

4 Analysis of Alternatives

CEQA mandates consideration and analysis of a reasonable range of alternatives to the proposed General Plan. According to CEQA Guidelines, the range of alternatives “shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts” (Section 15126.6(c)). The alternatives may result in new impacts that do not result from the proposed General Plan.

Case law suggests that the discussion of alternatives need not be exhaustive and that alternatives be subject to a construction of reasonableness. The impacts of the alternatives may be discussed “in less detail than the significant effects of the project proposed” (CEQA Guidelines Section 15126.6(d)). Also, the Guidelines permit analysis of alternatives at a less detailed level for general plans and other program EIRs, compared to project EIRs. The Guidelines do not specify what would be an adequate level of detail. Quantified information on the alternatives is presented where available; however, in some cases only partial quantification can be provided because of data or analytical limitations.

4.1 BACKGROUND OF ALTERNATIVES DEVELOPMENT

The alternatives considered in this analysis originate in the Sketch Plan Workbook, the second key step in the General Plan update process for Lemoore. The Sketch Plans were published and distributed to members of the General Plan Steering Committee (GPSC) and to City Staff, then discussed at a community meeting on November 13, 2006. They present alternative approaches to accommodating continued growth in Lemoore, while protecting the quality of life and character of its existing neighborhoods, shopping areas, and Downtown. They formed the early foundation for what became, with community input, the Preferred Plan Concept and now the proposed General Plan. They also avoid or substantially lessen environmental impacts in some areas, a criterion for selecting alternatives.

ALTERNATIVES INITIALLY CONSIDERED

The Sketch Plans were created to illustrate ideas for the City’s future in the form of two schematic land use alternatives:

- Sketch Plan A: West Hills Focus; and
- Sketch Plan B: Corridor and Core Focus.

The two Sketch Plans, *Corridor and Core Focus* and *West Hills Focus*, share a common program. In general, both plans provide similar numbers of new housing units and employment opportunities, with Alternative A providing greater overall development. Both schemes call for new trails, parks, and open space consistent with the City’s park planning efforts. Both schemes incorporate development on the west side of SR-41, as well as the expanded wetlands conservation area on the westernmost edge of development. The building block of both Sketch Plans is the neighborhood unit. This unit is designed to maintain the “small-town” character of

Lemoore by providing walkable neighborhoods and neighborhood commercial centers near where residents live. Wherever possible, the core of the unit is a combination of open space and public (elementary school) use. This combination of uses creates an active center to the new neighborhoods. Finally, the Sketch Plans have similar vehicular circulation systems, which connect to existing streets, facilitate an extension of the current system, and distribute traffic throughout the grid.

Alternatives Not Carried Forward for Analysis

A non-residential alternative to buildout on the Westside of Lemoore was considered during the planning process as an option to reduce residential exposure to NASL aircraft noise. This option was rejected for further analysis because it did not meet the City's planning objectives for the General Plan; more specifically, two reasons justified rejections of this alternative: a) most of the area on the Westside is already annexed to the City with entitlements, has an approved subdivision map for residential development, and has two existing schools (West Hills College and a charter school), and b) the City has a strong interest in neither encroaching on prime farmland to the north, nor leapfrogging development over the Lemoore Canal to the east, nor extending south into protected dairy areas. The majority of GPSC members did not endorse a "grow east" alternative with no Westside development. For these reasons, a non-residential alternative for West Lemoore was not selected for this EIR.

4.2 DESCRIPTION OF ALTERNATIVES

The following alternatives to the proposed General Plan are evaluated in this EIR:

- Alternative A: West Hills Focus;
- Alternative B: Corridor and Core Focus; and
- The No Project Alternative.

Alternative A and B are derived from Sketch Plan alternatives presented in the *Sketch Plans* report published for the General Plan Steering Committee in December 2006. Both alternatives presented various strategies for responding to community needs and projected market demand for a variety of land uses. Alternative A is the refinement of Sketch Plan A that focuses development around West Hills College. Alternative B is the refinement of Sketch Plan B which spreads development evenly along all edges of existing City limits. The proposed General Plan was prepared based on the responses of the community and policy direction from the GPAC and City Council after reviewing the original Sketch Plans. The No Project Alternative represents expected development patterns if no general plan update occurred and instead the existing 1992 General Plan were to remain in effect.

Table 4.2-1 summarizes buildout projections under the proposed General Plan and each of the alternatives. It includes a comparison of the ratio of jobs to employed residents.

Table 4.2-1 Comparison of the Proposed General Plan and Alternatives at Buildout

<i>Alternative</i>	<i>Housing Units</i>	<i>Jobs</i>	<i>Households</i>	<i>Employed Residents</i>	<i>Jobs/Employed Residents Ratio</i>
Proposed Plan	16,300	21,780	15,490	21,230	1.03
Alternative A	16,720	18,320	15,880	21,767	0.84
Alternative B	16,150	18,210	15,350	21,036	0.87
No Project	11,970	17,280	11,370	15,611	1.11

Employed residents assumed to be 0.44 of total population based on current levels and adjusted for future population trends.

Source: Dyett & Bhatia, 2007.

ALTERNATIVE A: WEST HILLS FOCUS

Alternative A supports intensification in West Lemoore by creating a major new focal point around West Hills Community College. In terms of residential land use, Alternative A places a stronger emphasis on low-density, single family homes with approximately 85 percent of all housing units contained in the Plan falling under the very-low and low density category. The combined use of agriculture land with housing is discouraged here, as only one percent of all residential land use fall under the Agriculture/Rural category. A mix of medium density housing and neighborhood supporting commercial uses are centered on new elementary and middle school sites. Owing to the greater number of housing units, Alternative A has more mixed use and neighborhood commercial than the proposed General Plan. These facilities are located in close proximity to serve the residents.

Geographically, Alternative A adopts a “grow west” strategy focusing on development on the west, northwest, and north of the Planning Area. As opposed to the proposed General Plan, no development is proposed east of 17th Avenue. Scattered development can be found along Lemoore Canal and infill is proposed throughout the City. Overall, urban coverage is greater in the alternative than under the proposed General Plan.

A main component in Alternative A is the inclusion of a large City Park located northwest of the Planning Area along Industrial Way. Instead of a large number of scattered park parcels in the case of the proposed General Plan, the alternative has fewer and smaller neighborhood parks. The City Park more than compensates for the fewer neighborhood parks as total park area is 30 percent greater than the proposed General Plan. Additional greenways, trailways and buffer areas are proposed along canals and highway corridors for aesthetic, noise, as well as recreation purposes.

Regional commercial and professional office areas are introduced along highway corridors for maximum accessibility and convenience to businesses while light industry can be found at two areas – around the rail line near the existing Leprino Factory and south of Iona Avenue near SR-41. Both areas are expected to become major employment centers to support job growth in Lemoore during the next 23 years. Alternative A is illustrated in Figure 4.2-1.

ALTERNATIVE B: CORRIDOR AND CORE FOCUS

The development concept underlying Alternative B is an even distribution of new residential development around existing City limits and new commercial along circulation corridors. Based

on Sketch plan B, this alternative proposes new growth that is similar in character to recent development in Lemoore. Single-family homes are prioritized here, with low-density residential development consisting of over 70 percent of all housing units. Very-low density residential and low-medium density residential are proposed in small numbers. Although Alternative B has a different residential land use mix, its total number of housing units is similar to the proposed General Plan. As such, the total buildout population is expected to be similar.

The size and focus of urban growth is likewise similar to the proposed General Plan with an equal distribution of development at the western (centered around West Hills College), the northern (north of Hanford Armona Road but below the northern Planning Boundary) and southeastern (along Lemoore Canal) portion of the Planning Area. Unlike the proposed General Plan, no development is proposed east of 17th Avenue. Infill development can be found throughout the City. Overall, urban land coverage is less than Alternative A but similar to that of the proposed General Plan.

Neighborhood Parks are distributed throughout the City near residential areas so residents can walk or bike to them. The only conceptual difference from the proposed General Plan is the existence of a linear park along the lower half of Lemoore Canal, where only a linear trail is proposed in the proposed General Plan. Open space areas are found in greenways or buffers along highways, wetlands in the western edge of the Planning Area, and preserved in surrounding agriculture and pasture.

