

Calaveras County General Plan Update

Alternatives Report

February 2010



mintierharnish
planning consultants

This page is intentionally left blank.

Calaveras County General Plan Update Alternatives Report

prepared by:

**Mintier Harnish
Calaveras County Planning Department**

February 2010

CREDITS

COUNTY OF CALAVERAS

Planning Department

George White, Planning Director

Brenda Gillarde, General Plan Coordinator

Dave Pastizzo, Planner III

CONSULTANTS

Mintier Harnish

J. Laurence Mintier, FAICP, Principal

Rik Keller, Senior Associate

Jessica C. Law, Associate

Applied Development Economics, Inc. (ADE)

Environmental Science Associates (ESA)

LSC Transportation Consultants, Inc.

Fehr & Peers Transportation Consultants

Sierra Research Inc.

TABLE OF CONTENTS

I. INTRODUCTION.....	1
A. THE GENERAL PLAN UPDATE.....	1
B. PURPOSE/ORGANIZATION OF THIS REPORT.....	2
C. ALTERNATIVES PHASE PROCESS	2
D. NEXT STEPS	2
II. LAND USE ALTERNATIVES OVERVIEW	4
A. INTRODUCTION.....	4
B. VISION STATEMENT AND GUIDING PRINCIPLES FOR CALAVERAS COUNTY	4
C. LAND USE DESIGNATIONS	5
D. OVERVIEW OF ALTERNATIVES A, B, AND C	6
1. <i>Alternative A: Baseline Growth</i>	6
2. <i>Alternative B: Community-Centered Growth</i>	6
3. <i>Alternative C: Accelerated Community-Centered Growth</i>	7
E. GROWTH PROJECTIONS	7
III. COMPARISON OF ALTERNATIVES	9
A. OVERVIEW COMPARISON: COUNTYWIDE, REGIONS, AND SUB-AREAS	9
1. <i>Land Use and Development Pattern</i>	9
Region 1: Western County	10
Region 2: Highway 49 Corridor	10
Region 3: Foothills	11
Region 4: Highway 4 Corridor	11
2. <i>Projected Development: Housing Unit and Job Growth</i>	21
Countywide	21
County Regions and Sub-Areas.....	21
3. <i>Transportation and Circulation</i>	21
4. <i>Air Quality</i>	22
B. TOPICAL COMPARISON SUMMARY	33
1. <i>Countywide Land Use Patterns and Community Identity</i>	34
2. <i>Open Space</i>	35
3. <i>Economic Growth</i>	36
4. <i>Community Infrastructure and Services</i>	37
5. <i>Transportation and Mobility</i>	38
6. <i>Air Quality and Greenhouse Gas Emissions</i>	39
7. <i>Public Health and Safety</i>	40
APPENDIX A. GENERAL PLAN UPDATE OVERVIEW: PROCESS/SCHEDULE.....	41
A. GPU PHASES	41
B. GENERAL PLAN DOCUMENTS	42
C. GPU SUPPORT DOCUMENTS	42
D. GPU COMMUNITY WORKSHOPS, STUDY SESSIONS, AND HEARINGS	43
E. OTHER GENERAL PLAN WORK	44
1. <i>Water Element</i>	44
2. <i>Housing Element</i>	44
3. <i>Economic Element</i>	44
4. <i>Agriculture Element</i>	45
5. <i>Community Plans and Community Visions</i>	45
APPENDIX B. LAND USE DESIGNATIONS	46
A. BACKGROUND AND METHODOLOGY	46
B. PROPOSED LAND USE DESIGNATION SYSTEM	46
APPENDIX C. MODELING GROWTH PROJECTIONS	53

A. LAND USE	53
B. TRANSPORTATION	53
C. AIR QUALITY/GREENHOUSE GAS EMISSIONS	54
APPENDIX D. DETAILED ALTERNATIVES TABLES.....	55

Index of Tables and Figures

TABLE 1 CALAVERAS GENERAL PLAN UPDATE ALTERNATIVES PROJECTIONS	8
TABLE 2 GPU LAND USE DESIGNATIONS TOTAL ACREAGE.....	12
FIGURE 1 LAND USE DESIGNATIONS ALTERNATIVE A	13
FIGURE 1.1 LAND USE DESIGNATIONS SUPERVISORIAL DISTRICT 2 ALTERNATIVE A.....	15
FIGURE 2 LAND USE DESIGNATIONS ALTERNATIVES B & C	17
FIGURE 2.1 LAND USE DESIGNATIONS SUPERVISORIAL DISTRICT 2 ALTERNATIVES B & C	19
FIGURE 3 PROJECTED DEVELOPMENT ALTERNATIVE A	24
FIGURE 4 PROJECTED DEVELOPMENT ALTERNATIVE B.....	27
FIGURE 5 PROJECTED DEVELOPMENT ALTERNATIVE C.....	29
FIGURE 6 PROJECTED DEVELOPMENT BY SUB-AREA ALTERNATIVES A, B, & C.....	31
TABLE B-1 GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS	47
TABLE D-1 2005-2035 UPLAN ALLOCATION BY GPU LU DESIGNATIONS	55
TABLE D-2 2005-2035 PROJECTIONS BY SUB-AREA.....	56

I. INTRODUCTION

State law requires every city and county in California to prepare and maintain a planning document called a general plan. A general plan is a “blueprint” for the future physical development of a county or city. The general plan establishes a baseline for understanding the challenges facing the community and provides an opportunity for citizens and policymakers to come together in a process of developing a common vision for the future.

The Calaveras County General Plan Update (GPU) project is a four-year multi-phase process that will comprehensively update the existing 1996 Calaveras County General Plan. The GPU started in early 2007 and is scheduled to be completed in early 2011. The planning horizon for the new General Plan is 2035.

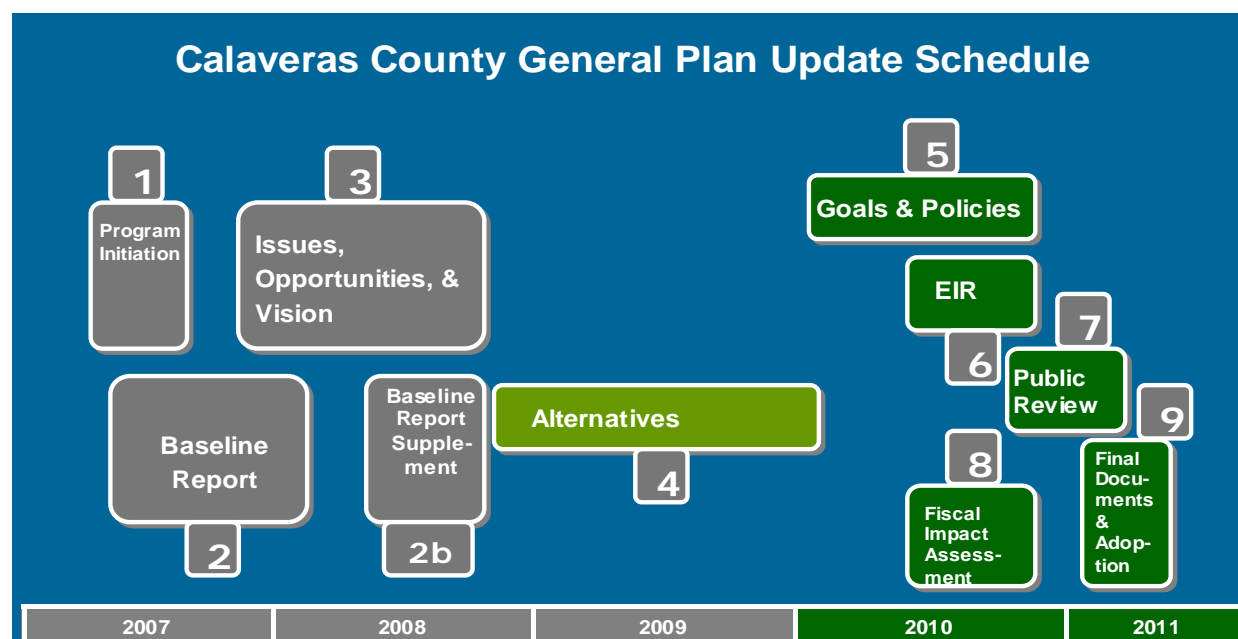
A general plan is “blueprint” for the future physical development of a county or city. The general plan establishes a baseline for understanding the challenges facing the community and provides an opportunity for citizens and policymakers to come together in a process of developing a common vision for the future.

