In addition, numerous small subdivisions are currently under development or proposed within the City of Clovis. However, as stated above these discretionary projects are assumed to be consistent with the General Plan, and thus using the context of General Plan build-out is an appropriate approach to determining cumulative impacts.

City of Fresno

The Southeast Growth Area, bound by the Gould Canal to the north, McCall and Highland Avenues to the east, Jensen Avenue to the South, and Locan and Temperance Avenues to the west, is projected to accommodate a population of 55,000 people, comprised of an urban village south of the Gould Canal with a population of approximately 10,000 people and south of Tulare Avenue with an urban activity center projected to accommodate approximately 45,000 people. This area is immediately south of the proposed City of Clovis project area. Development may proceed subject to approval of a detailed community and/or specific plan, and approval of the additional area within the urban boundary and sphere-of-influence in accordance with provision of the 1983 Joint Resolution on Metropolitan Planning.

City of Sanger

Sanger currently has over 200 acres of industrial zoned land available for development. The Kings River Technology Park is Sanger's newest industrial area consisting of approximately 73 acres, and is located on Academy Avenue between Muscat and Central Avenues, approximately eight miles south of the proposed project area. Currently, the northern half of this property is fully improved with streets, sewer, water, and drainage facilities, and has railroad access.

County of Fresno

The development of the project area would result in a remainder agricultural area roughly one half by one mile between the City of Clovis and the Quail Lakes residential development in the County of Fresno. It is foreseeable that the agricultural area may experience compatibility issues associated with nearby urban uses, as well, as development pressures.

County of Madera

Because of the distance between the project area and the County line, there are no known projects that would potentially result in cumulative impacts.



9.3 CUMULATIVE IMPACTS RELATED TO AESTHETICS, LIGHT AND GLARE

The cumulative impacts of potential development of the project area must be considered in conjunction with other proposed developments within the Cities of Fresno and Sanger, and unincorporated Fresno and Madera County.

The impacts of the proposed specific plan, when taken together with all of the other projects in the subregion, have the potential to create a significant adverse impact. This results from the potential transformation of a portion of the rural San Joaquin Valley into urban uses. Since visual quality is subject to the interpretation of the observer, the transformation of the eastern Fresno-Clovis metropolitan area into more intense urban uses may be considered by some to be a significant cumulative impact.

The Southeast Urban Center Specific Plan includes development standards and design guidelines, which will minimize any impacts associated with aesthetic effects, including light and glare. The City of Clovis evaluates projects on a site-by-site basis to ensure that City standards and Specific Plan guidelines are implemented. These policies are intended to both enhance the visual quality of the City and mitigate adverse impacts of urban growth through implementation of policies for the City design, historic and scenic preservation, view corridor conservation, and agricultural preservation.

If other jurisdictions in the sub-region implement policies similar to those of Clovis (design and scenic preservation), impacts on aesthetics can be reduced to a less than significant level on a cumulative basis. The City of Fresno and County of Fresno have adopted similar design and visual resource preservation policies. Therefore, there are no significant cumulative impacts with regard to aesthetics.

Despite the imposition of mitigation measures for light and glare impacts, the proposed project's impact is considered significant and unavoidable. The transition of this area from an agricultural and rural residential environment to an urbanized area represents a significant change in the increased potential for light and glare impacts. This is true for other developments in Cities of Clovis and Fresno and Fresno County. The impact on light and glare is considered significant on a cumulative basis.

Conclusion: Light and glare impacts significant and unavoidable.

9.4 CUMULATIVE IMPACTS RELATED TO AGRICULTURAL RESOURCES

The Final EIR for the Fresno County General Plan reported, in October 2000, that implementation of the County General Plan would result in 37,737 acres of land currently producing food and fiber. The Clovis General Plan projected that approximately 5,978 acres of Prime Farmland and 3,223 acres of Farmland of Statewide Importance would be converted to various land uses other than agriculture uses such as open space, rural residential, low and medium residential, and mixed use, representing conversion of nearly 86 percent of the City's total agricultural land resources. The project area includes approximately 1,850 acres of land currently used for agricultural purposes that would be converted to urban uses. The loss of agricultural lands has already been determined to be significant and unavoidable by the City of Clovis and Fresno County General Plans.

Conclusion: Significant and unavoidable.

9.5 CUMULATIVE IMPACTS RELATED TO AIR QUALITY

The analysis of the build out of the proposed Specific Plan includes cumulative development due both to local growth as well as project development. Implementation of the Specific Plan would result in generation of additional pollutants from stationary sources (construction activities, electrical and natural gas usage) and mobile sources primarily from increased vehicular travel. Short-term impacts will result from construction activities due to site disturbance and emissions from construction equipment.

Although the City of Clovis will comply with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) rules and regulations, the possibility for significant short-term and long-term adverse air quality impacts could occur as a direct or indirect result of General Plan build-out.

Because the proposed project violates several ambient air quality standards (e.g., ozone and PM₁₀) and contributes substantially to an existing air quality violation, the regional emissions impacts associated with the project are found to represent a significant impact that cannot be mitigated to less than a level of significance (see Section 5.3, *Air Quality*). Therefore, any proposed future projects, including the proposed project, within or adjacent to the City of Clovis General Plan area will result in a cumulatively considerable impact. As such, cumulative impacts related to air quality are found to be unavoidable and considerable.

Conclusion: Significant and unavoidable.

9.6 CUMULATIVE IMPACTS RELATED TO BIOLOGICAL RESOURCES

Development of the project area will cumulatively impact the biological resources of area. Cumulative impacts to biologic resources include the ongoing loss of sensitive habitat areas. Due to the heavy utilization of the project area as agricultural land, there are relatively few "natural" areas that exist within the City, and relatively few sensitive or endangered plant or animal species that dwell within the City.

Nevertheless, increased population and the associated development in eastern Fresno County would result in an incremental loss of habitat and decrease of biological diversity in the sub-region and could result in a loss of plant and animal species including officially listed species and their habitats. However, the City of Clovis General Plan, and the Southeast Urban Center Specific Plan, has policies targeting the reduction of cumulative impacts to sensitive species and their habitats. These policies are anticipated to adequately address the protection of biological resources. Therefore, no cumulative impacts to biological resources are anticipated.

Conclusion: Not cumulatively considerable.



9.7 CUMULATIVE IMPACTS RELATED TO HYDROLOGY AND WATER SUPPLY QUALITY

Although the proposed policies of the General Plan and Southeast Urban Center Specific Plan, and the improvements and facilities as proposed under the Water Master Plan, adequately address water supply issues, the subject of greater concerns relates to the implementation of a conjunctive-use water program, the on-going water conservation program, and the maintenance of the City's water allocation.

Build-out of the project area, and other jurisdiction in eastern Fresno County, will increase impermeable surfaces and thus increase runoff. This increase in runoff will increase the drainage flows that currently exist in flood control facilities of the Fresno Metropolitan Flood Control District (FMFCD) and Fresno Irrigation District (FID). However, the City of Clovis will continue to cooperate with the FMFCD in reviewing projects to conform to NPDES permit requirements, as well as the FMFCD's Stormwater Management Plan. Approval by the FMFCD is required for local jurisdictions to construct flood control improvements, especially those improvements which affect FMFCD and FID facilities, mitigation of potentially significant impacts occurs as part of the design and review process. Given local jurisdictional compliance with FMFCD and FID requirements, no significant cumulative impacts associated with hydrology are anticipated.

In addition, the development of the surface water treatment facility will decrease the project area's reliance on groundwater, and will have a net benefit to the project area (e.g., increased groundwater recharge, decreased groundwater contamination, reduced likelihood of subsidence). Therefore, assuming that the necessary infrastructure is provided (e.g., retention basins, reinforced stream channels, surface water treatment plant, water reuse facility), there would be no significant cumulative impacts to the region with regard to water supply, quality, and hydrology.