Employment generating uses are centered along major circulation corridors for ease of access. The alternative retains the highway commercial designation of the existing General Plan and proposes a major center at the junction of Iona Avenue and SR-198. Unlike the proposed General Plan, no Business Park land use is proposed in this alternative. Consequently, most employment will come from industrial areas located around the rail line near the existing Leprino Factory and south of Iona Avenue near SR-41. Neighborhood commercial has been introduced throughout the City in close proximity to schools and residential neighborhoods. This alternative does not provide sites for mixed-use development. Alternative B is illustrated in **Figure 4.2-2**.

NO PROJECT ALTERNATIVE

Consideration of the No Project Alternative is required by CEQA in all EIRs and represents the continuation of the current City of Lemoore 1992 General Plan land use designations. In the absence of the proposed General Plan, the existing General Plan and Zoning Ordinance would continue to guide development in the Planning Area. There are many differences between the proposed General Plan and the No Project Alternative. As compared to the proposed General Plan, the No Project Alternative:

- Does not implement new policies proposed in the new General Plan,
- Provides no Business Park and no Mixed-use land designation,
- Does not provide neighborhood centers focused on school and park combinations,
- Does not provide circulation improvements required to accommodate population growth,

- Shows a community or City park at the western end of the City near West Hills College, where land should be conserved due to wetlands located there,
- Does not include the 430 acre Business, Industrial and Technology Reserve in the proposed General Plan.

The No Project Alternative is illustrated in **Figure 4.2-3**, and a detailed buildout comparison of all four alternatives is provided in **Table 4.2-2**.

Table 4.2-2 Buildout and Existing (2006) Conditions: Proposed General Plan and Alternatives

	<u>Housing Units</u>			<u>Households</u>			<u>Population</u>			<u>Jobs</u>		
	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>	<i>Existing</i>	<i>Buildout</i>	<i>Additional</i>
Proposed Plan	7,860	16,300	8,440	7,470	15,490	8,020	23,390	48,250	24,860	5,260	21,780	16,520
Alternative A	7,860	16,720	8,860	7,470	15,880	8,410	23,390	49,470	26,080	5,260	18,320	13,060
Alternative B	7,860	16,150	8,290	7,470	15,350	7,880	23,390	47,810	24,420	5,260	18,210	12,950
No Project	7,860	11,970	4,110	7,470	11,370	3,900	23,390	35,480	12,090	5,260	17,280	12,020

Notes: Rounded to nearest tenth. For projected buildout, households equal 95 percent of the total housing units (assuming a 5 percent vacancy rate). Housing unit buildout totals include housing units in projects that have been approved or are under review ("pipeline projects") plus additional units attributable to each alternative.

Source: Dyett & Bhatia, 2007.

Figure 4.2-1 Alternative A Map

Back

Figure 4.2-2 Alternative B

Alternative B back

Figure 4.2-3 No Project Alternative

Back

4.3 COMPARATIVE IMPACT ANALYSIS

This comparative analysis of alternatives evaluates impacts in the same environmental issue areas analyzed in Chapter 3 for the proposed General Plan. Alternatives are generally compared to the proposed General Plan and subject to the same significance criteria. It is assumed that Alternatives A and B would generally include the same policies as those defined for the proposed General Plan, excluding site specific policies that would not apply because of differences in planned land use.

LAND USE AND AGRICULTURE

Table 4.3-1 shows land use by acreage at full buildout of each alternative. The alternatives differ in the amount of land dedicated to residential and non-residential uses, as well as in the density and intensity of development. As a result, each alternative would provide a different number of housing units and population. While the proposed General Plan and all alternatives share the same Planning Area, the proposed General Plan, Alternative A and Alternative B have unique Urban Growth Boundaries around urban land uses to promote compact development and prevent sprawl. The No Project alternative does not have a specific Urban Growth Boundary.*

Another difference between the four options is that the proposed General Plan has a Business, Industrial, and Technology Employment Reserve Area proposed at the southwest quadrant between SR-198 and SR-41. Alternative A, Alternative B, and the No Project Alternative do not have such a reserve.

The proposed General Plan will result in 8,440 additional housing units and 24,860 additional residents. At full buildout, 2,800 acres of agriculture land or 23 percent of the existing Planning Area will need to be converted to urban land uses (see Table 4.3-2). The proposed General Plan devotes more land to commercial, office, and business park developments compared to the other alternatives.

Alternative A will result in 8,860 additional housing units and 26,080 additional residents. At full buildout, 2,570 acres of agriculture land or 21 percent of the existing Planning Area will need to be converted to urban land uses. Compared to the proposed General Plan, Alternative A has residential land use at the northwest corner of the Planning Area but no Business, Industrial and Technology Reserve at the southwest quadrant of the Planning Area. The densities of both Alternative A and the proposed General Plan are similar with one major difference – only 5 acres of land are proposed for joint agriculture/residential use under Alternative A, whereas the proposed General Plan proposes 186 acres for joint agriculture/residential use.

Alternative B will result in 8,290 additional housing units and additional 24,420 residents. At full buildout, 2,210 acres of agriculture land or 18 percent of the existing Planning Area will need to be converted to urban land uses. Compared to the proposed General Plan, Alternative B has slightly more land coverage at the northern edge of the Planning Area. Additionally, it devotes more land to low density housing, but less land to medium density housing, low-medium density

* The existing General Plan plans to limit urban growth “within Lemoore City limits as they exist on January 1, 2000, except where any change in the City limit is initiated by a legislative action of the City Council”. Lemoore 1993 General Plan, Land Use, page 74

housing and industrial uses. Alternative B also does not have a Business Park, mixed use areas, or a Business, Industrial and Technology Reserve.

Table 4.3-1 Planned Land Use at Buildout by Alternative

<i>Land Use Category¹</i>	<i>Proposed</i>			
	<i>Plan</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
Agriculture/ Rural Residential	213	5	53	-
Very Low Density Residential	518	605	279	50
Low Density Residential	1,124	1,191	1,561	540
Low-Medium Density Residential	268	267	208	472
Medium Density Residential	77	77	39	71
High Density Residential	-	-	-	65
<i>Residential Land Subtotal</i>	<i>2,200</i>	<i>2,144</i>	<i>2,140</i>	<i>1,197</i>
Mixed Use	91	89	-	-
Neighborhood Commercial	52	47	79	-
<i>Mixed Use Subtotal</i>	<i>143</i>	<i>136</i>	<i>79</i>	<i>-</i>
Community Commercial	-	-	-	143
Commercial	63	145	57	31
Service Commercial	-	-	-	-
Highway Commercial	99	-	82	50
Professional Office	90	54	82	7
Business Park	105	58	-	-
Planned Industrial	-	-	-	17
Industrial	674	606	580	332
Heavy Industrial	41	-	-	-
*Business, Industrial, and Technology Reserve ²	398	-	-	-
<i>Commercial/Office/Industrial Subtotal</i>	<i>1,471</i>	<i>863</i>	<i>900</i>	<i>580</i>
Public Institutional	215	190	210	85
Community Facilities	-	-	-	-
Parks/Recreation	201	251	191	146
Greenway/ Basin	207	63	35	54
Wetlands	655	732	735	-
Agriculture	3,240	3,480	3,603	5,809
<i>Other Subtotal</i>	<i>4,517</i>	<i>4,717</i>	<i>4,774</i>	<i>6,095</i>
Total	8,330	7,860	7,890	7,870

¹ Excludes existing developed areas

² The area designated as Business, Technology and Industrial Reserve is for long term development. Planning for this area is not likely to be initiated before 2020, at a time when at least 75 percent of the planned development north of SR-198 has occurred.

Source: City of Lemoore, Dyett & Bhatia, 2007.

Table 4.3-2 Farmland and Williamson Act Land Conversion at Buildout by Alternative

<i>Land Use Alternatives</i>	<i>Converted Farmland</i>	<i>Converted Williamson Act lands</i>
Proposed Plan	2,802	2,023
Alternative A	2,572	1,472
Alternative B	2,210	1,205
No Project	1,220	774

Does not include converted land categorized under "other" category

Source: California Department of Conservation, *Farmland Mapping and Monitoring, 2006*. Dyett & Bhatia, 2007.

The No Project Alternative will result in 4,110 additional housing units and additional 12,090 residents. This requires the conversion of 1,220 acres of agriculture land representing 10 percent of the Planning Area into urban land uses. Compared to the proposed General Plan, the No Project Alternative has a smaller land coverage at the north, south, and east side of the Planning Area. The alternative also does not have a Business Park land use or a Business Industrial and Technology Reserve.