The General Plan must address at least seven issue categories or elements, to the extent that they are relevant locally: land use, circulation, housing, open space, conservation, noise, and safety. The County may also address other topics of community interest, such as economic development or historic preservation in the General Plan. The General Plan sets out the goals, policies, and programs in each of these areas and serves as a policy guide for how the County will interact with the City of Angels and other local, regional, State, and Federal agencies, and surrounding counties.

State law requires zoning to be consistent with the General Plan and prohibits the approval of subdivisions that are inconsistent with the Plan. Virtually all other regulatory actions and capital expenditure decisions by the County must also be consistent. For example, all specific plans and public works projects must be consistent with the General Plan.

A. THE GENERAL PLAN UPDATE

The GPU consists of the following phases as described in the GPU Work Program (June 2007). The Alternatives Report is part of Phase 4. See Appendix A of this report for a full description of the GPU phases.



B. PURPOSE/ORGANIZATION OF THIS REPORT

The Alternatives Phase (Phase 4 of the GPU) marks the point at which the GPU moves from background information, issues and opportunities, and conceptual visioning and guiding principles to a definable land use plan. The Alternatives Report presents a comparative evaluation of three possible land use concepts for Calaveras County out to the General Plan horizon year of 2035.

The report is intended to frame an active discussion among stakeholders, community members, County staff, the Planning Commission, and the Board of Supervisors, leading to direction from the Board of Supervisors on a “preferred land use alternative,” which will become the basis for the General Plan Land Use Diagram. The report should be viewed as a starting point for discussion of the preferred land use alternative. The preferred alternative will likely not be one of the alternatives described in this Report. Instead, the preferred alternative may consist of parts of these alternatives that the decision-makers feel best represents how Calaveras County should grow in the future.

This report has three major sections:

- This introductory section that describes the GPU and the Alternatives Phase (see also Appendix A for a full description of the GPU process and how the Alternatives Phase fits in with the larger GPU work scope);
- An overview of the three land use Alternatives and the process that was used to define, develop, and evaluate them; and
- An evaluation and comparison of the three land use alternatives. The comparison is presented both geographically, based on county sub-areas, and by individual issues or topics.

C. ALTERNATIVES PHASE PROCESS

The Alternatives Phase includes the following steps:

- Developing a unified set of land use designations
- Developing a set of countywide growth projections
- Developing land use alternatives
- Modeling the alternatives to project growth in the county by sub-areas
- Evaluating land use alternatives

- Preparing the Alternatives Report
- Conducting Community Workshops
- Conducting Joint Board of Supervisors/Planning Commission Study Sessions

A critical first step in the Alternatives Phase was to develop a new unified set of land use designations that could be used to describe land use alternatives and ultimately be used in the new General Plan Land Use Diagram.

Since at least the 1970s the County has operated with a set of land use designations that have varying names, standards (for minimum parcel sizes, maximum densities, and intensities) and organization across the Land Use Element and the community and special plans.

In the next step Consultants and County staff developed population, housing unit, and employment growth projections for the county. Based on these projections, the public input process, the community plans/vision statements, and County decision-maker direction, the General Plan Team developed three possible alternative growth scenarios for land use for the county. These land use alternatives were modeled using UPlan software to project the pattern of growth in county sub-area geographies. Finally, the Team evaluated the three land use alternatives/concepts in terms of impacts on land use, transportation, public facilities, and natural resources.

D. NEXT STEPS

In March 2010, the County will conduct a series of six workshops to solicit input on the Alternatives Report. Following Community Workshops, the Board of Supervisors and Planning Commission will hold two joint study sessions in April to review the Alternatives Report and the input from the Community Workshops, and to receive further comments from the public.

After the Board of Supervisors and Planning Commission review the alternatives and the feedback from the Community Workshops, and hear public comments during the joint study sessions, the Board will select a preferred land use alternative for the General Plan Update.

The preferred alternative will not necessarily be one of the alternatives described in this Report. Instead, the preferred alternative may consist of parts of these alternatives that the decision-makers feel best represents how Calaveras County should grow in the

future. The preferred alternative will serve as the foundation for the draft General Plan goals, policies, and programs to be prepared in the next phase of the GPU.

It should be noted that the Valley Springs community planning effort is proceeding as a separate process. As of the writing of this report, the new Valley Springs community boundary and land use designations have yet to be defined. Ultimately the Valley Springs Plan will be incorporated into the General Plan but the timing of that effort is unknown at this juncture.

In reviewing the Alternative Report during the Community Workshops and the Board/Planning Commission Study Sessions, the public and County decision-makers should consider the following questions in the evaluation of the alternatives:

- Which growth figures best represent the level of future growth that the county should plan for?
- What distribution of land use designations can best realize the Draft Vision Statement and Guiding Principles?
- Does the growth distribution to county sub-areas meet expectations in terms of realistically modeling the distribution of overall countywide growth projections?
- How do the quantified impacts compare among the alternatives in terms of population, housing units, employment, traffic, and air quality?
- How do the impacts compare among the alternatives in terms of issues such as land use patterns, agriculture, and public health and safety?
- Is there further policy guidance that should supplement the policy direction contained in the Vision Statement and Guiding Principles?

II. LAND USE ALTERNATIVES OVERVIEW

A. INTRODUCTION

This chapter presents an overview of the three land use alternatives for the future growth of Calaveras County. These alternatives illustrate three different approaches to accommodating growth in Calaveras County through 2035. One alternative (Alternative A) is based on the existing 1996 General Plan. The two other alternatives (Alternatives B and C) were formulated based on earlier direction from community workshops, the Planning Commission, and the Board of Supervisors.

The following are the three growth alternatives:

- Alternative A: Baseline Growth
- Alternative B: Community-Centered Growth
- Alternative C: Accelerated Community-Centered Growth

This chapter first presents the Vision Statement and Guiding Principles that were developed during the previous phase of the GPU and which form the basis for Alternatives B and C. Next, this chapter describes the new unified set of land use designations. This is followed by a description of each alternative and its respective growth implications. Finally, this chapter describes the growth projections that were developed for the alternatives.

Chapter III of this report provides a side-by-side comparison of the alternatives, which summarizes the impacts of each. This chapter presents the alternatives evaluation primarily through a series of maps that show countywide and county “regions” and “sub-areas.” This evaluation is based on the results of a multi-step land use, transportation, and air quality modeling process.

B. VISION STATEMENT AND GUIDING PRINCIPLES FOR CALAVERAS COUNTY

The following is the Draft Working Vision Statement and Guiding Principles that were developed in Phase 3 of the GPU and published on June 25, 2008. The Vision Statement and Guiding Principles are based on input from community groups, community workshops, Board of Supervisors, and County staff. The language will be refined following the selection of the preferred alternative at the conclusion of Phase

4, and ultimately placed in the preface of the new General Plan.

Calaveras County Vision Statement

The historical character of the county's communities, the value of its productive resources, and the distinction of its physical beauty will continue to create a high quality of life for residents and a remarkable and memorable experience for visitors to the county.

Guiding Principles

- The history of the Gold Rush era will be alive in the culture of distinctive communities that provide a high quality of life for generations of residents.
- Open space, wildlife habitat, scenic vistas, agricultural lands, forests, rivers, and lakes will be protected and maintained for wildlife habitat, productive grazing and agricultural lands, and recreation.
- Communities will have clear boundaries and be separated from one another by working landscapes, greenbelts, or parks.
- Communities will have distinct centers where shopping, medical services, childcare, schools, jobs, and infrastructure are available. They will provide a range of housing types and affordability so people of all income levels can live in the same community.
- Businesses will thrive in a strong local economy based on sustainable natural resources and innovative industries. New opportunities for economic development will capitalize on advanced technology and catalyze growth and innovation.
- Visitors from around the state will be attracted to Calaveras County's historic communities, local businesses, recreation areas, and wineries. Tourism will play a major role in the local

economy and protection of natural and scenic resources.

- Development will not outpace the ability of County government to provide adequate services and infrastructure or reduce the level of service provided to existing communities.
- Highways and streets will be well-maintained and well-connected. Public transit and bike and pedestrian facilities will provide choices for travel within communities and to major destinations.
- Water quality and water rights will be protected to ensure that they are sustained for future generations.
- The risks of flooding, fire hazards, and climate change will be mitigated to the greatest extent possible to protect residents.
- Residents will have access to medical and emergency services, and opportunities for life-long learning and enrichment at educational institutions.
- Government services will be efficient and effective with measurable results. Through community involvement and volunteerism, residents will be active participants in guiding Calaveras County towards a common vision for the future.