Conclusion: Not cumulatively considerable.

9.8 CUMULATIVE IMPACTS RELATED TO LAND USE

Land uses proposed in Clovis, and in the surrounding jurisdictions including the Cities of Fresno and Sanger, and the Counties of Fresno and Madera, will contribute to cumulative population growth in the San Joaquin Valley. Regional impacts such as jobs/housing balance, traffic, noise and air quality are the result of multiple land use decisions made by other jurisdictions in the Valley. The City of Clovis may strive to achieve balance in its own general Plan, as well as the Southeast Urban Center Specific Plan, but these efforts may be compromised by other jurisdictions' decisions that result in Valley-wide excess or deficits in certain types of land uses or poor spatial arrangement of uses. These cumulative impacts can be mitigated if all jurisdictions within east Fresno County and south Madera County remain aware of each other's planning efforts, and seek to achieve regional as well as local balance. To this end, the City of Clovis has entered in a Joint Resolution of Metropolitan Planning with the City and County of Fresno, and is a member of the Fresno County Council of Governments, which provides a regional perspective on land use decisions within the project area.

All of the development that is currently underway or proposed within the project vicinity is consistent with the land use policies of the governing jurisdiction. There are no significant cumulative impacts with regard to land use.

Conclusion: Not cumulatively considerable.

9.9 CUMULATIVE IMPACTS RELATED TO NOISE

The analysis of the build out of the proposed Specific Plan includes cumulative traffic volumes due both to local growth as well as vehicles passing through the project area. Thus, the impacts associated with the project included a cumulative analysis.

Noise levels in the project area will increase in the future regardless of whether the project is implemented or not because of the inevitability of future development within and outside of the specific plan area.

Noise in the sub-region will increase also due to the development pressures in the area. If all jurisdictions comply with noise standards developed by State, federal, and local agencies, noise impacts can be reduced to a level of insignificance. Policies set forth on the Specific Plan, as well as the City of Clovis General Plan, will help reduce impacts caused by increased traffic and short-term construction activities

Roads subject to significant impact are included in Table 5.8-7, Comparison of Long-Term Traffic-Related Exterior Noise Levels, and are also significant on a cumulative basis. Noise levels on 13 of the 14 modeled roadways will increase at least 5 DB or more. Specific plan policies targeting the reduction of noise along roadways would reduce the impacts and in doing so, also reduce the cumulative impact. However, based on the projected noise increases, the residual impact is expected to remain significant for off-site receptors. Therefore, the cumulative impact is considered to be significant and unavoidable.

Conclusion: Significant and unavoidable.

9.10 CUMULATIVE IMPACTS RELATED TO PUBLIC SERVICES

Growth and development in the 1993 General Plan area will increase the demand for police, fire, parks and educational services.

Law Enforcement

Currently, homicide, forensics, canine, and SWAT team services for the project area are provided by the County of Fresno Sheriff's Department. However, upon development of the project area, and its subsequent annexation to the City of Clovis, the City of Clovis will take over all police protection services. As population growth continues on a regional level, greater demand will be placed upon local jurisdictional law enforcement agencies.

Fire

Increased development will result in an increase in the number of structures in the region and, therefore, increase the potential of fire hazard. Additional fire suppression equipment and stations will required to adequately respond to the increased number of calls. As development continues and the number of calls increase, stations in one area may need to provide back-up support for stations in another community.

Parks and Recreation

As population in the region continues to grow, the communities within the area will need to make provision of active and passive recreation for people of all age groups and abilities. This includes the need to provide facilities for the physically challenged.



Schools

Development will increase the number of school age children in the region and therefore increase the demand on existing school facilities. The Clovis and Sanger Unified School Districts serve the Project Area and surrounding area. Existing school facilities in the Project area are currently operating at or above capacity. Facilities will have to be provided to accommodate the increased numbers of students generated by proposed project.

Library Facilities

Build-out of the project area will contribute to a cumulative increase in the demand for library service and facilities in the project area. Additional operating and capital improvement funds to meet increased demand on library services in the region will be required.

Summary

Police, fire, and parks services, as well as the local school districts, will expand their services to adequately serve all development consistent with the General Plan, including the project area. Therefore, there are no significant cumulative impacts with regard to public services.

Conclusion: Not cumulatively considerable.

9.11 CUMULATIVE IMPACTS RELATED TO PUBLIC UTILITIES

Water

The projected population growth of eastern Fresno County will add to the need for infrastructure to provide water. Developers are general required to contribute towards the cost of this infrastructure to mitigate this potentially significant impact. As long as all jurisdictions continue to follow standard procedures linking development approvals to the provision of fees for infrastructure, impacts to water resources can be reduced to levels of insignificance.

In addition, regional development of residential, commercial and industrial sites will result in an increased demand on the potable water supply. The City of Clovis will be developing a surface water treatment facility (SWTP), so that the reliance on groundwater will be diminished (see Section 5.10, for additional detail on the SWTP). Since any concerns over groundwater overdraft will be eliminated by the development of the SWTP, the increase in demand of potable water is not considered a significant unavoidable cumulative impact.

Wastewater

As stated earlier, regional growth in eastern Fresno County will add to the need for infrastructure to provide sewer service. Developers are generally required to contribute toward the cost of this infrastructure, which mitigates this potentially significant impact. As long as all jurisdictions continue to follow standard procedures linking development approvals to the provision of fees for infrastructure, impacts to wastewater systems can be reduced to levels of insignificance.

Solid Waste

Development and a growing population will increase the amount of trash generated within the region. In addition, this will shorten the lifespan of existing landfill facilities and necessitate their expansion, development of alternative waste disposal facilities, or the reduction in the amount of waste generated.

The California Integrated Waste Management Act of 1989 (formerly AB939) requires local governments to reduce the amount of solid wastes generated in their jurisdictions and disposed of in a landfill or other means by 50% by the year 2000. If all jurisdictions in southern California implement policies in the their General Plans to reduce the generation of solid waste, diversion goals can be met and impacts to landfills can be reduced.

Summary

Adequate capacity can be provided for all utility and service systems upon development of the project area, and the supporting infrastructure (e.g., roadways, electrical substations, water lines, surface water treatment facility, wastewater treatment/water reuse facility). Note that the provision of these facilities is being provided to support the build-out of the 1993 General Plan. Long-term water supply and wastewater disposal issues are addressed in Section 5.10, *Public Services and Utilities*. Cumulative impacts are not considered significant.

Conclusion: Not cumulatively considerable.

9.12 CUMULATIVE IMPACTS RELATED TO SOCIOECONOMICS

Since the Southeast Urban Center Specific Plan was developed to implement the City of Clovis General Plan, which has been determined to be consistent with the regional growth forecasts, there are no significant cumulative impacts with regard to socioeconomics.

Conclusion: Not cumulatively considerable.

9.13 CUMULATIVE IMPACTS RELATED TO SOILS AND GEOLOGY

Because the project area is located within the seismically active San Joaquin Valley region, development of the project area together with other development proposed for the sub-region will expose an additional number of people to differing levels of potential geologic and soils hazards. These may include intensive grading of slopes; settlement and collapse of soils; corrosion from soils; landslides/mudflows; wind and water erosion; flooding; leakage from on-site sewage disposal systems and waste disposal facilities due to seismic activity; fault movement; and ground rupture and shaking. However, these impacts can be mitigated if all involved jurisdictions implement measures to address geologic hazards. Therefore, there are no significant cumulative impacts with regard to seismic and geologic hazards.

Conclusion: Not cumulatively considerable.