TRANSPORTATION

While there is some variation in the modeling predictions, all four land use alternatives have similar overall transportation impacts. The highest amount of local versus regional traffic is created under the proposed General Plan. This results in less regional traffic and resultant impacts and more localized travel with the City of Lemoore. Based upon daily vehicle trip patterns, the No Project Alternative produces the least amount of travel between Lemoore and the region. However, the amount of regional traffic through the City of Lemoore is less under the proposed General Plan than the No Project Alternative. Finally, in terms of vehicle miles traveled, Alternative A produces the least number of vehicle miles traveled, and so is environmentally superior in terms of overall transportation impacts. Specific comparisons follow.

Trip Generation

As shown in Table 4.3-3, all of the alternatives generate fewer trips than the proposed General Plan. Overall the No Project Alternative creates the least number of trips on the system.

Table 4.3-3 Trip Generation by Alternative

<i>Land Use Alternatives</i>	<i>Daily</i>	<i>AM Peak-Hour</i>			<i>PM Peak-Hour</i>		
		<i>In</i>	<i>Out</i>	<i>Total</i>	<i>In</i>	<i>Out</i>	<i>Total</i>
Proposed Plan	426,410	18,971	16,807	35,778	20,527	21,660	42,187
Alternative A	386,906	16,928	15,605	32,533	18,860	19,537	38,397
Alternative B	385,529	16,935	15,471	32,406	18,713	19,505	38,218
No Project	350,753	16,481	12,945	29,426	16,233	18,059	34,292

Source: Dowling Associates, 2007.

Trip Distribution Patterns

Trip distribution patterns created by the proposed General Plan and the alternatives, shown in Table 4.3-4, address three types of trips:

1. Trips that start and end within the City of Lemoore;
2. Trips between the City of Lemoore and the region;
3. Trips that travel through the City of Lemoore using regional roadways.

The proposed General Plan results in the most local trips within Lemoore, Alternative A results in the most trips between Lemoore and the region, and the No Project Alternative results in the most through-trips on regional roadways.

Table 4.3-4 Daily Vehicle Trip Patterns by Alternative

Land Use Alternatives	Trips within Lemoore	Trips between			Total		
		Lemoore and region	Through-Trips				
Proposed Plan	318,385	75%	64,365	15%	43,660	10%	426,410
Alternative A	283,272	73%	64,635	17%	38,999	10%	386,906
Alternative B	285,313	74%	60,470	16%	39,746	10%	385,529
No Project	248,144	71%	58,066	17%	44,543	13%	350,753

Source: Dowling Associates 2007, from Kings County Travel Demand Model.

Vehicle Miles Traveled

Another variable for evaluating the impacts of the General Plan alternatives is vehicle miles traveled (VMT). VMT is the total number of daily trips times the total number of miles traveled between trip origins and destinations. This metric can be useful as a gross comparison of the amount of traffic generated by different alternatives and takes into account the circuitous routes that drivers can take to avoid congested areas. Considering not only local trips but also regional trips, Table 4.3-5 shows that Alternative A has the least VMT.

Table 4.3-5 Local and Regional Vehicle Miles Traveled (VMT) by Alternative

Land Use Alternatives	Local VMT	Regional VMT	Total		
Proposed Plan	346,394	13%	2,294,375	87%	2,640,769
Alternative A	317,530	14%	1,996,422	86%	2,313,952
Alternative B	326,920	14%	2,027,209	86%	2,354,129
No Project	272,802	10%	2,387,455	90%	2,660,257

Local VMT= All trips that start and end within Lemoore. - Regional VMT = All trips that start or end in Lemoore

Source: Dowling Associates 2007, from Kings County Travel Demand Model.

Roadway System Analysis

Table 4.3-6 provides a comparison of the project alternatives to the proposed General Plan. Generally, the alternatives result in acceptable levels of service which are similar to those that would occur under the proposed General Plan. Some roadway segments operate at better levels of service, while others operate at slightly worse levels of service than the proposed General Plan with the planned improvements. No local roadway segments operate at unacceptable levels of service.

Table 4.3-6 Level of Service Comparison at Buildout by Alternative

Segment Descriptions			Level of Service with Planned Improvements								
RoadName	Segment Limit	Segment Limit	AB or BA	GP AM Level of Service (LOS)	GP PM Level of Service (LOS)	Alt A AM Level of Service (LOS)	Alt A PM Level of Service (LOS)	Alt B AM Level of Service (LOS)	Alt B PM Level of Service (LOS)	No Proj AM Level of Service (LOS)	No Proj PM Level of Service (LOS)
State Route (SR) 41	Idaho Avenue	SR-198	NB	A	B	A	B	A	B	A	B
	Idaho Avenue	SR-198	SB	B	A	A	A	B	A	C	B
	SR-198	Bush Street	NB	B	B	A	B	A	B	B	B
	SR-198	Bush Street	SB	B	B	B	B	B	B	B	B
	Bush Street	Hanford-Armona Road	NB	A	B	A	B	A	B	A	B
	Bush Street	Hanford-Armona Road	SB	B	B	B	B	B	A	B	A
State Route (SR) 198	21st Avenue/Marsh Drive	SR-41	WB	B	A	B	A	B	A	B	A
	21st Avenue/Marsh Drive	SR-41	EB	A	C	A	B	A	B	A	B
	SR-41	19th Avenue	WB	C	A	B	A	B	A	B	A
	SR-41	19th Avenue	EB	A	C	A	B	A	B	A	B
	19th Avenue	Vine Street	WB	C	A	B	A	B	A	C	B
	19th Avenue	Vine Street	EB	A	C	A	B	A	B	A	B
	Vine Street	Lemoore Avenue	WB	C	A	B	A	B	A	C	B
	Vine Street	Lemoore Avenue	EB	A	B	A	B	A	B	A	B
	Lemoore Avenue	D Street	WB	C	B	B	A	B	A	C	B
	Lemoore Avenue	D Street	EB	A	B	A	B	A	B	A	C
19th Avenue	Idaho Avenue	Iona Avenue	NB	B	C	C	C	B	C	C	C
	Idaho Avenue	Iona Avenue	SB	C	B	C	C	C	B	C	C
	Iona Avenue	SR-198 EB ramps	NB	C	C	C	C	C	C	C	C
	Iona Avenue	SR-198 EB ramps	SB	C	C	C	C	C	C	C	C
	SR-198 EB ramps	SR-198 WB ramps	NB	C	C	C	C	C	C	C	C

Chapter 4: Analysis of Alternatives

	SR-198 EB ramps	SR-198 WB ramps	SB	C	C	C	C	C	C	C	C
	SR-198 WB ramps	Cedar Lane	NB	C	C	C	C	C	C	C	C
	SR-198 WB ramps	Cedar Lane	SB	C	C	C	C	C	C	C	C
	Cedar Lane	Bush Street	NB	C	C	C	C	C	C	C	C
	Cedar Lane	Bush Street	SB	C	C	C	C	C	C	C	C
	Bush Street	Cinnamon Drive	NB	C	C	C	C	C	C	C	C
	Bush Street	Cinnamon Drive	SB	C	C	C	C	C	C	C	C
	Cinnamon Drive	Hanford-Armona Road	NB	B	C	B	C	B	C	B	C
	Cinnamon Drive	Hanford-Armona Road	SB	B	C	B	C	B	C	C	C
	Hanford-Armona Road	Lacey Boulevard	NB	C	C	C	C	C	C	C	C
	Hanford-Armona Road	Lacey Boulevard	SB	C	C	C	C	C	C	C	C
19th 1/2 Avenue	Bush Street	Cinnamon Drive	NB	C	C	C	C	C	C	C	C
	Bush Street	Cinnamon Drive	SB	C	C	C	C	C	C	C	C
	Silverado Drive	Bush Street	NB	C	B	C	C	C	B	C	B
	Silverado Drive	Bush Street	SB	B	C	B	C	B	C	B	C
21st Avenue	Idaho Avenue	SR-198	NB	C	C	A	A	A	A	C	C
	Idaho Avenue	SR-198	SB	C	C	A	A	A	A	C	C
	Jackson Avenue	Idaho Avenue	NB	C	C	A	A	A	B	C	C
	Jackson Avenue	Idaho Avenue	SB	B	C	A	A	A	A	A	C
Belle Haven Realignment	Bush Street	Hanford-Armona Road	NB	A	C	A	B	A	B	A	C
	Bush Street	Hanford-Armona Road	SB	A	A	A	A	A	A	C	A
Bush Street	SR-41 NB ramps	SR-41 SB ramps	WB	C	C	C	C	C	C	C	C
	SR-41 NB ramps	SR-41 SB ramps	EB	C	C	C	C	C	C	C	C
	SR-41 SB ramps	Belle Haven Drive	WB	D	C	C	C	C	C	D	D
	SR-41 SB ramps	Belle Haven Drive	EB	C	D	C	D	C	D	C	D
	Belle Haven Drive	Semas Drive	WB	C	C	C	C	C	C	C	C
	Belle Haven Drive	Semas Drive	EB	C	C	C	C	C	C	C	C