C. LAND USE DESIGNATIONS

The County's land use designation system has evolved over the last thirty years. The result today is that the County's General Plan and community plans now collectively include about 120 individual land use designations. Many of these designations overlap and have inconsistent standards.

The General Plan Team examined all of the General Plan and community plan land use designations and developed a new consolidated set of land use designations for the GPU with density and intensity standards based on the analysis of the existing land use designations, land use designations used in similar communities, and work that has been done by various community groups. Preparing the new consolidated land use designations facilitated the description and comparison of the three land use alternatives

The new land use designations are organized under five categories. The following is a list of the categories and the proposed land use designation system for the GPU. See Appendix B for a full description of the process used to develop the new

land use designations along with a table describing each designation.

- **Natural Resource Lands**

- Agricultural Lands
- Public Lands
- Biological Resource
- Timber Resource
- Timber Production Zone
- Parks and Recreation
- Water Body

- **Residential**

- Residential-Agricultural
- Residential-Rural
- Residential-Low Density
- Residential-Medium Density
- Residential-High Density

- **Mixed Use**

- Community Center-Local
- Community Center-Historic
- Community Center-Regional

- **Commercial/Industrial**

- Commercial
- Commercial-Recreation
- Office/Business Park
- Industrial

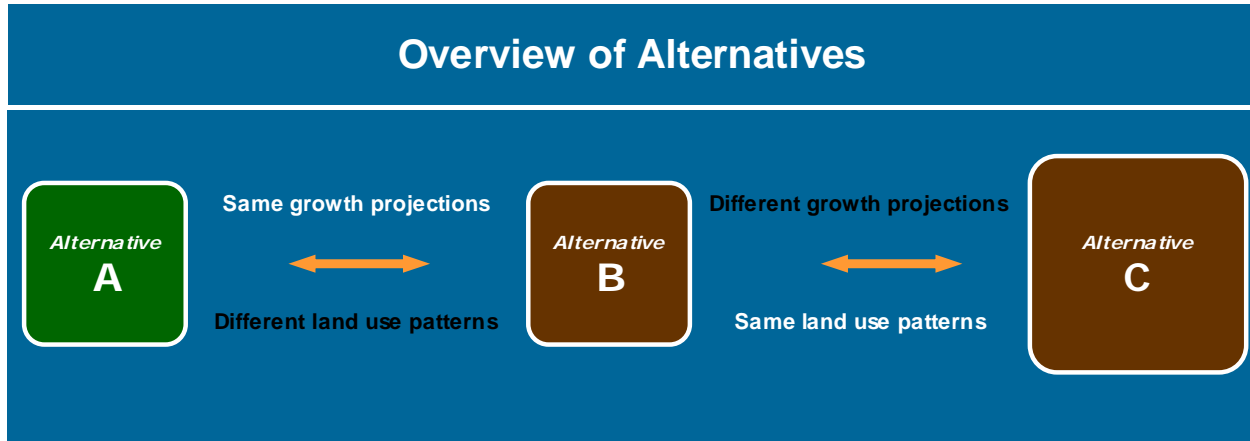
- **Other**

- Public Services
- Urban Planning Area (City of Angels (Angels Camp) Sphere of Influence (SOI)
- Right of Way

D. OVERVIEW OF ALTERNATIVES A, B, AND C

The following is a description and overview of the three land use alternatives:

- Alternative A: Baseline Growth
- Alternative B: Community-Centered Growth
- Alternative C: Accelerated Community-Centered Growth



1. Alternative A: Baseline Growth

Alternative A is based on the trends for growth in Calaveras County over the past 10 to 15 years, and on the existing regulatory environment. Alternative A uses population projections derived directly from California Department of Finance (DOF) projections published in 2007. It also assumes a declining household size based on regional and statewide trends and projections. The jobs and employed residents projections were developed based on an analysis of recent trends, an employment sector analysis, and correlation with population and household growth projections.

The following is a summary of the policy direction that Alternative A encompasses:

- Continue the existing policy direction and regulatory environment as expressed in County policy/actions over the last decade.
- Continue the development trends and outcomes over the last decade.
- Continue dispersed low density and rural residential development on agricultural lands.
- Limited infill and redevelopment.
- Limited constraints to development on agricultural land or sensitive environmental areas.

Alternative A reflects the existing pattern of land use designations (i.e., the 1996 General Plan land use designations), but translated into the new GPU land use designation system.

2. Alternative B: Community-Centered Growth

Alternative B reflects the new land use policy direction that County decision-makers have expressed during the GPU process (and as captured in documents such as the Draft Working Vision Statement and Guiding Principles).

Alternative B uses the same overall population, household, dwelling unit, jobs, labor force, and employed residents projections as Alternative A, but distributes that growth differently in terms of type, intensity, and location.

As an overall policy direction, Alternative B focuses growth in existing community centers and maintains distinct boundaries between community centers with the following goals:

- Preserve open space/agricultural land by reducing the conversion of agricultural land to residential and other uses.

- Avoid further parcelization of agricultural and rural residential areas and minimize scattered, large lot rural residences on agricultural land.
- Protect biological resources and avoid development in natural resource areas.
- Reduce aesthetic and economic impacts of sprawl.
- Reduce the demands that new development places on the existing substandard road system.
- Serve new development efficiently with public facilities.
- Improve emergency response times.
- Reduce the risk from natural hazards such as wildfires and flooding.
- Enhance amenities and sense of place in community centers.
- Improve air quality and reduce GHG emissions through a more efficient circulation system and land use patterns.
- Provide greater housing choice/housing affordability.
- Capitalize on the strength of agriculture in diversifying the county's economy.

3. Alternative C: Accelerated Community-Centered Growth

Alternative C is similar to Alternative B in terms of policy direction, but is based on more aggressive growth assumptions than those in Alternatives A and B that are based on official State forecasts. The most recent DOF population projections (2007) are more conservative than past DOF projections in 2004, 2001, and 1998.

Alternative C distributes new development in the same pattern as Alternative B, but increases the 2005-2035 growth increment for population, jobs, labor force, and employed residents by 50 percent over Alternatives A and B. Because Alternative C assumes that the increased growth increment is based on increased levels of economic activity and employment, it also increases the average household size and decreases the housing vacancy rate to account for more working families, relatively fewer retirees, and relatively fewer second/vacation homes.

Similar to Alternative B, the primary policy direction for Alternative B is to focus growth in existing community centers and maintain distinct boundaries between community centers. However, Alternative C assumes additional focus on economic development efforts, including broader retail opportunities,

educational institutions, increased tourism, and larger residential developments. Alternative C provides a larger population and jobs base.

E. GROWTH PROJECTIONS

Before determining where new growth should occur within the county, the amount and type of growth must be defined. Growth projections provide an estimate of the potential growth that is expected to occur based on migration, market demand, land use inventory, infrastructure, constraints, and other considerations.

The projected growth assumption is the same for Alternatives A and B. This approach allows for a direct comparison of these growth alternatives and more clearly defines the differences and impacts that may occur under each. On the other hand, the distribution of land use designations is the same for Alternatives B and C.

Table 1 below provides a summary of the growth projections for the three possible Alternatives for 2035 and includes the growth increment from 2005 to 2035 and the annual average growth rate (AAGR) for 2005 to 2035.

The following assumptions were used in formulating these growth projections. See Chapter 2 of the General Plan Baseline Report (Population and Demographics) for an in-depth discussion and analysis of demographic projections for Calaveras County.

Alternatives A and B

- Official 2007 countywide State of California population projections from DOF were used as the base for 2035.
- The jobs and labor force growth projection was based on regional economic models, and population, household, and dwelling unit projections.
- Household size projected lower based on statewide and local demographic trends.
- Continuation of high vacancy rate (due to second/vacation homes).
- Assumption of stable 7 percent unemployment rate to 2035).