9.14 CUMULATIVE IMPACTS RELATED TO TRAFFIC AND CIRCULATION

The traffic generated from the build-out of the Southeast Urban Center Specific Plan area effectively represents the General Plan build-out traffic volumes for the area. Currently, the area is underdeveloped. It is not expected that this area will see a significant growth in cut-through or background traffic. The future traffic growth will be directly related to the development of land uses identified in the specific plan. As those land uses are developed, the area will then experience traffic growth. The growth in traffic will be the result of trips attracted from external sources and trips generated by internal sources.



Therefore, future development in accordance with the project area is not expected to substantially contribute to the present and projected adverse traffic congestion on urban, rural and arterial streets under the jurisdiction of the City of Fresno and the County of Fresno. Furthermore, through compliance with traffic programs such as Transportation Demand Management (TDM), local jurisdictions can reduce cumulative traffic impacts to a level less than significant. As such, there are no significant cumulative impacts with regard to traffic and circulation.

Conclusion: Not cumulatively considerable.

10.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires that Environmental Impact Reports "...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" (Guidelines Section 15126(d)). The CEQA Guidelines directs that the selection of alternatives be governed by "a rule of reason." The alternatives selected for detailed review in the EIR may be limited to those that "would avoid or substantially lessen any of the significant effects of the project" and would "feasibly attain most of the basic objectives of the project." The selection of alternatives and their discussion must "foster meaningful public participation and informed decision making" (Guidelines Section 15126(d)(5)).

One alternative required by CEQA is the No Project Alternative. Pursuant to CEQA Guidelines Section 15126.6(e)(3), the discussion of the No Project Alternative generally proceeds along one of two lines:

- "(A) When the project is the revision of an existing land use or regulatory plan, policy or ongoing operation, the "no project" alternative will be the continuation of the existing plan, policy or operation into the future. Typically this is a situation where other projects initiated under the existing plan will continue while the new plan is developed. Thus, the projected impacts of the proposed plan or alternative plans would be compared to the impacts that would occur under the existing plan.
- (B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no project" alternative is the circumstance under which the project does not proceed. Here the discussion would compare the environmental effects of the property remaining in its existing state against environmental effects which would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this "no project" consequence should be discussed. In certain instances, the no project alternative means "no build" wherein the existing environmental setting is maintained. However, where failure to proceed with the project will not result in preservation of existing environmental conditions, the analysis should identify the practical result of the project's non-approval and not create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment."

The Southeast Urban Center Specific Plan is a regulatory plan and represents a step in the implementation of the City's General Plan and as such, falls within the approach outlined in (A) above. This "no project alternative" that satisfies CEQA Guidelines Section 15126.6(e)(3) as presented above is defined and evaluated in Section 10.2, No Project/Existing County Zoning Alternative. It assumes that the proposed Specific Plan is not adopted and instead, development continues to occur following the County's AE-20, Agricultural zoning.

As second "no project alternative" is included in this section for comparative purposes. The "No Project/Existing City General Plan" Alternative also assumes that the proposed Southeast Urban Center Specific Plan is not approved, but that development in the area occurs over time consistent with the land use designations of the City's 1993 General Plan.

As explained above, EIRs must identify alternatives to the project <u>or</u> to the location of the project (CEQA Guidelines Section 15126.6(a)). Alternative sites may be included where changing a project's location would avoid or substantially lessen any of the project's significant impacts. In this instance, for planning



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documents (such as a specific plan) for entire jurisdictions, there are no alternative locations to be considered.

An EIR must identify an "environmentally superior" alternative and where the No Project Alternative is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral or inferior. However, only those impacts found significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Only the impacts involving light and glare, agricultural resources, air quality, and noise were found to be significant and unavoidable. Section 10.5 identifies the environmentally superior alternative.

10.2 NO PROJECT/EXISTING COUNTY ZONING ALTERNATIVE

The No Project/Existing County Zoning Alternative assumes that the proposed Southeast Urban Center Specific Plan is not approved. Approximately 60 percent of the land within the Southeast Urban Center is currently devoted to agricultural uses, including farming and grazing activities, ancillary rural residential and agricultural/storage uses and several commercial and commercially related agricultural uses. The current County zoning for the project area is AE-20, which mandates minimum 20-acre parcels and exclusive agricultural use.

In the absence of the proposed Specific Plan, development is expected to occur in a parcel-by-parcel, unplanned manner, due to the significant development pressure that continues in the Fresno/Clovis metropolitan area. This is the haphazard development pattern that the City of Clovis desires to avoid, and which prompted its incorporation of "Urban Centers" in its 1993 General Plan as a way to accommodate growth in a responsible fashion and maintain a small town atmosphere.

10.2.1 Aesthetics/Light and Glare

The No Project/Existing County Zoning Alternative is expected to result in a haphazard development pattern with new residential subdivisions settled amongst continuing farming and grazing operations. Typical County development patterns eliminate the potential to create visually appealing communities and to establish clear lines between urban and rural land uses. This type of sprawl is inefficient and visually chaotic and is what the City desires to avoid. The No Project/Existing County Zoning Alternative is considered environmentally inferior as compared to the proposed project as it relates to aesthetics and light and glare.

10.2.2 Agricultural Resources

While the No Project/Existing County Zoning Alternative would retain the County's AE-20 zoning for the project area, its ultimate impact on agricultural resources is expected to be adverse. The potential to capture urban development within key urban centers and avoid suburban sprawl and the excessive loss of farmland that accompanies such a land use pattern would be lost in this alternative. The No Project/Existing County Zoning Alternative is considered environmentally inferior as compared to the proposed project as it relates to agricultural resources.

10.2.3 Air Quality

The proposed project area would provide a mix of housing and employment opportunities, as such, could potentially reduce the number and length of vehicle trips in the region. The No Project/Existing County Zoning Alternative would result in a continuing trend of unplanned, haphazard development spread across productive agricultural lands. Because of the inefficiencies of such a land use pattern,

this alternative is considered environmentally inferior as compared to the proposed project as it relates to air quality.

10.2.4 Biological Resources

Biological resources within the project area are not considered very sensitive and with mitigation the loss of on-site resources are not considered a significant impact. With low sensitivity at the project area and the potential for greater impacts elsewhere due to a haphazard, inefficient development pattern, the No Project/Existing County Zoning Alternative is considered inferior to the proposed project in terms of potential impacts to biological resources.

10.2.5 Cultural Resources

The project area was determined to have a low sensitivity for historic, archaeological and paleontological resources. As a result the proposed project could be developed without significant impacts or the need for mitigation measures. With low sensitivity at the project area and the potential for greater impacts elsewhere due to a haphazard, inefficient development pattern, the No Project/Existing County Zoning Atternative is considered inferior to the proposed project in terms of potential impacts to cultural resources.

10.2.6 Hydrology and Water Quality

The project area is not particularly sensitive in regards to surface flows, flooding or groundwater conditions. Development could generally be accommodated under the No Project/Existing County Zoning Alternative; however, this alternative implies an inefficient land use pattern that would also translate into inefficiencies in creating the storm drain, water recharge and water supply systems. The No Project/Existing County Zoning Alternative is considered inferior to the proposed project in terms of potential impacts on hydrology and water quality.

10.2.7 Land Use and Relevant Planning

The No Project/Existing County Zoning Alternative is expected to result in a haphazard development pattern with new residential subdivisions settled amongst continuing farming and grazing operations. Typical County development patterns eliminate the potential to create well-planned, cohesive communities and to avoid conflicts between urban uses and farming activities. This type of sprawl is inefficient and is what the City desires to avoid. The No Project/Existing County Zoning Alternative would not achieve the goals and objectives outlined for the project and is considered environmentally inferior as compared to the proposed project as it relates to land use and relevant planning.