2030 Lemoore General Plan: Draft Environmental Impact Report

Semas Drive	College Drive	WB	C	C	C	C	C	C	C	C	C
Semas Drive	College Drive	EB	C	C	C	C	C	C	C	C	C
West of College Drive	Terminus of Bush Street	WB	C	C	C	C	C	C	C	C	C
West of College Drive	Terminus of Bush Street	EB	C	C	C	C	B	C	C	C	C
SR-41 NB ramps	19th 1/2 Avenue	WB	C	C	C	C	C	C	C	C	C
SR-41 NB ramps	19th 1/2 Avenue	EB	C	D	C	C	C	C	C	C	D
19th 1/2 Avenue	19th Avenue	WB	C	C	C	C	C	C	C	C	C
19th 1/2 Avenue	19th Avenue	EB	C	C	C	C	C	C	C	C	C
19th Avenue	Lemoore Avenue	WB	C	C	C	C	C	C	C	C	C
19th Avenue	Lemoore Avenue	EB	B	C	B	C	B	C	B	C	C
Lemoore Avenue	East D Street	WB	C	C	A	B	B	C	C	C	C
Lemoore Avenue	East D Street	EB	C	C	C	C	C	C	C	C	C
Cedar Lane	19th 1/2 Avenue	WB	C	C	C	C	C	C	C	C	C
	19th 1/2 Avenue	EB	C	C	C	C	C	C	C	C	C
Cedar Lane Extension	19th 1/2 Avenue	WB	A	A	A	A	A	A	A	A	A
	19th 1/2 Avenue	EB	A	A	A	A	A	A	A	A	A
Cinnamon Drive	19th 1/2 Avenue	WB	C	C	C	C	C	C	C	C	C
	19th 1/2 Avenue	EB	C	C	C	C	C	C	C	C	C
	19th Avenue	WB	C	C	C	C	C	C	C	C	C
	19th Avenue	EB	C	C	C	C	C	C	C	C	C
	Fox Street	WB	C	C	C	C	C	C	C	C	C
	Fox Street	EB	C	C	C	C	C	C	C	C	C
	Lemoore Avenue	WB	D	D	D	D	D	D	D	D	D
	Lemoore Avenue	EB	C	C	C	C	C	C	C	C	C
	Daphne Lane	NB	C	D	C	D	C	D	C	D	D
	Daphne Lane	SB	D	D	D	D	D	D	D	D	D
College Drive	Bush Street	NB	A	A	B	C	A	A	A	A	A

Chapter 4: Analysis of Alternatives

	Bush Street	Hanford-Armona Road	SB	A	A	C	B	A	A	A	A
	Pedersen Avenue	Bush Street	NB	C	C	C	C	C	C	C	C
	Pedersen Avenue	Bush Street	SB	C	C	B	C	B	C	C	C
D Street	West Bush Street	19th Avenue	WB	C	C	C	C	C	C	C	C
	West Bush Street	19th Avenue	EB	C	C	C	C	C	C	C	C
	19th Avenue	Fox Street	WB	A	A	A	A	A	A	A	A
	19th Avenue	Fox Street	EB	A	A	A	A	A	A	A	A
	Fox Street	Lemoore Avenue	WB	A	A	A	A	A	A	C	A
	Fox Street	Lemoore Avenue	EB	A	A	A	A	A	A	A	C
	Lemoore Avenue	Smith Street	WB	C	B	C	B	C	B	C	C
	Lemoore Avenue	Smith Street	EB	C	C	C	C	C	C	C	C
	Smith Street	17th Avenue	WB	C	C	C	C	C	C	C	C
	Smith Street	17th Avenue	EB	C	C	C	C	C	C	C	C
	17th Avenue	SR-198 EB ramps	WB	D	D	D	D	D	D	D	D
	17th Avenue	SR-198 EB ramps	EB	D	C	D	C	D	C	D	D
Daphne Extension	D Street	Cinnamon Drive	NB	C	D	C	C	C	C	C	D
	D Street	Cinnamon Drive	SB	C	C	C	C	C	C	C	C
Follett	Cinnamon Drive	RR Tracks	NB	A	A	A	A	A	A	A	A
	Cinnamon Drive	RR Tracks	SB	A	A	A	A	A	B	A	A
	RR Tracks	Bush Street	NB	A	A	A	A	A	A	A	A
	RR Tracks	Bush Street	SB	A	A	A	A	A	A	A	A
Fox Street	Bush Street	D Street	NB	A	B	A	A	A	A	A	C
	Bush Street	D Street	SB	A	A	A	A	A	A	A	A
	D Street	Cinnamon Drive	NB	B	C	B	C	B	C	C	C
	D Street	Cinnamon Drive	SB	C	B	C	B	C	C	C	C
	Cinnamon Drive	Hanford-Armona Road	NB	C	C	C	C	C	C	C	C
	Cinnamon Drive	Hanford-Armona Road	SB	C	C	C	C	C	C	C	C
Hanford-Armona Road	College Drive	Belle Haven Drive	WB	C	B	C	C	B	B	B	A

2030 Lemoore General Plan: Draft Environmental Impact Report

	College Drive	Belle Haven Drive	EB	A	C	C	C	A	B	A	B
	Belle Haven Drive	SR-41 SB ramps	WB	C	B	C	C	C	B	C	B
	Belle Haven Drive	SR-41 SB ramps	EB	B	C	C	C	B	C	B	D
	SR-41 NB ramps	19th Avenue	WB	C	C	C	C	C	C	C	C
	SR-41 NB ramps	19th Avenue	EB	C	C	C	C	C	C	C	C
	19th Avenue	Liberty Drive	WB	C	C	C	C	C	C	C	C
	19th Avenue	Liberty Drive	EB	C	C	C	C	C	C	C	C
	Fox Street	Lemoore Avenue	WB	C	C	C	C	C	C	C	C
	Fox Street	Lemoore Avenue	EB	C	C	C	C	C	C	C	C
	Lemoore Avenue	Cinnamon Drive	WB	B	A	A	A	A	A	B	A
	Lemoore Avenue	Cinnamon Drive	EB	A	B	A	A	A	A	A	B
Industry Way	College Drive	Belle Haven Drive	WB	A	A	A	A	A	A	C	A
	College Drive	Belle Haven Drive	EB	A	B	A	B	A	B	A	C
Iona Avenue	19th Avenue	18th Avenue	WB	C	C	C	C	C	C	B	A
	19th Avenue	18th Avenue	EB	C	C	C	C	C	C	A	C
Jackson Avenue	21st Avenue	SR-41	WB	C	C	C	C	C	C	C	C
	21st Avenue	SR-41	EB	C	C	C	C	C	C	C	C
Lemoore Avenue	Golf Links Dr.	Iona Avenue	NB	C	D	C	D	C	D	C	D
	Golf Links Dr.	Iona Avenue	SB	C	D	C	D	C	D	C	D
	Iona Avenue	SR-198 EB ramps	NB	C	C	C	C	C	C	C	C
	Iona Avenue	SR-198 EB ramps	SB	C	C	C	C	C	C	C	C
	SR-198 WB ramps	Cedar Lane	NB	C	C	C	C	C	C	C	C
	SR-198 WB ramps	Cedar Lane	SB	C	C	C	C	C	C	C	C
	Cedar Lane	Bush Street	NB	C	C	C	C	C	C	C	C
	Cedar Lane	Bush Street	SB	C	C	C	C	C	C	C	C
	Bush Street	D Street	NB	C	C	C	C	C	C	C	C
	Bush Street	D Street	SB	C	C	C	C	C	C	C	C
	D Street	Cinnamon Drive	NB	C	C	C	C	C	C	C	C
	D Street	Cinnamon Drive	SB	C	C	C	C	C	C	C	C