TABLE 1
CALAVERAS GENERAL PLAN UPDATE ALTERNATIVES PROJECTIONS
2005-2035

	Population	Households (HH)	Dwelling Units	Jobs	Civilian Labor Force	Employed Residents	Persons/ HH	Housing Vacancy Rate
2005								
Existing	44,610	18,573	25,848	12,563	20,640	19,350	2.40	28.1%
2035								
Alternative A	68,294	32,521	45,168	19,288	29,116	27,078	2.10	28.0%
Alternative B	68,294	32,521	45,168	19,288	29,116	27,078	2.10	28.0%
Alternative C	80,136	37,273	49,697	22,651	33,354	30,942	2.15	25.0%
2005-2035 Increment								
Alternative A	23,684	13,948	19,320	6,725	8,476	7,728	1.70	27.8%
Alternative B	23,684	13,948	19,320	6,725	8,476	7,728	1.70	27.8%
Alternative C	35,526	18,700	23,849	10,088	12,714	11,592	1.90	21.6%
2005-2035 AAGR								
Alternative A	1.43%	1.88%	1.88%	1.43%	1.15%	1.13%	-	-
Alternative B	1.43%	1.88%	1.88%	1.43%	1.15%	1.13%	-	-
Alternative C	1.97%	2.35%	2.20%	1.97%	1.61%	1.58%	-	-

Alternative C

- Increased 2005-2035 growth increment for population, jobs, labor force, and employed residents by 50 percent over Alternatives A and B.
- Projected 2035 household size larger than Alternatives A and B because of assumption of more working families and relatively fewer retirees.
- Vacancy rate of 25 percent lower than Alternatives A and B because of assumption of relatively more working households and relatively fewer second/vacation homes).

As shown in Table 1, Alternatives A and B have a projected 2035 population of 68,294, while Alternative C projects a total population of 80,136 by 2035. Alternatives A and B have a 1.43 percent AAGR for population and jobs, and a 1.88 percent AAGR for households and dwelling units from 2005 to 2035. Alternative C has a 1.97 percent AAGR for populations and jobs, a 2.35 percent AAGR for households, and a 2.2 percent AAGR for dwelling units.

While the population growth increment for Alternative C (35,526) is 50 percent higher than that for Alternatives A and B (23,684), the dwelling unit growth increment is only 23 percent higher because of projected lower vacancy rates and increased household size due to the assumption of a greater percentage of working families as part of the increased growth increment.

As a comparison to historical rates of growth, between 1970 and 1980, Calaveras County had a 4.3 percent AAGR for population. Between 1980 and 1990, the county increased in population even more quickly (an average of 4.4 percent per year). From 1990 to 2000, growth slowed to an AAGR of 2.4 percent. For the most recent period from 2000 to 2009, the population AAGR was 1.45 percent. Chapter 2 (Population and Demographics) of the General Plan Baseline Report has an in-depth discussion of population, household, and employment growth rates in Calaveras County.

III. COMPARISON OF ALTERNATIVES

This chapter presents an evaluation and comparison of the three land use alternatives. The comparison is presented both geographically, based on county sub-areas, and by individual issues or topics.

Multiple computer modeling tools were used to allocate projected growth within the county and to analyze growth impacts of the three alternatives. These included UPlan, TransCAD, and EMFAC models, which are described in Appendix C of this report.

A. OVERVIEW COMPARISON: COUNTYWIDE, REGIONS, AND SUB-AREAS

1. Land Use and Development Pattern

One of the key land use issues that the GPU needs to address is the conflict between low density rural residential development patterns and the preservation of open space and provision of County services. The current configuration of land use designations in the existing General Plan is creating sprawling patterns of land use, fragmenting agricultural and forestry land, and discouraging development in community centers. Rural residential development outside of community centers fragments landscapes. It creates small pockets of development that are far from daily services and jobs that burdens the road network with commuting and day-to-day trips to distant destinations.

County policy direction is moving toward promoting development within the boundaries of existing communities, so that development will be able to take advantage of existing water and sewer infrastructure, roads, and centrally-located retail services and schools. Additional considerations include providing sufficient land for industrial and commercial uses, allowing for choices in housing types, not overburdening infrastructure or road capacity, and protecting open space.

Table 2 and Figures 1 and 2 below show a comparison of the allocation of land use designations among the three alternatives that was projected using UPlan. As previously discussed, Alternative A reflects the existing configuration of land use designations translated into the new GPU land use designation system, while Alternatives B and C use a different configuration of land use designations based

on direction provided by the various Community Plans/Visions and County decision-makers in the GPU process. The configuration of land use designations in Alternatives B and C are identical.

As shown in Table 2, one of the primary differences between the land use designations in Alternatives B and C, as compared to Alternative A, is the shift of a large amount of land from a Residential-Agricultural (RA) designation (with a minimum parcel size of 5 to 40 acres) to an Agricultural Lands (AG) designation (with a minimum parcel size of 40 to 80 acres).

Alternatives B and C also include a larger share of higher density housing types (greater than one unit per acre) than Alternative A. These are located in community areas with available public facilities.

Figures 1 (and 1.1) and 2 (and 2.1) show maps of the land use designations for Alternative A, and Alternatives B and C, respectively. The maps also show five geographic regions in the county that were defined specifically for the purposes of analysis in the Alternatives Report. The regions were delineated to define logical geographic areas and follow Traffic Analysis Zone (TAZ) boundaries used by the County in its Regional Transportation Plan (RTP). The five regions are as follows:

- Region 1: Western County
- Region 2: Highway 49 Corridor
- Region 3: Foothills
- Region 4: Highway 4 Corridor
- Region 5: High Country

Figures 1 and 2 show community/ special plan boundaries.¹ These community plan areas will have a separate section in the General Plan Policy

¹ The existing Calaveras County Airport Special Plan boundary is not shown because the plan is not being revised in the GPU. As of the writing of this report, the Airport Land Use Consistency Plan (ALUCP) is being adopted by the Calaveras County Airport Land Use Commission (ALUC) and the Special Plan is being phased out.

The Valley Springs Community Plan (VSCP) is currently (Spring 2010) being updated in a separate process. As of the writing of this report, the new VSCP boundary has yet to be defined, so it is not shown in Figures 1 and 2.

Document. The figures also show the proposed “Town Center” boundaries for the following communities:

- Glencoe
- Paloma
- Rail Road Flat
- Sheep Ranch
- Mountain Ranch
- Wallace
- West Point
- Wilseyville

Figures 1.1 and 2.1 shows the proposed “Community Vision” boundaries for the Town Center areas located in Supervisorial District 2.

These Town Center areas will have specific policies that apply to them in the Policy Document (see Appendix A for a description of the process for integrating community plans and community visions into the General Plan).

The following is a description of the major differences between the land use designations in Alternatives B and C compared to Alternative A within the areas shown in detailed call-out boxes in Figures 1 and 2. These differences reflect the overall countywide policy direction of promoting development within the boundaries of existing communities, along with the direction contained in the individual community plans and vision statements.

Figures 1 and 2 show the allowable residential density ranges for the residential and community center designations. Please see Table B-2 in Appendix B for a full list of the allowable residential densities for all land use designations.

Region 1: Western County

Wallace & Burson Area

- Expanded Community Center-Local (CCL) area in Burson.
- Changed Residential-Low Density (RL) areas to Residential-Agricultural (RA) and Agricultural Lands (AG) in Burson because of lack of water and sewer services.
- Added Wallace as a Town Center.
- Expanded the CCL area north to the west of Highway 12 in Wallace.

- Changed some RL areas to Residential-Agricultural (RA) in Wallace because of lack of water and sewer services.
- Changed some RL areas to Biological Resource (BR) in Wallace (EBMUD property).

Copperopolis Area

- Added a Community Plan boundary with land use designations consistent with the draft Plan.
- Changed some AG areas south of Copperopolis Town Square to RA.
- Changed a large RA area in the southwest part of the Community Plan area to CCL.
- Changed an RA area in the southwest part of the Community Plan to Parks and Recreation (PR).
- Changed a CCL area around O’Byrnes Ferry Road to mostly Residential-Rural (RR) because of a lack of water and sewer services/facilities.
- Changed an RL area around O’Byrnes Ferry Road to mostly RA because of a lack of water and sewer services/facilities.
- Changed an RA area east of O’Byrnes Ferry Road to AG.
- Created new Community Center-Local (CCL) and Industrial (I) areas on the east side of O’Byrnes Ferry Road.

Region 2: Highway 49 Corridor

Mokelumne Hill Area

- Changed the Commercial (C) area around the intersection of Highways 26 and 49 to CCL and Community Center-Historic (CCH).
- Changed some RL areas in central Mokelumne Hill to CCL and CCH.
- Changed some AG areas to RA.

San Andreas Area

- Changed all RR areas to AG and RA because of lack of water and sewer services
- Changed some RL areas to RA because of a lack of water and sewer services/facilities.
- Changed some C and RL areas along Highway 49 to CCR.
- Extended mixed use (CCR and CCH) areas along Main Street

Alternatives Report

- Changed the I area west of Pool Station Road to AG because of the decommissioning of the cement plant.
- Changed some C and RL areas in the south part of the Community Plan area along Highway 49 to I because of the proximity to the airport area.