10.2.8 Noise

Noise levels at certain off-site sensitive receptor locations were found to be significant under the current project. Under the No Project/Existing County Zoning Alternative, development would be expected to spread over a much larger area. While a larger area would experience higher noise levels as a result, the noise levels might not exceed accepted standards without the higher concentration of development expected with the proposed project. For this reason, the No Project/Existing County Zoning Alternative is not considered either superior or inferior to the proposed project as it relates to potential noise impacts.



10.2.9 Public Safety and Health

The project area is not particularly sensitive in regards to soil contamination, hazardous materials or public safety considerations. With low sensitivity at the project area and the potential for greater impacts elsewhere due to a haphazard, inefficient development pattern, the No Project/Existing County Zoning Alternative is considered inferior to the proposed project in terms of potential impacts on public health and safety.

10.2.10 Public Services and Utilities

Implementation of the project area as proposed by the Southeast Urban Center Specific Plan would involve substantial expansion and extension of all public services and utilities. However, when compared to providing such services and utilities under the typical sprawl development pattern found in the County, the No Project/Existing County Zoning Alternative is considered inferior as it relates to potential impacts on public services and utilities.

10.2.11 Socioeconomics

The No Project/Existing County Zoning Alternative is expected to result in a haphazard development pattern with new residential subdivisions settled amongst continuing farming and grazing operations. Typical County development patterns eliminate the potential to create well-planned communities with a balance of job-generating uses and residential areas. This type of sprawl is inefficient and would hinder the City's desire to maintain a jobs/housing balance. The No Project/Existing County Zoning Alternative is would not achieve the goals and objectives outlined for the project and is considered environmentally inferior as compared to the proposed project as it relates to socioeconomics.

10.2.12 Soils and Geology

The project area is not particularly sensitive in regards to soils and geologic conditions. Development can generally be accommodated under the No Project/Existing County Zoning Alternative; however, this alternative implies an inefficient land use pattern that would also translate into inefficiencies in designating areas appropriate for urban development given their soils and geologic characteristics. The No Project/Existing County Zoning Alternative is considered inferior to the proposed project in terms of potential impacts on soils and geology.

10.2.13 Traffic and Circulation

In the absence of the proposed Specific Plan, development is expected to occur in a parcel-by-parcel, unplanned manner. The result is inefficiency in funding and providing critical infrastructure, including roadways. A pattern of urban sprawl spread across agricultural land results in higher vehicular trip rates and vehicle miles traveled. The No Project/Existing County Zoning Atternative is considered environmentally inferior to the proposed project in terms of traffic and circulation.

10.2.14 Conclusion

Under the No Project/Existing County Zoning Alternative, development is expected to occur in a parcel-by-parcel, unplanned manner, due to the significant development pressure that continues in the Fresno/Clovis metropolitan area. This is the haphazard development pattern that the City of Clovis desires to avoid, and which prompted its incorporation of "Urban Centers" in its 1993 General Plan as a way to accommodate growth in a responsible fashion and maintain a small town atmosphere.

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Of the four significant, unmitigated impacts associated with the project, the No Project/Existing County Zoning Alternative would result in more significant impacts for three of those impacts: light and glare, farmland and air quality. The fourth impact, noise, is considered to have the same level of impact under either the project or the No Project/Existing County Zoning Alternative.

Further, this alternative fails to accomplish the project's objectives. The No Project/Existing County Zoning Alternative is not considered environmentally superior to the proposed project.

10.3 NO PROJECT/EXISTING CLOVIS GENERAL PLAN ALTERNATIVE

This alternative also assumes that the currently proposed Southeast Urban Center Specific Plan is not approved. Under the No Project/Existing Clovis General Plan Alternative the area is assumed to develop consistent with the land use designations included for this area in the City's adopted 1993 General Plan, which is shown in Figure 4.2-1. The revised land use plan for the Southeast Urban Center Specific Plan (the project) is shown in Figure 4.3-1.

The most significant difference between the No Project/Existing Clovis General Plan Alternative and the Southeast Urban Center Specific Plan (the project) involves a change in boundaries. The 1993 Clovis General Plan designated the area north of Shaw Avenue between Locan Avenue and Highland Avenue as a Special Studies Area, which was not included in the land use statistics for the project area. The current proposal for the Southeast Urban Center Specific Plan incorporates this area into the Specific Plan. Another change has also occurred where the area between Leonard and McCall Avenues and generally south of Ashland, which is included in the project area in the 1993 General Plan, has been eliminated from the current Specific Plan area.

The land use statistics presented in Table 10.1-1 shows that the No Project/Existing Clovis General Plan Alternative covers an area that is 123 acres larger than the current boundaries of the project area. Table 10.1-1 provides a comparison of the land uses under the No Project/Existing Clovis General Plan Alternative and the proposed project.



TABLE 10.1-1 LAND USE STATISTICS: NO PROJECT/EXISTING CLOVIS GENERAL PLAN ALTERNATIVE VS. PROPOSED PROJECT

Land Use	No Project/Existing Clovis General Plan Alternative	Proposed Project
Agriculture	78	105
Rural	571	0
Very Low	373	87
Low	966	1,284
Res. Plan. Community	0	335
Medium	396	247
Medium High	64	77
High	62	129
Very High	0	27
Commercial	19	0
Mixed-Use	221	0
Village Center	70	0
Industrial	60	0
Gettysburg/Ashland PC		
-Residential	0	330
-Commercial	i o	6
-Neighborhood Commercial	0	5
Community Center		
-Residential	0	84
-Commercial	0	42
-Office	0	17 ·
-Open Space/Public	0	17
Other	304	711
Total Acres	3,184	3,307

Source: The City of Clovis General Plan Program Draft Environmental Impact Report dated December 1992 and Southeast Urban Center Specific Plan, 2002.

10.3.1 Aesthetics/Light and Glare

While both the proposed project and the No Project/Existing Clovis General Plan Alternative involve implementation of an Urban Center, the two would involve development of two somewhat different geographic areas and the proposed project covers a somewhat larger areas. The proposed project also involves a greater concentration of development, which yields a greater percentage of open space. Given the implementation of the General Plan policies protecting natural resources, and requirement of design standards to guide quality development, this impact is anticipated to be less than significant under either scenario. The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project.

10.3.2 Agricultural Resources

While the current project would contain additional remaining agricultural acreage as compared to the No Project/Existing Clovis General Plan Alternative, the project also represents conversion of a somewhat greater number of agricultural acres due to its larger size. The impact to agricultural resources would be

significant and unavoidable under both scenarios. Because the intent of the project is to stop haphazard development of farmlands by concentrating development in the Urban Centers, this alternative is not considered environmentally superior to the proposed project. Agricultural resources within the City's project area would benefit from the implementation of either the proposed project or No Project/Existing Clovis General Plan Alternative and the difference between the two is negligible.

10.3.3 Air Quality

The proposed project was found to generate a significant, unavoidable impact in terms of both construction- and operations-related (mostly from vehicular traffic) pollutant emissions. The No Project/Existing Clovis General Plan Alternative would generate similar levels of construction and operations-related emissions and so would not represent a means of reducing a significant environmental impact. However, based on the projected growth for the project area, the Urban Center concept under either scenario represents the most positive way to bring a mix of uses together and minimize travel times (and related emissions). The mitigation measures dictated under the requirements of the SJVAPCD and City of Clovis General Plan would be similar under both scenarios. The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project in terms of potential air quality impacts.