Chapter 4: Analysis of Alternatives

	Cinnamon Drive	Hanford-Armona Road	NB	C	C	C	C	C	C	C	C
	Cinnamon Drive	Hanford-Armona Road	SB	C	C	C	C	C	C	C	C
Liberty Drive	Cinnamon Drive	Hanford-Armona Road	NB	C	C	C	C	C	C	C	C
	Cinnamon Drive	Hanford-Armona Road	SB	C	C	C	C	C	C	C	C
	Hanford-Armona Road	Lacey Boulevard	NB	A	A	A	A	A	A	A	B
	Hanford-Armona Road	Lacey Boulevard	SB	A	B	A	B	A	B	B	B
Marsh Drive	SR-198	Semas Drive	NB	C	C	C	C	C	C	C	C
	SR-198	Semas Drive	SB	C	C	C	C	C	C	C	C
	Semas Drive	Pedersen Avenue	NB	C	C	C	C	C	C	C	C
	Semas Drive	Pedersen Avenue	SB	C	C	C	C	C	C	C	C
	Pedersen Avenue	Bush Street	NB	C	C	C	B	A	B	B	B
	Pedersen Avenue	Bush Street	SB	C	C	A	C	A	B	A	C
Pederson Avenue	Semas Drive	Marsh Drive	WB	C	C	B	B	B	B	C	C
	Semas Drive	Marsh Drive	EB	C	C	A	C	A	C	C	C
Semas Drive	Bush Street	Pedersen Avenue	NB	C	C	C	C	C	C	C	C
	Bush Street	Pedersen Avenue	SB	C	C	C	C	C	C	C	C
	Pedersen Avenue	Marsh Drive	NB	C	C	C	C	C	C	A	A
	Pedersen Avenue	Marsh Drive	SB	C	C	C	C	C	C	A	A
Silverado	19th Avenue	19 1/2 Avenue	WB	C	C	C	C	C	C	C	C
	19th Avenue	19 1/2 Avenue	EB	C	C	C	C	C	C	C	C

Source: Dowling Associates, 2007.

PUBLIC UTILITIES AND SERVICES

The comparison of impacts on public facilities is based on the degree of increased demand on public school, water supply, wastewater treatment, solid waste, and Police and Fire Department facilities and services. The proposed General Plan, the two “build” alternatives, as well as the No Project alternative propose some increased demand on these public service facilities and services at buildout. With the least new population added and the least new demand for public services and facilities generated, the No Project alternative is the environmentally superior alternative in this issue area. However, as CEQA does not permit classifying only the No Project Alternative as the environmentally superior alternative, the next best choice is Alternative B. Policies in the proposed General Plan and Alternatives A and B would ensure that new development contributes its fair share towards public service improvements needed to accommodate increased demand. Therefore, the differences among alternatives would not be substantive with respect to their impacts on public utilities and services.

Schools

All of the alternatives, including the No Project Alternative, will increase the student population in 2030 as shown in Table 4.3-7.

Alternative A will result in a projected new enrollment of approximately 4,910 students, or about 250 more students than the proposed General Plan. Under this alternative, the total enrollment would be accommodated by the existing schools plus six new schools, including at least one high school and two K-8 schools in the western part of the Planning Area.

Alternative B will result in a projected new enrollment of approximately 4,680 students, only 20 students more than the proposed General Plan. Under this alternative, a total of six new schools will be needed, with at least two each in the west and south of the Planning Area. Since the total student population is very close to the proposed General Plan, this alternative will have a similar impact on school resources.

The No Project Alternative will generate the least number of new students. Nonetheless, four schools will still need to be built since existing schools are already near capacity.

Table 4.3-7 Demand for Public Schools at Buildout by Alternative

<i>Land Use Alternatives</i>	<i>New Housing</i>	<i>New Students¹</i>	<i>Demand Above Existing Capacity</i>	<i>Percent Increase</i>	<i>Additional Schools Needed</i>
Proposed Plan	8,440	4,660	4,733	83.2	6
Alternative A	8,860	4,910	4,981	87.6	6
Alternative B	8,290	4,680	4,749	83.5	6
No Project	4,110	2,200	2,274	39.3	4

¹ Assumes 0.354 elementary school, 0.088 middle school, and 0.183 high school students per single family household, and 0.320 elementary school, 0.070 middle school, and 0.117 high school students per multi family household.

Source: Dyett & Bhatia, 2007.

Water Supply

Under all of the alternatives and the No Project Alternative, water usage is expected to increase proportionately. Table 4.3-8 compares the average daily flow and percentage increase from existing water demand for each case. According to the 2005 Water Management Plan, the Tulare Lake Subbasin will be able to meet the City’s needs under the proposed General Plan or any of the 3 alternatives.

Alternative A is projected to have the largest buildout population among all 4 scenarios and would result in a demand of 10.7 million gallons per day. This alternative would increase average day demand by 69.7 percent from existing water demand of 6.3 mgd.

Alternative B would result in a demand of 10.4 million gallons per day. This alternative would increase average day demand by 65.1 percent from existing water demand of 6.3 mgd.

The No Project Alternative will generate the least amount of population and demand for fresh water at 8.2 million gallons per day. Compared with the other alternatives, it would have the least impact on water resources and water supply infrastructure.

Table 4.3-8 Projected Water Demand at Buildout by Alternative

<i>Land Use Alternatives</i>	<i>Buildout Population</i>	<i>Average Day Demand (mgd)</i>	<i>Percent Increase from Existing Water Demand</i>
Proposed Plan	48,250	10.5	66.3
Alternative A	49,470	10.7	69.7
Alternative B	47,810	10.4	65.1
No Project	35,480	8.2	30.8

mgd = million gallons per day

Based on per capita consumption of 175 gallons per day Average Day Demand with an addition of 2,033,000 gallons per day consumption for SK Foods and Leprino Foods.

Source: Dyett & Bhatia, 2007.

Wastewater Treatment

Typically, larger demand for wastewater treatment is produced by additional acres of mixed-use, commercial, and industrial development. The impact from residential demand is usually less than the other uses. All of the alternatives, including the No Project alternatives will require an expansion of the current wastewater treatment plant (WWTP) as the current facility has a capacity of only 4.5 mgd.

Alternative A would generate more households, but fewer jobs than anticipated under the proposed General Plan. Therefore, the demand for wastewater treatment is expected to be less than what would be under the proposed General Plan. If wastewater treatment policies and mitigation measures under the proposed General Plan are applied to Alternative A, the impact from increased wastewater treatment demand would become insignificant.

Alternative B would generate fewer households and fewer jobs than anticipated under the proposed General Plan. Therefore, the demand for wastewater treatment facilities will be less than under the proposed General Plan. If wastewater treatment policies and mitigation measures

under the proposed General Plan are applied to Alternative B, the impact from increased wastewater treatment demand would become insignificant.

The No Project Alternative would create the least number of households and jobs among all the alternatives. As such, it would place the smallest demand on wastewater treatment facilities. However, the No Project Alternative does not have policies such as those in the proposed General Plan requiring facility upgrades concurrent with new development. As such, wastewater demands created by additional households and jobs under this alternative would have to be carried by existing infrastructure. This would create a significant impact on existing wastewater treatment facilities.

Solid Waste

All of the alternatives, including the No Project Alternative, will generate solid waste, which will need to be taken to the Kettleman Hills Landfill Facility.

Alternative A would generate more new housing units but less jobs than the proposed General Plan. Accordingly, this alternative will have a heavier demand on solid waste services from residential development.

Alternative B results in less new housing units and jobs than either the proposed General Plan or Alternative A, thus placing less demand on solid waste services and facilities than either the proposed General Plan or Alternative A.

The No Project Alternative would result in the least amount population and jobs among all four alternatives. Accordingly, this alternative would result in the least amount of solid waste and demand on facilities.

Public Safety and Emergency Preparedness

In order to maintain existing levels of services, the buildout of the proposed General Plan as well as all the alternatives will require an increase in Police and Fire Department manpower and facilities. Table 4.3-9 shows the anticipated need for personnel under each alternative. Additionally, new fire stations would be needed to maintain response times under each of the alternatives and the No Project Alternative.

Table 4.3-9 Demand for Police and Fire Personnel at Buildout by Alternative

<i>Land Use Alternatives</i>	<i>New Residents</i>	<i>Additional Police Needed¹</i>	<i>Additional Fire Service Officers Needed²</i>
Proposed Plan	24,860	33	37
Alternative A	26,080	35	39
Alternative B	24,420	32	37
No Project	12,090	16	18

¹ Additional police officers calculated to maintain a ratio of 1.33 officers to one thousand residents

² Additional firemen calculated to maintain a ratio of 1.5 to one thousand residents

Source: Dyett & Bhatia, 2007.