Region 3: Foothills**Blue Mountain Area**

- Added Town Center boundaries for Glencoe, Rail Road Flat, West Point, and Wilseyville based on the boundaries in the draft community vision documents.
- Added Community Vision boundaries for Glencoe/Rail Road Flat, West Point, and Wilseyville based on the boundaries in the draft community vision documents (see Figures 1.1 and 2.1).
- Changed the CCL area outside of the proposed Glencoe Town Center area to AG.
- Changed the CCL area outside of the proposed Rail Road Flat Town Center area to Timber Resource (TR) and BR.
- Expanded CCL areas to correspond with proposed West Point and Wilseyville Town Center areas.
- Changed the CCL areas outside of the proposed West Point and Wilseyville Town Center areas to RR and BR.

Mountain Ranch & Sheep Ranch Area

- Added Town Center boundaries for Mountain Ranch and Sheep Ranch based on the boundaries in the draft community vision documents.
- Added Community Vision boundaries for Mountain Ranch and Sheep Ranch based on the boundaries in the draft community vision documents (see Figures 1.1 and 2.1).
- Changed some CCL and RL areas outside of the proposed Mountain Ranch Town Center area to RA because of a lack of water and sewer services/facilities.

Region 4: Highway 4 Corridor**Murphys & Douglas Flat Area**

- Changed some RR areas to RA because of a lack of water services/facilities.

Arnold, Avery & Hathaway Pines Area

- No changes

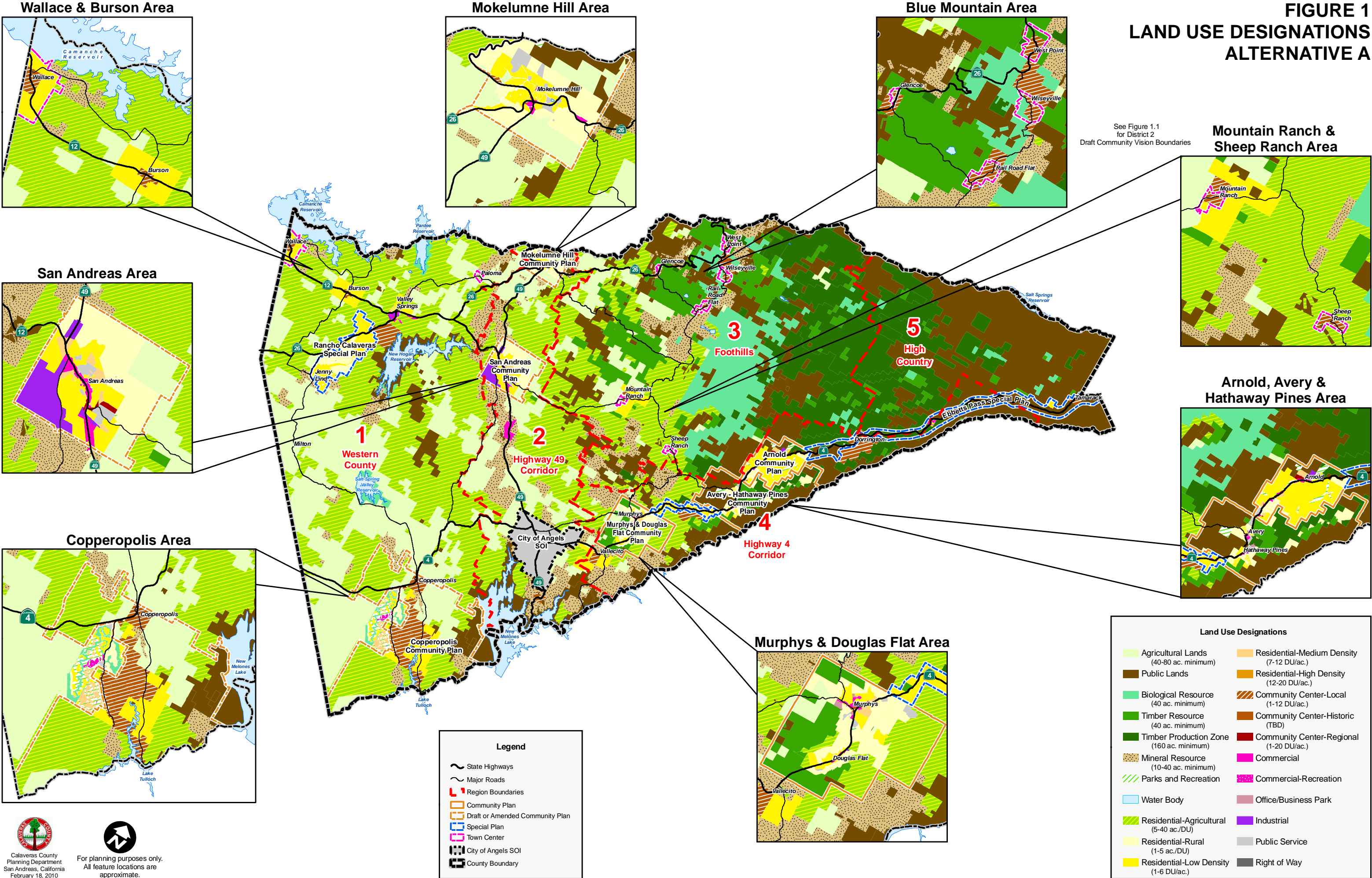
**TABLE 2
GPU LAND USE DESIGNATIONS TOTAL ACREAGE**

Category/LU Designation	Code	Alternative A (acres)	Alternative B & C (acres)
Natural Resource Lands			
Agricultural Lands	AG	121,524	288,910
Public Lands	PL	132,595	132,158
Biological Resource	BR	30,445	41,212
Timber Resource	TR	31,296	38,365
Timber Production Zone	TPZ	72,335	72,329
Mineral Resource*	MR	45,284	-
Parks and Recreation	PR	1,829	3,045
Water Body	WB	9,092	8,738
TOTAL		444,399	584,757
Residential			
Residential-Agricultural	RA	166,361	29,558
Residential-Rural	RR	12,639	16,161
Residential-Low Density	RL	19,710	13,683
Residential-Medium Density	RM	1,326	1,493
Residential-High Density	RH	218	218
TOTAL		200,254	61,113
Mixed Use			
Community Center-Local	CCL	11,634	9,057
Community Center-Historic	CCH	118	156
Community Center-Regional	CCR	1,578	2,724
TOTAL		13,329	11,938
Commercial/Industrial			
Commercial	C	1,348	371
Commercial-Recreation	CR	272	254
Office/Business Park	O	297	297
Industrial	I	1,146	934
TOTAL		3,063	1,856
Other			
Public Services	PS	1,114	2,368
Right of Way	ROW	678	819
TOTAL		1,792	3,187
TOTAL ALL LAND USE DESIGNATIONS**		662,838	662,851

* Note: the Mineral Resource designation was only used in Alternative A to reflect the existing General Plan. Mineral resources will be managed and protected through policies and programs in the GPU, not with a distinct land use designation.