10.3.4 Biological Resources

Impacts associated with biological resources would be slightly reduced under the No Project/Existing Clovis General Plan Alternative due to the larger size of the proposed project. However, this area has not been found to be especially sensitive concerning biological impacts and the project's impacts were found to be less than significant. With low sensitivity at the project area, the proposed project and the potential for greater impacts elsewhere, the No Project/Existing Clovis General Plan Alternative is not considered environmentally neutral to the proposed project in terms of potential impacts to biological impacts.

10.3.5 Cultural Resources

The project area was determined to have a low sensitivity for historic, archaeological and paleotonological resources. As a result, development of the area under either the proposed project could or the No Project/Existing Clovis General Plan Alternative could occur without significant impacts. The No Project/Existing Clovis General Plan Alternative is considered neutral in comparison to the proposed project for potential impacts to cultural resources.

10.3.6 Hydrology

The project area is not particularly sensitive in regards to surface flows, flooding or groundwater conditions. The types of infrastructure required to support the development under either the proposed project or the No Project/Existing Clovis General Plan Alternative would be the essentially the same and no significant, unmitigated impact would be reduce or eliminated through the selection of the No Project/Existing Clovis General Plan Alternative. The No Project/Existing Clovis General Plan Alternative is considered environmentally neutral as it relates to potential hydrology and water quality impacts associated with the project.

10.3.7 Land Use and Relevant Planning

The project area and land use mix for this alternative would be based on the 1993 General Plan, as shown in Table 10.1-1 and Figure 4.2-1. Although a direct comparison is difficult, more acreage was devoted to lower density land uses (i.e., rural and very low) in the No Project/Existing Clovis General



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Plan Alternative land use concept than in the proposed project. As such, the net effect is that the proposed project represents a more concentrated land use pattern than the No Project/Existing Clovis General Plan Alternative, which also yields more remaining open space.

Land use policies would remain primarily the same, as implemented by the General Plan. Furthermore, both alternatives would provide opportunities for a mix of residential, employment and commercial uses. The No Project/Existing Clovis General Plan Alternative is considered environmentally neutral relative to land use and relevant planning impacts associated with the proposed project.

10.3.8 Noise

Noise levels at certain off-site sensitive receptor locations were found to be significant under the current project. Given a similar amount of the development that would occur under the No Project/Existing Clovis General Plan Alternative, the amount of traffic found along arterials in the area would be about the same under both scenarios. As a result, the noise levels would be about the same and the impact is considered significant and unavoidable. The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project and does not represent a means to reduce this significant, unmitigated impact.

10.3.9 Public Safety and Health

The project area is not particularly sensitive in regards to soil contamination, hazardous materials or public safety considerations. With low sensitivity at the project area and similar levels of development planned under both the project and the No Project/Existing Clovis General Plan Alternative, the level of impact is not considered significant under either scenario. The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project.

10.3.10 Public Services and Utilities

Implementation of the project area as proposed by the project would involve substantial expansion and extension of all public services and utilities. A similar investment in public facilities would be required under the No Project/Existing Clovis General Plan Alternative as well. While the expansion of such services and facilities is extensive under either scenario, neither would represent a significant, unavoidable impact. The No Project/Existing Clovis General Plan Alternative is considered environmentally neutral as compared to the proposed project concerning potential impacts on public services and utilities.

10.3.11 Socioeconomics

The No Project/Existing Clovis General Plan Alternative includes more lower-density residential uses than does the proposed project. As such, the proposed project reflects a greater concentration of urban development within the project area, which also yields a greater percentage of open space. It also includes a greater amount of job-creating commercial and office development. However, the General Plan did not include the detailed quantification of this area needed to allow a direct comparison between it and the proposed project in terms of specific number of dwelling units, workers, jobs and jobs/housing balance.

The proposed project accommodates more employment opportunities than potential workers who live within the plan area, producing a positive jobs-to-housing ratio of 1.15. It is possible to note that this figure is reduced from what would be expected under the No Project/Existing Clovis General Plan Alternative. Both scenarios would not produce a housing-rich bedroom community, with the negative

impacts of high commuting patterns and associated air pollution. The impacts on socioeconomics are not considered significant under either scenario.

10.3.12 Soils and Geology

The project area is not particularly sensitive in regards to soils and geologic conditions. Development can be accommodated under the No Project/Existing Clovis General Plan Alternative very similar to the proposed project and significant, unavoidable impacts are not anticipated under either the proposed project or No Project/Existing Clovis General Plan Alternative. The No Project/Existing Clovis General Plan Alternative is considered environmentally neutral compared to the proposed project's potential impacts related to soils and geology.

10.3.13 Traffic and Circulation

Based on the projected growth for the project area, the Urban Center concept under either the proposed project or No Project/Existing Clovis General Plan Alternative represents a more positive way to bring a mix of uses together and minimize vehicular trips and travel times. The roadway system could be devised to accommodate the No Project/Existing Clovis General Plan Alternative without difficulty. These two alternatives are very similar in nature and the impact traffic and circulation is not considered significant under either scenario.

10.3.14 Conclusion

The proposed project represents the next step in the implementation process of the City's General Plan. The No Project/Existing Clovis General Plan Alternative is essentially the original concept for establishing an Urban Center in this area and the proposed Southeast Urban Center Specific Plan includes the refinements and improvements gained from learning more about the area since completion of the 1993 General Plan.



Implementation of the No Project/Existing Clovis General Plan Alternative would eliminate all improvements associated with the long planning process that has occurred. As a result, this alternative is not considered environmentally superior to the proposed project.

Of the four significant, unmitigated impacts associated with the project, the No Project/Existing Clovis General Plan Alternative would result in similar levels of impacts. The significant impacts on light and glare, farmland, air quality and noise would all remain significant if this alternative were selected.

This alternative would accomplish the project's objectives, but the improvements gained in the on-going planning process would be lost.

10.4 INCREASED URBAN CORE DENSITY ALTERNATIVE

In the absence of the City's Urban Center concept, development is expected to occur in a parcel-by-parcel, unplanned manner, due to the significant development pressure that continues in the Fresno/Clovis metropolitan area. This haphazard development pattern is what the City of Clovis desires to avoid, and which prompted its incorporation of the Urban Centers concept in its 1993 General Plan. The intent of the Urban Centers is to accommodate growth in a responsible fashion and maintain a small town atmosphere. While the overall effect of the Urban Center is to minimize loss of agricultural resources in the project area, the loss of farmland within the project area is still recognized as significant and unmitigated.

The Increased Urban Core Density Alternative is intended to explore the potential to further increase densities and thereby save additional agricultural resources. This Alternative leaves the basic structure of the Southeast Urban Center Specific Plan in tact, but maintains a much larger area designated as Agriculture and shifts the residential development to the remaining urban development areas through higher densities. There are two areas that would remain as Agriculture in this alternative: 1) the area north of Barstow Avenue (including an imaginary extension of Barstow to Highland) and 2) the area between Dakota Avenue/Gould Canal and a 1/4-mile south of Ashlan Avenue.

The development that would occur from the properties designated Very Low and Low Density Residential within the two areas described above would instead occur through an increase in density throughout the remaining portions of the Specific Plan. This alternative not fully meet the objectives of the City in terms of achieving an appropriate mix of land uses, transition between densities, separation of farming and urban land uses and maintaining a small town atmosphere.

10.4.1 Aesthetics/Light and Glare

Due to the reduced conversion of existing farmland to urban uses, aesthetic impacts would be reduced. However, given the implementation of the General Plan policies protecting natural resources, and requirement of design standards to guide quality development, this impact is anticipated to be less than significant. The significant, unmitigated light and glare impact associated with the project is associated with the general increase in illumination of night skies. Despite the imposition of mitigation for controlling nuisance lighting and glare, this impact is recognized as significant and unavoidable. With a more compact urban form and more farmland remaining surrounding the Urban Center, the light impact would occur across a more limited area. As a result, the Increased Urban Core Density Alternative would reduce the significant light and glare impact, but the impact would still be considered significant. Although this difference is considered marginal, the Increased Urban Core Density Alternative is considered environmentally superior to the proposed project in terms of light and glare.