Alternative A, with more housing units and residents than the proposed General Plan, will place a greater demand for both police and fire service personnel as well as facilities. Additionally, Alternative A has a larger built up area on the west of SR-41, necessitating additional police and fire facilities on this side of the City. In all, 32 additional police officers and 39 additional firefighters will be needed at full buildout to maintain existing levels of service. The demand on emergency and public safety resources will be higher than the proposed General Plan.

Alternative B, with approximately the same number of residents as the proposed General Plan and approximately the same built up area, will require 30 additional police officers and 37 firefighters at full buildout to maintain existing levels of service. The demand on emergency and public safety resources will be similar to the proposed General Plan.

The No Project Alternative has a smaller population and built-up area compared with the proposed General Plan. Therefore, the demand on emergency and public safety resources is expected to be smaller compared to the proposed General Plan. However, it should be noted that this alternative will not have the benefit of new policies included in the proposed General Plan and Alternative A or B requiring the increase in police and fire-fighting manpower and facilities to match population growth. This makes the No Project Alternative less desirable even though it may require less resources compared to the other alternatives.

PARKS AND RECREATION

The current standard for parkland is 5.0 acres per thousand residents. The City had 117 acres of parkland resources in 2006. The proposed General Plan aims to increase the functional park acreage to reach a goal of 6.0 acres per thousand residents. All of the alternatives considered would add parkland acreage to the City, as shown in Table 4.3-10.

Table 4.3-10 Total Parkland at Buildout (acres) by Alternative

<i>Land Use Alternatives</i>	<i>Parkland</i>	<i>Total per Thousand Residents</i>	<i>Increase per Thousand Over Existing</i>
Proposed Plan	295	6.0	1.0
Alternative A	356	7.2	2.2
Alternative B	296	6.2	1.2
No Project	251	7.1	2.1

Source: Dyett & Bhatia, 2007.

Alternative A would result in the largest population among all four options. Accordingly, it would also require more parks to meet demand. Compared to the proposed General Plan, there are fewer neighborhood parks, and each is spaced further apart. This apparent lack of neighborhood parks is compensated by one large City park at the northwest portion of the Planning Area. The ratio of parkland to residents is estimated at 7.2 acres per thousand residents, which represents an increase of 2.2 acres per thousand residents over current parkland ratios.

Alternative B exhibits similarities to the proposed General Plan in park distribution and total park acreage. The only major difference between the two options is the existence of a linear park along Lemoore Canal in Alternative B, where only a trail is shown in the proposed Plan. The ratio of

parkland to residents is slightly higher than the proposed Plan at 6.2 acres per thousand residents due to its smaller overall population. In short, this alternative will provide more parkland than the proposed General Plan.

The No Project Alternative was developed on the assumption that community, neighborhood and pocket parks will develop as shown on the existing General Plan Diagram. Under these conditions, the City is projected to have a total of 251 acres of parkland for 45,450 residents. This provides a park ratio of approximately 7.1 acres per thousand residents. The development of a single, large community park at the western portion of the Planning Area (next to West Hills College) is primarily responsible for this larger ratio. However, the land on which this large park is proposed has since been preserved as wetlands habitat and would not be available as parkland, thereby reducing the park acreage to 142 and the parkland ratio to 4.0 acres per thousand residents.

BIOLOGICAL RESOURCES

Like the proposed General Plan, Alternative A proposes to preserve valuable agricultural land by limiting development in the northwest and southwest portions of the Planning Area. Minimizing growth adjacent to or within these ecologically sensitive areas limits the amount of open space land converted to developed uses and reduces the potential for habitat fragmentation issues associated with future development in the Planning Area. This alternative also allows for commercial and residential uses west of SR-41 between the railroad track and Hanford-Armona Road, much of which is currently agricultural lands providing habitat for numerous species such as Swainson's hawk. This alternative would create a lower impact on biological resources than would the proposed General Plan, as a greater setback is provided for the large wetland complex in the western Planning Area, and the agricultural lands in the southwest quadrant between SR-198 and SR-41 would not be converted to urban uses. Overall, impacts on biological resources associated with this alternative would be less than with the proposed General Plan because more wetlands and open space habitats are preserved. However, this alternative would still result in significant and unavoidable impacts to biological resources because future growth would convert several acres of undeveloped land to urban use, in particular land adjacent to the large wetland complex.

Alternative B proposes development that is similar in nature to that anticipated under the proposed General Plan but it would convert slightly less agricultural land to urban uses. As with the proposed General Plan, this alternative proposes low-density residential uses adjacent to the large wetland complex, which would create indirect impacts on the wetland complex and sensitive status species. This alternative also suggests a school be located adjacent to the wetlands, which would allow for even greater indirect impacts due to student foot traffic. This alternative, however, would provide a greater setback for the large wetland complex in the western Planning Area, thereby creating fewer direct impacts to this sensitive habitat than the proposed General Plan. Also, the agricultural lands within the southwest quadrant would not be converted to urban uses as they would be in the proposed Plan. Development proposed under Alternative B would result in slightly more conversion of agricultural lands in the southeast than under the proposed General Plan, which is adjacent to sensitive valley sink scrub habitat and sensitive status species. Impacts associated with this alternative would be less than with the proposed General Plan; however, this alternative would also result in significant and unavoidable impacts to biological

resources because future growth would occur over several hundred acres of currently undeveloped land (south and west of the existing City Limits), thereby reducing habitat for one or more plant or wildlife species.

The No Project Alternative would result in development that is similar in nature to that anticipated under the proposed General Plan; yet less land would be converted from agricultural to urban uses. Additionally, this alternative would not extend development to the Planning Area's southern boundary where sensitive valley sink scrub habitat and known occurrences of sensitive status species occurs. Although the No Project Alternative does not include the full range of policies in the proposed General Plan designed to address biological issues, current State and federal regulations have specific requirements designed to avoid impacts related to biological resources, which would apply to both the No Project Alternative and the proposed General Plan. Biological impacts under the No Project Alternative are considered to be less than those of the proposed General Plan.

HYDROLOGY AND WATER QUALITY

Decreased water quality, inadequate stormwater drainage, and increased flooding hazards are impacts on hydrology and water quality associated with new development. Urban expansion can increase impervious surfaces areas, resulting in more non-point source pollution, less groundwater recharge, and increased runoff rates and flows. New development can also result in erosion and increased use of hazardous materials which can result in the pollution of stormwater runoff. The hydrology impacts of the proposed General Plan are considered less than significant. The proposed General Plan designates approximately 700 more acres as urban uses than Alternative A and B and approximately 1,200 more acres than the No Project Alternative.² Therefore, the impacts on hydrology also are considered less than significant for all alternatives, particularly given the regulatory requirements and standards to which existing and future development must comply.

Alternative A would designate slightly more than 3,300 acres as urban uses while maintaining about 57 percent open space within the Planning Area. This alternative would result in three percent more housing units with slightly higher average density than the proposed General Plan. However, it would result in about 16 percent fewer jobs. Therefore, the overall intensity of the development would be lower than the proposed General Plan and there would be less potential impact on hydrology and water quality. Based on the amount of total development, this alternative would have the least impact on local hydrology; however, it focuses development in the western, northwestern and northern areas of the Planning Area near the wetlands and in the 100-year floodplain, which would have an impact.³

Alternative B would result in similar buildout to Alternative A, with approximately 3,300 acres of urban uses and about 58 percent open space. This alternative would result in one percent fewer

² The acreages for 'Urban uses' includes Residential land use, Mixed uses, Commercial land uses, Office and Industrial land uses,, and Public and Institutional land uses.

³ The City has submitted an application to FEMA for a change in the 100-year floodplain boundary to reflect City improvements. This proposed change has not been incorporated into published maps and is not included in acreage calculations. When GIS digital files are available, the flood hazard maps will be updated.

housing units and about 16 percent fewer jobs than the proposed General Plan. Therefore, the overall intensity of the development would be lower than the proposed General Plan and there would be less potential impact on hydrology and water quality. This alternative focuses development along circulation corridors and spreads residential development around the existing urban area. It is similar to the proposed General Plan in that it allows higher density development to occur near the wetlands and floodplains. However, the overall developed area within the floodplain is slightly less than the General Plan.

The No Project Alternative would designate about 1,900 acres as urban uses while maintaining about 76 percent open space. The No Project Alternative would result in only half as many additional housing units at a higher average density and about 20 percent fewer jobs than the proposed General Plan. This alternative shows a park in the wetlands and is the only alternative that would allow development in the 500-year floodplain. However, the total area of urban uses within the floodplains is the least of all alternatives, as illustrated in Table 4.3-11.