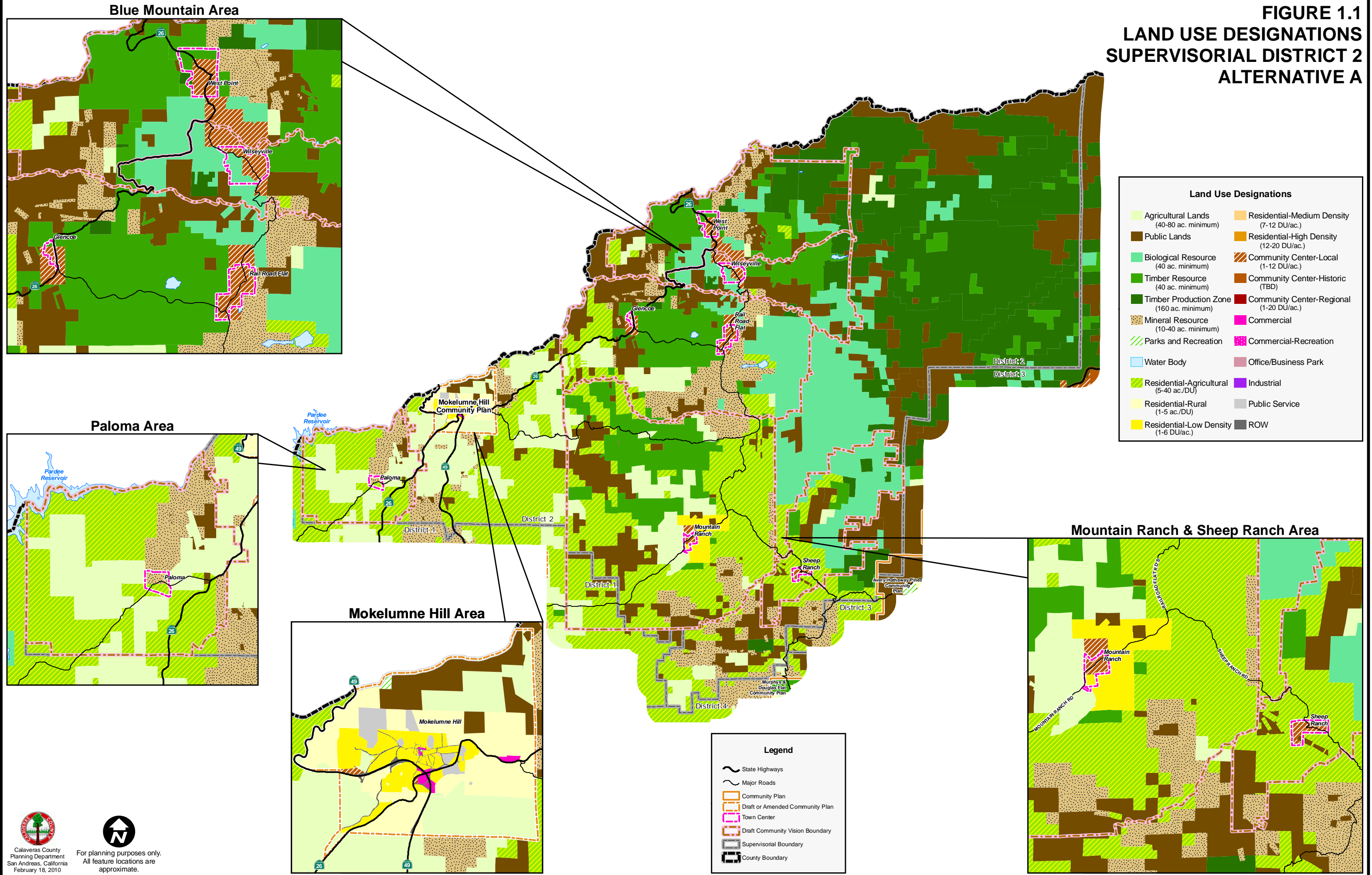
** Totals for Alternative A and Alternatives B & C vary slightly due to rounding.

FIGURE 1
LAND USE DESIGNATIONS
ALTERNATIVE A



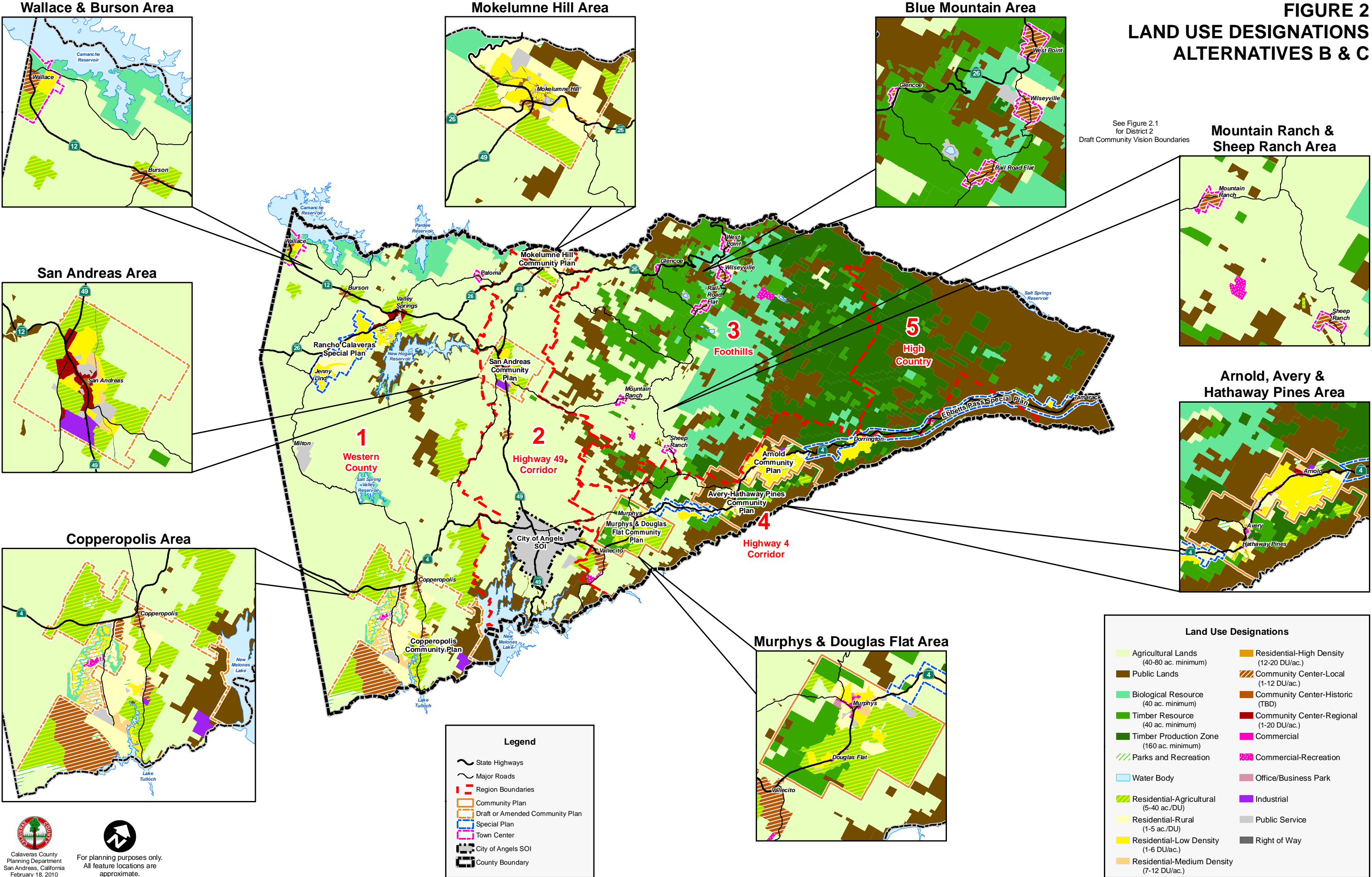
This page is intentionally left blank.

FIGURE 1.1
LAND USE DESIGNATIONS
SUPERVISORIAL DISTRICT 2
ALTERNATIVE A



This page is intentionally left blank.