10.4.2 Agricultural Resources

The Urban Center concept is designed to address the problem of haphazard development patterns and the loss of agricultural resources. The General Plan alternative would result in the preservation of additional agricultural lands when compared to the proposed project. Both this alternative as well as the proposed project Plan would include the goals and policies of the General Plan encouraging the preservation of agricultural and requiring adequate buffers between rural and urban land uses. The Increase Urban Core Density alternative would reduce the impact to agricultural resources at least in the short-term. However, the impact on such resources would still be recognized as significant. This alternative would not fully satisfy the City's objectives concerning the achievement of the appropriate mix of land uses and transitions from low to higher densities in the Urban Center. The Increased Urban Core Density Alternative may also have a greater potential to create conflicts between on-going farming operations and urban land uses.

The Increased Urban Core Density Alternative is considered environmentally superior to the proposed project, although this improvement is considered marginal.

10.4.3 Air Quality

The proposed project would result in significant impacts related to both construction- and operationsrelated pollutant emissions. The Increased Urban Core Density Alternative would result in the same amount of residential and commercial development, but within a more compact urban form. Higher densities within a balanced community are generally recognized as reducing travel demand and vehicle miles traveled. As a result, this Alternative is considered environmentally superior to the proposed project in terms of air quality impacts. However, the impact is still considered significant and unavoidable.

10.4.4 Biological Resources

Impacts associated with biological resources would be slightly lower under the Increased Urban Core Density Alternative than the proposed project given a greater amount of area remaining as agriculture. Although much of the agricultural land is currently disturbed, the conversion of it to urban uses would permanently destroy any potential habitat that exists in the area. Both this alternative and the proposed project would implement the General Plan goals and policies protecting biological resources. The project area is not considered particularly sensitive in terms of biological impacts and its development under either scenario would not result in significant impacts to biological resources.

10.4.5 Cultural Resources

The project area was determined to have a low sensitivity for historic, archaeological and paleotonological resources. As a result, development of the area under either the proposed project could or the Increased Urban Core Density Alternative could occur without significant impacts. However, due the reduced area slated for disturbance, this alternative is considered marginally superior to the proposed project.

10.4.6 Hydrology

Due to the preservation of additional agricultural land, this alternative is anticipated to result in a greater amount of area undeveloped. The Urban Center would be developed at greater densities, which would require construction of infrastructure to support this level of development. The project area is not particularly sensitive in terms of hydrologic or flooding issues and development under either scenario would not result in significant, unavoidable impacts. However, because of the reduced amount of impervious surfaces created, the Increased Urban Core Density Alternative is considered environmentally superior to the proposed project.

10.4.7 Land Use and Relevant Planning

The Increased Urban Core Density Alternative is consistent with the City's Urban Centers concept in a general sense. However, the proposed Southeast Urban Center Specific Plan is the result of a long planning process and is considered the ideal mix of land uses and appropriate mix of land uses. The Increased Urban Core Density Alternative would alter this mix and increase remaining densities across the board. The transitions from low to higher densities would be more abrupt and the potential for conflicts between farming operations and urban uses would be greater. Also, the Increased Urban Core Density Alternative is not consistent with the City's objectives of accommodating growth, but maintaining a small town atmosphere. Finally, the densities required in this alternative are not desirable and may not be feasible given market conditions for the Fresno/Clovis metropolitan area. The Increased Urban Core Density Alternative is considered environmentally inferior to the proposed project.

10.4.8 Noise

Although project-generated traffic volume would likely be identical, trip length and trip concentration would not be. As such, there is some potential for additional noise impacts along certain roadways. However, there would also be a corresponding drop in generated noise in the areas that have been preserved as agricultural. Overall, the alternative would generate similar noise impacts as the proposed Southeast Urban Center Specific Plan.



Noise levels at certain off-site sensitive receptor locations were found to be significant under the current project. The Increased Urban Core Density Alternative would result in the same amount of residential and commercial development, but within a more compact urban form. While the number of trips that occur within the Urban Center may be reduced under this alternative, the number of trips on nearby arterials would remain about the same. The impact on noise sensitive uses surrounding the Urban Center would remain significant land unavoidable under both the Increased Urban Core Density Alternative and the proposed project. The Increased Urban Core Density Alternative is considered neutral in terms of potential noise impacts relative to the proposed project.

10.4.9 Public Safety and Health

The project area is not particularly sensitive in regards to soil contamination, hazardous materials or public safety considerations. With low sensitivity at the project area and similar levels of development planned under both the project and the Increased Urban Core Density Alternative level of impact would not be considered significant. The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project.

10.4.10 Public Services and Utilities

The demand for public services and utilities would slightly decrease from the proposed Specific Plan. Some economies of scale could be gained by increasing the density in the urban core through the reduction of water and sewer lines construction. Furthermore, although the population would likely remain constant, and thus the number of service calls would as well, fire and police services would have a smaller coverage area, and thus would have reduced response times. The demand for school bussing may also be reduced, saving the local Districts additional operational revenue. The Increased Urban Core Density Alternative is considered environmentally superior to the proposed project in terms of public services and utilities. However, the impact would not be considered significant under either scenario.

10.4.11 Socioeconomics

This alternative would have no effect on the number of dwelling units developed or jobs created as compared to the proposed project. Therefore, this alternative would have the same socioeconomic impact as the proposed Specific Plan. The Increased Urban Core Density Alternative is considered environmentally neutral as it concerns the project's potential impacts on socioeconomics.

10.4.12 Solls and Geology

The project area is not particularly sensitive in regards to soils and geologic conditions. Development can be accommodated under Increased Urban Core Density Alternative and significant, unavoidable impacts are not anticipated under either the proposed project or Increased Urban Core Density Alternative. The Increased Urban Core Density Alternative is considered environmentally neutral compared to the proposed project's potential impacts related to soils and geology.

10.4.13 Traffic and Circulation

The Increased Urban Core Density Alternative would alter the mix of land uses and increase the densities for non-agricultural densities across the board. The greater concentration of urban uses is expected to reduce internal trips, while external trips on the major arterials would remain about the same. The road network for the Increased Urban Core Density Alternative would be designed to accommodate the higher densities and significant, unavoidable impacts are not anticipated. The Increased Urban Core

Density Alternative is considered environmentally neutral as compared to the proposed project's potential impacts related to traffic and circulation.

10.4.14 Conclusion

Implementation of the Increased Urban Core Density Alternative would result in the same amount of overall development, but would concentrate the growth in the Urban Core, thereby preserving additional agricultural land along the northern and southern boundaries of the proposed project area. Ultimately, the alternative would result in reduced impacts to three of the four significant, unavoidable impacts associated with the project: light and glare, agricultural resources, and air quality. Noise, the fourth significant, unavoidable impact associated with the project would not be reduced through the selection of this alternative.

The Increased Urban Core Density Alternative is considered environmentally superior to the proposed project for its ability to reduce three of the four significant impacts. However, the proposed Southeast Urban Center Specific Plán is the result of a long planning process and is considered the ideal mix of land uses and appropriate mix of land uses. The Increased Urban Core Density Alternative would alter this mix and increase remaining densities across the board. The transitions from low to higher densities would be more abrupt and the potential for conflicts between farming operations and urban uses would be greater. Also, the Increased Urban Core Density Alternative is not consistent with the City's objectives of accommodating growth, but maintaining a small town atmosphere. Finally, the densities required in this alternative are not desirable and may not be feasible given market conditions for the Fresno/Clovis metropolitan area.