Table 4.3-11 Urban Uses within Floodplains at Buildout by Alternative

<i>Land Use Alternatives</i>	<i>Acres of Urban Uses in 100-Year Floodplain</i>	<i>Acres of Urban Uses in 500-Year Floodplain</i>	<i>Percent of Total Urban Uses in a Floodplain</i>
Proposed Plan	449	-	6.0
Alternative A	630	-	7.6
Alternative B	427	-	6.1
No Project	376	17	6.0

The City has submitted an application to FEMA for a change in the 100-year floodplain boundary to reflect City improvements. This proposed change has not been incorporated into published maps and is not included in acreage calculations. When GIS digital files are available, the flood hazard maps will be updated.

Source: Federal Emergency Management Agency, 1995; Dyett & Bhatia, 2007.

AIR QUALITY

Development under Alternative A would result in slightly more dwelling units and residents, and fewer jobs than the proposed General Plan. Although there is a reduction in jobs under this alternative, the additional dwelling units and other types of development to accommodate the increase in population would result in increased levels of both mobile and stationary sources of air quality emissions, toxic air contaminants, and the potential for odor emissions. Consequently, development proposed under Alternative A would also result in a significant and unavoidable air quality impact because this additional growth would also contribute to air quality emissions that would exceed the annual SJVAPCD thresholds for NOx and ROG.

Development under Alternative B would result in slightly fewer dwelling units and residents, and significantly fewer jobs than the proposed General Plan. These reductions in dwelling units and other types of development would result in reduced levels of both mobile and stationary sources of air quality emissions, toxic air contaminants, and the potential for odor emissions. However, development proposed under Alternative B would also result in a significant and unavoidable air quality impact because growth would still contribute to air pollutant emissions that would exceed the annual SJVAPCD thresholds for NOx and ROG.

Under the No Project Alternative, the City would continue to function under the direction of the existing General Plan. Consequently, buildout under the existing General Plan would result in fewer jobs, fewer dwelling units and residents than the proposed General Plan. The reduction in dwelling units and employment area would result in fewer mobile and stationary sources of air quality emissions and toxic air contaminants, with emissions slightly greater than alternatives A and B and the proposed General Plan. Implementation of the No Project Alternative would result in a significant and unavoidable impact because growth would contribute to air pollutant emissions that likely exceed the annual SJVAPCD thresholds for NOx and ROG. Table 4.3-12 summarizes the comparison of vehicle operational emissions across all four alternatives.

Table 4.3-12 Vehicle Emissions at Buildout by Alternative

Pollutant	SJVAPCD Thresholds	Unmitigated Vehicle Emissions (metric tons/year) ¹			
		Buildout Year (2030) ²			
		Proposed Plan ^b	Alternative A	Alternative B	No Project
ROG	10	75	66	67	76
NOx	10	497	436	443	501
CO	N/A	1,249	1,095	1,114	1,258
CO2	N/A	684,454	599,747	610,160	689,505

¹ Emission factors were generated by the Air Resources Board EMFAC 2007 computer model (version 2.3) for the San Joaquin Valley Air Basin. The assumptions used in this model generate slightly different emissions levels than those used in the vehicle energy use analysis in the climate change section.

² Bold values are in excess of the applicable standard. The SJVAPCD established thresholds for ROG and NOx are 10 tons per year whereas CO and PM10 do not have an established emissions threshold of significance.

Source: Dyett & Bhatia, 2007.

NOISE

The comparison of noise impacts under the alternatives and the proposed General Plan is based on traffic modeling projections and NASL noise exposure. With traffic noise being the product of volumes, speeds, and percent trucks, the most important variable to examine between alternatives would be traffic volumes, since speeds and percent trucks are not likely to vary considerably between different buildout scenarios. Another consideration for a noise impact comparison would be where sensitive receptors are located in relation to streets, and whether these locations differ from one alternative to the next. As an example, plans that offer more infill development are likely to cause larger noise impacts on new residents than plans that permit residential development on the outskirts of urban areas. This would, however, also illustrate the conflict between the environmental goals of a noise analysis and those of an agricultural land conversion analysis. This comparative analysis will describe only the relative noise impacts of potential buildout alternatives, not the relative importance of a noise impact compared to other types of environmental impacts.

Under Alternative A, the projected numbers of trips and vehicle miles traveled are lower than buildout of the proposed General Plan. Citywide noise levels associated with this alternative are therefore likely to be lower, but the differences are probably not significant. Alternative B has less development than both Alternative A and the proposed General Plan. This would result in lower volumes and marginally lower noise levels. Generally, noise exposure would be about the same as with the proposed General Plan. The No Project alternative would have the least residential and non-residential development (jobs) than all the other alternatives; thus projected traffic volumes are

lowest and this alternative is expected to produce less traffic noise than the proposed General Plan. However, since the No Project Alternative also does not benefit from the enhanced proposed General Plan policies concerning noise mitigation, the relative impact of noise generated at buildout may be expected to be greater in the No Project scenario than in the proposed General Plan scenario.

In terms of construction related noise and vibration, it may be assumed that all alternatives have similar potential for construction, and thus for noise and vibration generation. However, the No Project Alternative would not benefit from noise mitigation policies provided by the proposed General Plan and alternative A and B, therefore it may result in more noise impact relative to rates of construction activity, than the other buildout alternatives.

Alternative A has the potential to expose more people to noise from NASL than the proposed General Plan, Alternative B, or the No Project Alternative. The relative exposure of new development and population to NASL noise is provided in Table 4.3-13.

Table 4.3-13 Urban Land Exposure to Noise from NASL at Buildout by Alternative

	<i>Proposed Plan</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project</i>
Very Low Density Residential	52	114	-	-
Low Density Single Family Residential	279	346	494	-
Low Medium Density Residential	202	188	44	291
High Density Residential	-	-	-	32
Multi-Family Residential	21	9	12	-
Commercial	97	82	83	-
Highway-oriented Commercial	-	-	17	47
Neighborhood Commercial	11	28	20	128
Professional Office	27	38	12	7
Mixed-Use	30	28	-	-
Business Park	56	37	-	-
Industrial	82	470	479	303
Public/Institutional	557	83	54	-
Parks/Recreation	94	192	75	67
Greenway/Detention Basin	65	34	15	45
Total	1,572	1,648	1,306	920
<i>NASL Noise Exposure as Percent of Total Land in Planning Area</i>	13	13	11	8
<i>Total New Housing Units Exposed</i>	<i>2,929</i>	<i>3,048</i>	<i>2,236</i>	<i>1,175</i>
<i>Total New Population Exposed</i>	<i>8,630</i>	<i>8,980</i>	<i>6,580</i>	<i>3,460</i>

Notes: These numbers represent only new development at buildout that would be exposed to NASL noise between 60 dB and 75 dB. The balance of Planning Area land experiences less than 60 dB noise from NASL, and no where in the Planning Area are land uses exposed to noise levels from NASL higher than 75 dB.

Source: Dyett & Bhatia, 2007, NASL, 2007.

GEOLOGY, SOILS, AND SEISMICITY

As previously noted, Alternative A proposes development that is slightly more intensive in terms of housing and population growth than that of the proposed General Plan. Current State and federal regulations require specific engineering and design criteria to minimize impacts related to geologic, soils, and seismic hazards, which would apply to development under each of the alternatives and the proposed General Plan. Policies and implementation measures included as part of the proposed General Plan also apply to Alternative A, and incorporate all applicable regulations to minimize these impacts. For this reason, geologic and soils impacts under Alternative A are considered similar to those of the proposed General Plan.

Alternative B proposes development that is similar in nature to that anticipated under the proposed General Plan, but less land would be urbanized. Fewer jobs, fewer housing units, and a lower population would all result in less exposure to potential geologic, soils, or seismic hazards. For this reason, geologic and soils impacts under Alternative B are considered slightly less than those of the proposed General Plan.

The No Project Alternative proposes development that is smaller in scope to that anticipated under the proposed General Plan. It proposes less population and housing growth and job growth. Although the No Project Alternative does not include the proposed General Plan policies designed to address geologic and soil issues, all current State and federal regulations would apply to both the No Project Alternative and the proposed General Plan. For this reason, geologic and soils impacts under the No Project Alternative are considered to be similar to those of the proposed General Plan.