FIGURE 2
LAND USE DESIGNATIONS
ALTERNATIVES B & C



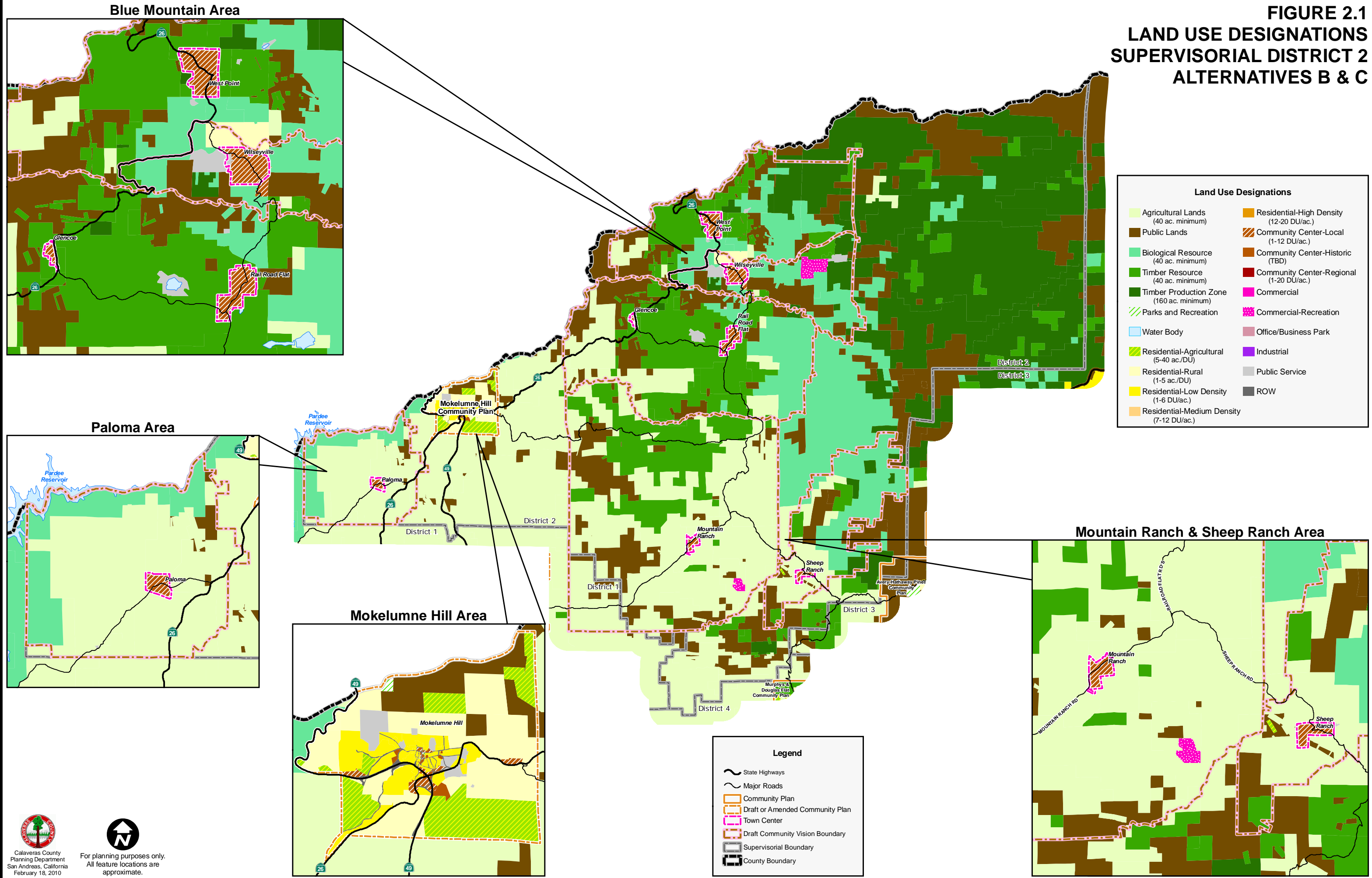
Calaveras County
Planning Department
San Andreas, California
February 18, 2010



For planning purposes only.
All feature locations are
approximate.

This page is intentionally left blank.

FIGURE 2.1
LAND USE DESIGNATIONS
SUPERVISORIAL DISTRICT 2
ALTERNATIVES B & C



This page is intentionally left blank.

2. Projected Development: Housing Unit and Job Growth

Countywide

Figures 3, 4, and 5 show the countywide allocation of projected development for Alternatives A, B, and C, respectively, based on the land use designations and projected growth for the three alternatives. The maps show a generalization of the UPlan model output for new development from 2005 to 2035 aggregated for all land use types (residential, commercial, and industrial) represented as orange dots. Existing development (as of 2005) is shown in dark gray shading, while other areas that were excluded from new development (primarily public land ownership) are shown in light gray shading.

The maps also show existing (2005) and projected (2035) growth for dwelling units (DUs) and jobs for each of the five county regions. The 2005 data is from the TransCAD transportation model, while the 2005 to 2035 growth is derived from the UPlan model outputs.

The most striking difference between the alternatives is the large amount of rural residential development in Alternative A compared to Alternatives B and C. Alternatives B and C show much more development concentrated in existing community areas.

The dwelling unit and job growth totals are very similar for Alternatives A and B for each of the five county regions. The additional growth in Alternative C is projected primarily in Region 1 (Western County) and Region 2 (Highway 49 Corridor) for housing, and in Region 1 and Region 4 (Highway 4 Corridor) for jobs.

Table D-1 in Appendix D of this report shows the 2005-2035 countywide UPlan allocation of dwelling units, population, residential acres, and commercial and industrial acres for each land use designation for the three land use alternatives.

County Regions and Sub-Areas

Figure 6 below shows projected development for dwelling units and jobs for 2000 and 2035 for each of the 2000 Census Designated Places (CDP) in each county region as follows:

- **Region 1: Western County**
 - Copperopolis CDP
 - Rancho Calaveras CDP
 - Valley Springs CDP
 - Wallace CDP

- **Region 2: Highway 49 Corridor**
 - City of Angels (Angels Camp)
 - Mokelumne Hill CDP
 - San Andreas CDP
- **Region 3: Foothills**
 - Mountain Ranch CDP
 - Rail Road Flat CDP
 - West Point CDP
- **Region 4: Highway 4 Corridor**
 - Arnold CDP
 - Avery CDP
 - Dorrrington CDP
 - Forest Meadows CDP
 - Murphys CDP
 - Vallecito CDP
- **Region 5: High Country**
 - None

Table D-2 in Appendix D shows the existing and projected growth for population, dwelling units, and jobs for each of the sub-areas in tabular form.

It should be noted that the existing conditions information in Figure 6 is not directly comparable to that in Figures 3 through 5. This is because the geography and data is based on 2000 Census geography and CDPs, whereas the geography and data in Figures 3 through 5 for the county region totals is based on Traffic Analysis Zones (TAZ) in the TransCAD model. The 2005 TAZ geography does not coincide with the 2000 CDP geography, so the two datasets are not directly comparable. Furthermore, the data in Table D-2 and Figure 6 uses Census employment for the 2000 baseline figures, which is a measure of the number of employed residents, not the actual number of jobs in a given locale. This baseline employment figure is not directly comparable with the projections of job growth by location.

3. Transportation and Circulation

As discussed in Appendix C, LSC Transportation Consultants, Inc. (LSC) conducted an evaluation of 12 key intersections and 14 key roadway segments for the Level of Service (LOS) associated with the three land use alternatives. LOS is a concept that reflects a driver's perception of traffic conditions and the level of delay that a driver experiences, ranging from LOS A (free-flow conditions) to LOS F (stop-and-go congested conditions). Calaveras County

currently uses LOS C as its official minimum standard.

Volume/capacity (v/c) ratio is a related concept that represents the sufficiency of a roadway segment or intersection to accommodate the vehicular demand. A v/c ratio less than 0.85 generally indicates that adequate capacity is available and vehicles are not expected to experience significant queues and delays. As the v/c ratio approaches 1.0, traffic flow may become unstable, and delay and queuing conditions may occur. Once the demand exceeds the capacity (a v/c ratio greater than 1.0), traffic flow is unstable and excessive delay and queuing is expected.

LSC's analysis assumed no change in the roadway network or intersection geometrics from current (2008) conditions. Further analysis to be conducted later in the GPU process will identify the improvements necessary to mitigate identified deficiencies.

The following is a summary of the findings:

- The total PM (afternoon) peak-hour traffic volume along all key roadway segments is 3 percent greater for Alternative B than for Alternative A, and an additional 9 percent greater for Alternative C than for Alternative B.
- At key intersections the total PM peak-hour traffic volume is 7 percent greater for Alternative B than for Alternative A, and an additional 10 percent greater for Alternative C than for Alternative B.
- It is likely the slightly greater projected traffic volumes for key roadway segments and intersections in Alternative B compared to Alternative A is a result of the concentration of growth within community centers, especially given the location of these roadway segments and intersections within the community areas.
- The average volume/capacity ratio for all study roadway segments ranges from 1.52 for Alternative A to 1.55 for Alternative B and 1.70 for Alternative C. Under all alternatives, average projected traffic volume is more than 50 percent greater than capacity. This likely indicates the need for 4-lane roadways to accommodate projected future traffic levels.
- In general, there is very little difference in the LOS results between the alternatives. Considering the current LOS C standard, the differences in traffic volumes only result in a different outcome in terms of attaining LOS at

a single location among all the key intersection and roadway segments among the alternatives (threshold exceeded under Alternative A for Mountain Ranch Road east of San Andreas).

- In all three alternatives 9 of the 12 intersections would not attain the existing LOS C standard.
- In all three alternatives 12 of the 14 roadway segments would not attain the existing LOS C standard.
- If County policy were changed to allow a lower LOS, there would be greater differentiation among the alternatives and roadway/intersection improvements to achieve acceptable conditions would likely be reduced. Assuming an LOS D standard, for example, the number of study roadway segments that would exceed the standard would drop to two under Alternative A and four under Alternatives B and C. Given the lower peak hour volume to capacity ratio for Alternative A, it could be easier to mitigate the effects of this alternative.