10.5 ALTERNATIVE SITES

Environmental impact reports must identify alternatives to the project or to the location of the project (CEQA Guidelines Section 15126.6(a)). Alternative sites are appropriate where changing a project's location would avoid or substantially lessen any of the project's significant, unmitigated impacts. In this instance, the project area is not considered particularly sensitive, meaning that moving the proposed land uses to another location would not avoid or reduce any significant impacts. Because the impacts that were found to be significant and unavoidable, light and glare, agricultural resources, air quality, and noise are not specific to this site, an alternative site would not result in a reduction in any significant, unavoidable impacts. For this reason, an alternative site is not included in this analysis.

10.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR must identify an "environmentally superior" alternative among the alternatives evaluated and where the "no project alternative" is identified as environmentally superior, the EIR is then required to identify as environmentally superior an alternative from among the others evaluated. Each alternative's environmental impacts are compared to the proposed project and determined to be environmentally superior, neutral or inferior. However, the proposed project's impacts that are found to be significant and unavoidable are used in making the final determination of whether an alternative is environmentally superior or inferior to the proposed project. Only the impacts involving light and glare, agricultural resources, air quality, and noise were found to be significant and unavoidable.

The No Project/Existing County Zoning Alternative is environmentally inferior to the proposed project in terms of its impacts on light and glare, agricultural resources and air quality. Its impact on noise is considered neutral in comparison to the proposed project. As a result, the No Project/Existing County Zoning Alternative is considered environmentally inferior to the proposed project.



10. Alternatives

The No Project/Existing Clovis General Plan Alternative is not considered environmentally superior to the proposed project. The significant, unavoidable impacts associated with the project – light and glare, loss of agricultural resources, air quality and noise – would not be reduced under this alternative.

The Increased Urban Core Density Alternative is considered the environmentally superior alternative. It would reduce significant, unavoidable impacts associated with light and glare, loss of agricultural resources and air quality. It is considered neutral in terms of impacts on noise. While this project would reduce three of the four significant impacts of the project, these reductions are considered marginal and the impacts would remain significant under this alternative.

Also, the proposed Southeast Urban Center Specific Plan is the result of a long planning process and is considered to provide a land use pattern that is preferable to that presented by the Increased Urban Core Density Alternative. The Increased Urban Core Density Alternative is not consistent with the City's objectives of accommodating growth, but maintaining a small town atmosphere. Finally, the densities required in this alternative are not desirable and may not be feasible given market conditions for the Fresno/Clovis metropolitan area.

11. Organizations and Individuals Contacted

CITY OF CLOVIS

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Janet Davis, Lieutenant, Police Department

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FRESNO COUNTY FIRE PROTECTION DISTRICT

Pete Marquez

FRESNO COUNTY DEPARTMENT OF AGRICULTURE

Robert Vandergon, Agriculture Commission

FRESNO IRRIGATION DISTRICT

Mike Palmer, Chief Engineer

Alan Hoffman, Assistant District Engineer

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT

Dan Gilbert

Denise Wade

Kevin Neff

CLOVIS UNIFIED SCHOOL DISTRICT

Roger Oraze, Assistant Superintendent

SANGER UNIFIED SCHOOL DISTRICT

Richard Sepulveda, Director of Support Services



11. Organizations and Individuals Contacted

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Joseph Augustine, Head Librarian

PACIFIC GAS AND ELECTRIC

Tim Bosch, Industrial Power Engineer

Mike Ross, Engineer

Steve Spielman, Land Agent

PACIFIC BELL

Anna Bay, Planning Engineer

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12. Report Preparation Personnel

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GENERAL INFORMATION REFERENCES

City of Clovis

The Planning Center, City of Clovis General Plan, April 1993.

The Planning Center, City of Clovis General Plan Program, Current Conditions Report, June 1992.

The Planning Center, <u>City of Clovis General Plan Program, Final Environmental Impact Report Responses to Comments</u>, March 1993.

The Planning Center, <u>City of Clovis General Plan Program, Draft Environmental Impact Report Technical Appendices</u>, March 1993.

City of Fresno

City of Fresno, 2025 Fresno General Plan, February 1, 2002.

U.R.S. Corporation, <u>Draft Master Environmental Impact Report No. 10130, 2025 Fresno General Plan</u>, May 2002.

County of Fresno

County of Fresno, <u>Fresno County General Plan Public Review Draft Environmental Impact Report</u>, February 2000.

Agricultural Resources

California Depart of Conservation, Williamson Act Program Status Report
(www.consrv.ca.gov/DLRP/lca/pubs/WEB%20Co%20Table%20Tot%20En.xls), viewed on October 7, 2002.

California Depart of Conservation, Fresno County 1998-2000 Land Use Conversion Table, (www.consrv.ca.gov/DLRP/fmmp/pubs/1998_2000/conversion_tables/frecon00.xls), viewed on October 7, 2002

California Department of Food and Agriculture Resource, "California Agricultural Overview: Statistical Reference," Department of Food and Agriculture Resource Directory 2001, (www.cdfa.ca.gov/docs/CAStats01.pdf).

Air Quality

California Air Resources Board, CALINE4 Computer Model, 1990

California Air Resources Board, MVEI7G Computer Model, Version 1.0, December 1995

California Air Resources Board, URBEMIS2001 for Windows Version 6.2.1, 2001

California Air Resources Board, URBEMIS7G Computer Model, Version 3.1, August 1998

CalTrans, Transportation Project-Level Carbon Monoxide Protocol, December 1997



San Joaquin Valley Unified Air Pollution Control District, Revised Guide for Assessing and Mitigating Air Quality Impacts, January 2002.

Blology

David, Hartsveldt, Live Oak Associates, Inc., Biological Resources, November, 2002.

Cultural Resources

Wren, Donald G., <u>A Cultural Resource Study for the Clovis Southeast Specific Plan</u>, Clovis, California, January 2002.

Noise

CalTrans, Sound32 Noise Prediction Model, Release 07/30/91

CalTrans, Technical Noise Supplement, October 1998

City of Clovis, Clovis Municipal Code, March 2002

Fresno County, Fresno County General Plan, October 2000

- U.S. Department of Housing and Urban Development, A Guide to HUD Environmental Criteria and Standards Contained in 24 CFR Part 51, August 1984
- U.S. Department of Housing and Urban Development, The Noise Guidebook, March 1985
- U.S. Environmental Protection Agency, Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances, Bolt, Beranek, and Newman, 1971

Public Safety and Health

Hazardous Waste and Substances Site List (Cortese List); Department of Toxic Substances Control, October 2002.

CERCLIS Hazardous Waste Sites in California, U.S. Environmental Protection Agency, November 2002;

National Priorities List Sites in California, U.S. Environmental Protection Agency, November 2002;

Water Purveyors Quarterly Report on Methyl Tertiary Butyl Ether (MTBE), California Regional Water Quality Control Board, July 2002;

Leaking Underground Storage Tanks Quarterly Report, California Regional Water Quality Control Board, July 2002;

Hazardous Materials Section of the Fresno County General Plan EIR, February 2002; and

Analysis of operating procedures for the proposed project related to hazardous materials.