SAFETY AND HAZARDOUS MATERIALS

Alternative A proposes development that is similar in nature to that anticipated under the proposed General Plan. Development proposed under this alternative would affect a variety of agricultural lands surrounding the existing City Limits. Similar to the proposed General Plan, implementation of this alternative would involve a decrease in the use of pesticides, herbicides, and other hazardous materials used for agricultural practices. Although hazards related to agricultural uses would be reduced, potential new commercial and industrial uses may introduce new sources of hazardous materials. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both Alternative A and the proposed General Plan. For this reason, hazards and hazardous materials impacts under Alternative A are considered to be similar to those of the proposed General Plan. Wildfire threat to individuals and homes in the proposed Planning Area would be generally low, and would be the same as the proposed General Plan.

Alternative B proposes development that is slightly less, but similar in nature to that anticipated under the proposed General Plan. Development proposed under this alternative would affect a variety of agricultural lands surrounding the existing City Limits. Similar to the proposed General Plan, implementation of this alternative would involve a decrease in the use of pesticides, herbicides, and other hazardous materials used for agricultural practices. Although hazards related to agricultural uses would be reduced, potential new commercial and industrial uses may introduce new sources of hazardous materials. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both

Alternative B and the proposed General Plan. For this reason, hazards and hazardous materials impacts under Alternative B are considered to be similar to those of the proposed General Plan. Wildfire threat to individuals and homes in the Planning Area would be generally low, and would be the same as the proposed General Plan.

The No Project Alternative proposes development that is similar in nature to that anticipated under the proposed General Plan, but with less development. The No Project Alternative would not include the additional hazardous materials and public safety policies and implementation measures contained as part of the proposed General Plan. However, hazardous materials generation, storage and clean-up are heavily regulated by federal, State and local regulations that would apply to both the No Project Alternative and the proposed General Plan. Wildfire threat to individuals and homes in the proposed Planning Area would be generally low, and would be the same as the proposed General Plan.

CULTURAL RESOURCES

Under Alternative A, development would be of a similar type and would convert a similar amount of open space land to an urban use when compared to that anticipated under the proposed General Plan, in particular conversion of agricultural land. Unlike the proposed General Plan, development proposed under this alternative would focus some new growth west of SR-41 and north of the existing City Limits. Grading and construction activities in these areas increase the likelihood of disturbing archaeological or paleontological resources. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities.

Alternative B would focus new growth within existing agricultural areas, which could result in similar cultural resources impacts as those under the proposed General Plan. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities. Development and intensification around the Downtown District, where there exist numerous locally-designated buildings of historic significance, would essentially be the same under this alternative as under the proposed General Plan.

The No Project Alternative proposes development that is smaller in geographic scope than that anticipated under the proposed General Plan. Similar to the proposed General Plan, urbanization associated with future growth could damage or destroy a variety of cultural resources during various construction-related activities. However, the existing General Plan does not have the full range of policies included in the General Plan designed to address cultural resources. The existing General Plan includes some policy guidance with respect to cultural resources; however, the proposed goals and policies provided as part of the proposed General Plan are considerably more comprehensive and detailed, including, in particular, those related to historic and paleontological resources.

VISUAL RESOURCES

Alternative A has slightly more residential development at the northern edge of the Planning Area compared to the proposed General Plan and has additional residential development at the northwestern area between SR-41 and the Leprino Cheese Factory not allocated in the proposed

General Plan. As such, visitors traveling south along SR-41 will observe an urban edge on both sides of the highway. On the other hand, because Alternative A has no infill or new development at the eastern edge of the Planning Area, visitors traveling from the east along SR-198 will be confronted with a feathered, uncontrolled urban edge. This is visually not as pleasing as the proposed General Plan since the intersection of SR-198 and Houston Avenue is a major entryway. In terms of open space, wetlands, and agriculture, Alternative A retains slightly more space around the City's edges despite the development on the northwestern corner. Built densities of both plans are similar, and both plans would result in similar increases in light and glare from existing conditions.

Alternative B has slightly more residential development at the northern edge of the Planning Area compared to the proposed General Plan. This difference however, should not be visually perceptible for a visitor looking inwards while entering the City from the north or outwards from within the City. Development at the western portion of the City is also similar to the proposed General Plan. The difference lies at the at the eastern edge where edge conditions are less controlled than in the proposed General Plan; and at the southern edge near Idaho Avenue where agriculture land in the proposed General Plan is zoned for residential. In terms of open space, wetlands, and agriculture, both Alternative B and the proposed General Plan retain approximately the same amount of land around the City's edges. Built density is also similar, and both plans would result in similar increases in light and glare from existing conditions.

The No Project Alternative would result in less development overall than the proposed General Plan, Alternative A, or Alternative B. It follows that the No Project Alternative will produce fewer view obstructions, fewer sources of light and glare, and less construction activity. However, without the benefit of new and updated policies on community design contained in the proposed General Plan, the No Project Alternative will not improve edges and entries and may result in more conflicts with the character of existing development.

ENERGY USE AND CLIMATE CHANGE

Compared to the proposed General Plan, Alternatives A, B and No Project can be expected to generate lower rates of electricity consumption because they offer significantly fewer acres of non-residential uses, and those are the ones consuming 75 percent of all electricity in the County. In terms of transportation-related energy use and GHG emissions, Alternative A and Alternative B perform better than the proposed General Plan, primarily because the proposed General Plan offers a combination of higher job numbers and a relatively large amount of new housing, thereby generating trips from both new residents and new jobs. The No Project Alternative is the 2030 scenario that would result in the most vehicle miles traveled and thus the most vehicle-related fuel consumption, carbon dioxide emissions, and total annual carbon dioxide equivalent emissions of methane and nitrous oxide. Considering both potential electricity use and vehicle emissions, Alternative B is the environmentally superior alternative with respect to this impact, but is better than Alternative A only by the slightest of margins. Tables 4.3-12 and 4.3-13 below summarize the transportation- and electricity-related GHG impacts of all four alternatives.

Table 4.3-14 Transportation Energy Greenhouse Gas Emissions (metric tons) at Buildout by Alternative

Land Use Alternatives	Annual Vehicle Miles Traveled	Annual Fuel Consumption (gallons)	Carbon Dioxide Emissions	CO2 Equivalent of CH4 Emissions	CO2 Equivalent of N2O Emissions	Total Annual CO2 Equivalent	Change from 2006 to 2030
Proposed Plan	963,880,685	37,948,058	544,593	1,012	14,940	560,545	439,715
Alternative A	844,592,480	33,251,672	477,195	887	13,091	491,173	370,343
Alternative B	859,257,085	33,829,019	485,480	902	13,318	499,701	378,871
No Project	970,993,834	38,228,104	548,612	1,020	15,050	564,681	443,851

Source: Dyett & Bhatia, 2007.

Table 4.3-15 Electricity Greenhouse Gas Emissions (metric tons) at Buildout by Alternative

Land Use Alternatives	Electricity Use (kWh)	Carbon Dioxide Emissions	Nitrous Oxide Emissions	Total CO2 Equivalent - Electricity	Total CO2 Equivalent - Electricity + Vehicle
Proposed Plan	427,414,689	161,563	107	194,702	755,247
Alternative A	438,221,858	165,648	110	199,624	690,797
Alternative B	423,517,021	160,089	106	192,918	692,619
No Project	314,293,744	118,803	79	143,169	707,850

Source: Dyett & Bhatia, 2007.

4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines require the identification of an environmentally superior alternative among the alternatives analyzed in an EIR. The Guidelines also require that if the No Project Alternative is identified as the environmentally superior alternative, then another environmentally superior alternative must be identified.

Based on the important environmental goals of reducing agricultural land conversion, protecting habitats and wildlife corridors, and reducing the production of greenhouse gases and criteria and toxic air pollutants, Alternative B appears to be the environmentally superior alternative. Though the No Project Alternative converts slightly fewer acres of agricultural land for urban uses and thus protects biological and water resources better than the other buildout alternatives, the existing General Plan does not provide adequate policies to control the quantity, type or direction of future growth, nor does it explicitly promote “not net loss” of habitat. Furthermore, Alternative B proposes fewer jobs and less population growth than all but the No Project Alternative, both of which should result in fewer vehicles, fewer vehicle miles traveled, lower electricity use and resulting greenhouse gas emissions than Alternative A or the proposed General Plan.

However, there are tradeoffs associated with Alternative B. The development potential of Alternative B does not meet the City's long term economic development needs, a factor that inspired the creation of the Business, Technology, and Industrial Reserve Area for the proposed General Plan. Fewer jobs in Alternative B also means that this alternative is less likely to achieve efficiencies that are possible with a better jobs-housing balance, wherein people may live and work in the same city, or closer to their jobs.

Page left intentionally blank