Public Services And Utilities

City of Clovis, Wastewater-Sewer Treatment Plan/Water Reuse Facility, July 22, 2002

- Blair, Church & Flynn, City of Clovis Wastewater Master Plan Update, Phase 1-B, November 20, 1996.
- Provost & Pritchard, Inc., <u>City of Clovis Water System Master Plan-Phase II, Executive Summary</u>, July 1998
- Kenneth D. Schmidt & Associates and Provost & Pritchard, Inc., <u>City of Clovis Water Master Plan</u>
 <u>Update Phase 1</u>, April 1995.
- Kenneth D. Schmidt & Associates and Provost & Pritchard, Inc., <u>City of Clovis Water Master Plan</u> <u>Update - Phase II, Facilities Plan</u>, July 1999.
- Land Use Associates, <u>Surface Water Treatment Facility Analysis of Three Alternative Site Initial Study/Mitigated Negative Declaration</u>, May 10, 2002.
- Fresno Irrigation District, Groundwater Report, January 1, 2002.
- Heather Kulterman, "CHS Enrollment Decline May Mean Boundary Changes," <u>Clovis Independent</u>, September 13-19, 2002.

Socioeconomics

U.S. Census 2000

Public Economics, Inc., City of Clovis "Baseline Economic and Market Analysis Proposed Southeast Urban Center Specific Plan," October 2001.



Traffic

- National Research Council, <u>Highway Capacity Manual</u>, Transportation Research Special Report 209, Fourth Edition, Updated 2000.
- McTrans Center for FHWA, Highway Capacity Software, University of Florida, Release 4.1, 2000.
- Institute of Transportation Engineers, Trip Generation, Sixth Edition, February 1997.
- San Diego Association of Governments, <u>San Diego Traffic Generators</u>, January 1990, Updated July 1995.
- Council of Fresno County Governments, Fresno Draft Regional Transportation Plan, September 2001.
- Council of Fresno County Governments, Fresno Regional Traffic Monitoring, May 2001.



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LETTER A

ac acres

ACM Asbestos Containing Material ACOE U.S. Army Corps of Engineers

ADT Average Daily Traffic
AGR Agricultural Supply (water)

AHERA Asbestos Hazard Emergency Response Act, 1986

APCD Air Pollution Control District
APN Assessor Parcel Number
AQAP Air Quality Attainment Plan

AQGGP Air Quality Guidelines for General Plans

ARB Air Resources Board

ASBS Areas of Special Biological Significance

avg average

LETTER B

BIOL Biological Habitats of Special Significance (water)

BMP Best Management Practice

BNSF Burlington Northern and Santa Fe (railroad)

LETTER C

CAAQS California Air Quality Standard

Cal-EPA California Environmental Protection Agency

CALINE California Line Source Model

CalTrans California Department of Transportation
CDBG Community Development Block Grant
CDFG California Department of Fish and Game
CEQA California Environmental Quality Act

CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980

CESA California Endangered Species Act

CFD Clovis Fire Department
CFR Code of Federal Regulations
CFS Cubic Feet per Second

CIWMB California Integrated Waste management Board

CMP Congestion Management Plan
CNEL Community Noise Equivalent Level

CO Carbon Monoxide
COG Council of Governments
CPD Clovis Police Department
CTR California Toxics Rule
CUSD Clovis Unified School District

CVRWQCB Central Valley Region of the Regional Water Quality Control Board (RWQCB)

CWA Clean Water Act

LETTER D

dB Decibel

dBA Decibel, A weighted

DHSONC Department of Health Services Office of Noise Control (California)

dia diameter

DOC California Department of Conservation

DOF Department of Finance



DOGGR Division of Oil, Gas and Geothermal Resources

DBCP dibromo-3-chloropropane

DTSC Department of Toxic Substances Control

DU Dwelling Unit

LETTER E

EBEP Enclosed Bays and Estuaries Plan

EDP ethylene dibromide

EFZ Earthquake Fault Zones

EIR Environmental Impact Report

EMS Emergency Medical Services

EPA Environmental Protection Agency

ESA Environmental Site Assessment

etc etcetera

LETTER F

FAR Floor Area Ratio FAX Fresno Area Express

FCDA Fresno County Department of Agriculture FCFPD Fresno County Fire Protection District

FCOG Fresno County Governments

FEMA Federal Emergency Management Agency

FESA Federal Endangered Species Act

FID Fresno Irrigation District
FIRM Flood Insurance Rate Map

FMFCD Fresno Metropolitan Flood Control District FMMP Farmland Mapping and Monitoring Program

FRSH Freshwater Replenishment

LETTER G

GAC granular activated carbon

GPM Gallons per Minute

GWR Groundwater Recharge (water)

LETTER H

HAS Health Services Agency

HCD Housing and Community Development, Department of

HHWE Household Hazardous Waste Element

hr hour

HSWA Hazardous and Solid Waste Amendments of 1984

HUC hydrologic unit codes

HUD U.S. Department of Housing and Urban Development

Hz Hertz

LETTER I

IEC International Electrotechnical Commission

IS Initial Study

ISWP Inland Surface Waters Plan

LETTER J

LETTER K

None

LETTER L

LAFCO Local Agency Formation Commission
Ldn Day-night Average Sound Level
LEA Local Enforcement Agency
Leq equivalent noise level

L_{min} minimum root-mean-square noise levels obtained over a period of 1 second maximum root-mean-square noise levels obtained over a period of 1 second

LOS Level of Service

LUST Leaking Underground Storage Tank

LETTER M

MBTA Migratory Bird Treaty Act (federal)
MGD Millions of Gallons per Day
MOU Memorandum of Understanding

mph miles per hour

MTBE Methyl Tertiary Butyl Ether

MUN Municipal and Domestic Supply (water)

MWN Municipal and Domestic Supply

LETTER N

NAAQS National Ambient Air Quality Standards
NAWQA National Water-Quality Assessment
NGVD National Geodetic Vertical Datum

NO Nitric Oxide

NO2 Nitrogen Dioxide

NOI Notice of Intent

NOT Notice of Termination

NOX Nitrogen oxides

NPDES National Pollutant Discharge Elimination System

NPL National Priorities List

NRHP National Register of Historic Places

LETTER O

OSHA Occupational Safety and Health Administration (Federal)

LETTER P

PEA Preliminary Endangerment Assessment

PEI Public Economics, Inc.

PG&E Pacific Gas and Electrical Company

PM₁₀ Particulate Matter less than 10 microns in diameter PM₂₅ Particulate Matter less than 2.5 microns in diameter

ppm Parts per million

PRC Public Resources Code (California)

LETTER Q



LETTER R

RARE Rare, Threatened, or Endangered Species (water)

REC Noncontact Water Recreation (water)
RCRA Resource Control and Recovery Act of 1974
RMPP Risk Management and Prevention Plan

ROG Reactive Organic Gases

RTBD Research and Technology Business Park
RWQCB Regional Water Quality Control Board

LETTER S

SARA Superfund Amendments and Reauthorization Act of 1986

SCS United States Soil Conservation Service

SJVAB San Joaquin Valley Air Basin

SJVAPCD San Joaquin Valley Air Pollution Control District

SO₂ Sulfur Dioxide SOI Sphere of Influence

SOx Sulfur Oxide

SRRE Source Reduction and Recycling Element
SSJVIC Southern San Joaquin Valley Information Center

SUSD Sanger Unified School District

SWD Solid Waste Division

SWPPP Stormwater Pollution Prevention Program SWRCB State Water Resources Control Board

SWTP Surface Water Treatment Plant

LETTER T

TDM Transportation Demand Management
TDR Transfer of Development Rights
TSD Treatment, Storage, Disposer
TSP Total Suspended Particulates

LETTER U

μg/m3 Micrograms Per Cubic Meter

USEPA United States Environmental Protection Agency

USFS United States Forest Service
USFWS US Fish and Wildlife Service
USGS US Geological Survey
UST Underground Storage Tank

LETTER V

VELB valley elderberry longhorn beetle

vpd vehicles per day

LETTER W

WARM Warm Freshwater Habitat (water)
WDR Waste Discharge Requirements

WILD Wildlife Habitat (water)
WWTP Wastewater Treatment Plant

LETTER X

LETTER Y

None

LETTER Z



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