It should be noted that the TransCAD model looks at travel *between* Traffic Analysis Zones (TAZs). Therefore, it does not capture the efficiencies created by concentrating development *within* community centers. This means that the more dispersed development pattern in Alternative A results in slightly lower traffic volume impacts than Alternative B in the TransCAD model. It is likely that the real-world impacts of concentrating development within community centers in Alternative B would lead to shorter trips and reduced traffic volumes.

4. Air Quality

As discussed in Appendix C, Sierra Research used EMFAC software to quantify both greenhouse gas and criteria pollutant emissions from transportation-related sources for the three land use alternatives. Vehicle emissions estimates were developed for both criteria pollutants (ROG (reactive organic gases) CO (carbon monoxide), NOx (oxides of nitrogen) and greenhouse gas CO₂ (carbon dioxide).

The following is a summary of the findings:

- Criteria pollutant emissions are expected to drop dramatically (65-68 percent for ROG, 71-75 percent for CO, and 73-77 percent for NOx) between 2005 and 2035 due to continued improvements in vehicle emission control technology.
- Until new Federal CAFE fuel economy standards or California AB1493 Greenhouse

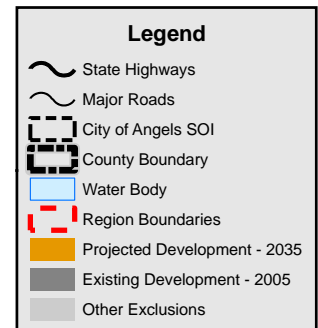
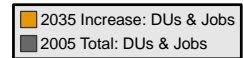
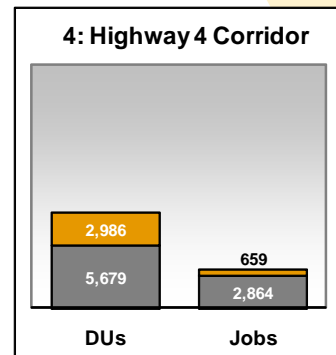
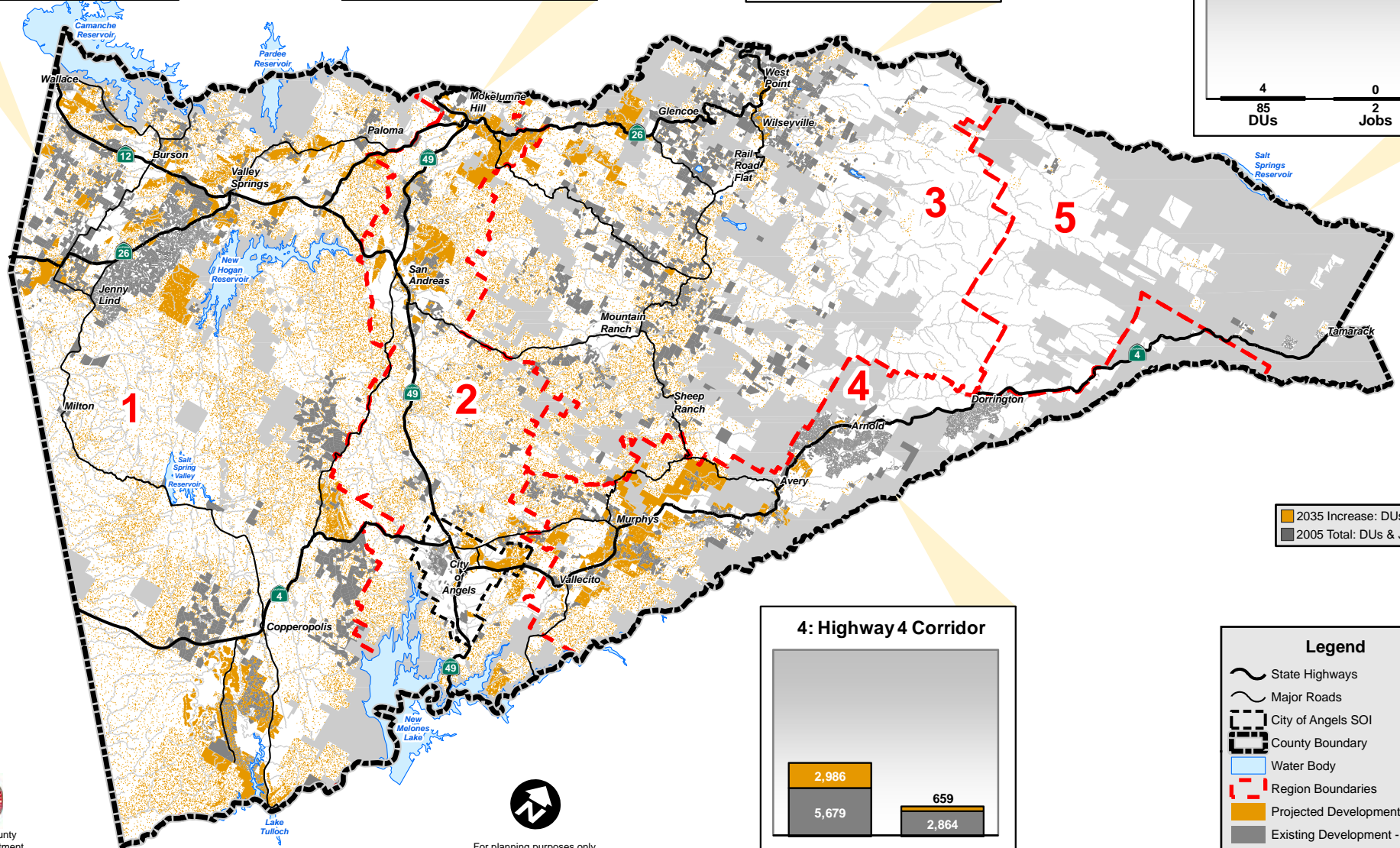
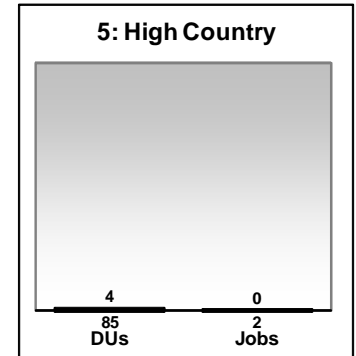
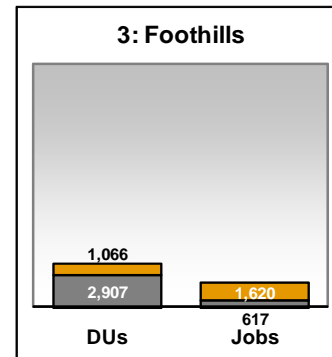
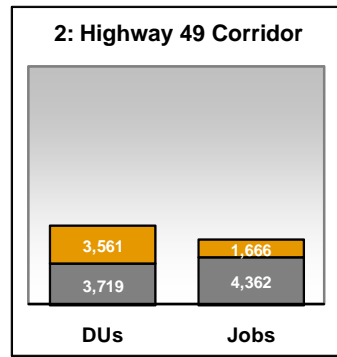
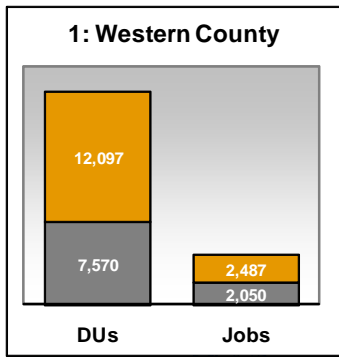
Gas CO₂ emission standards are implemented, vehicle CO₂ emissions will closely track with changes in vehicle travel volumes.

- CO₂ emissions are estimated to increase from 2005 to 2035 by 109 percent under Alternative A to 116 percent under Alternative B and 145 percent under Alternative C.
- Passenger cars and light-duty trucks accounted for 58 percent of criteria pollutant emissions in Calaveras County in 2005. Cars and light-duty trucks accounted for 67 percent of vehicle emissions of CO₂ in 2005.
- By 2035 the share of criteria pollutant emission from cars and light trucks is expected to decline to around 40 percent.

Until the EMFAC model is refined or updated to more robustly estimate CO₂ emissions reductions from more compact land use strategies, GHG emissions reductions will depend on strategies that measurably reduce vehicle miles traveled (VMT) or increase the share of “sweet spot” travel (speed region where vehicle emissions are minimized). Bypasses that could replace stop-and-go traffic with traffic at moderate speeds are an example of this “sweet spot” strategy.

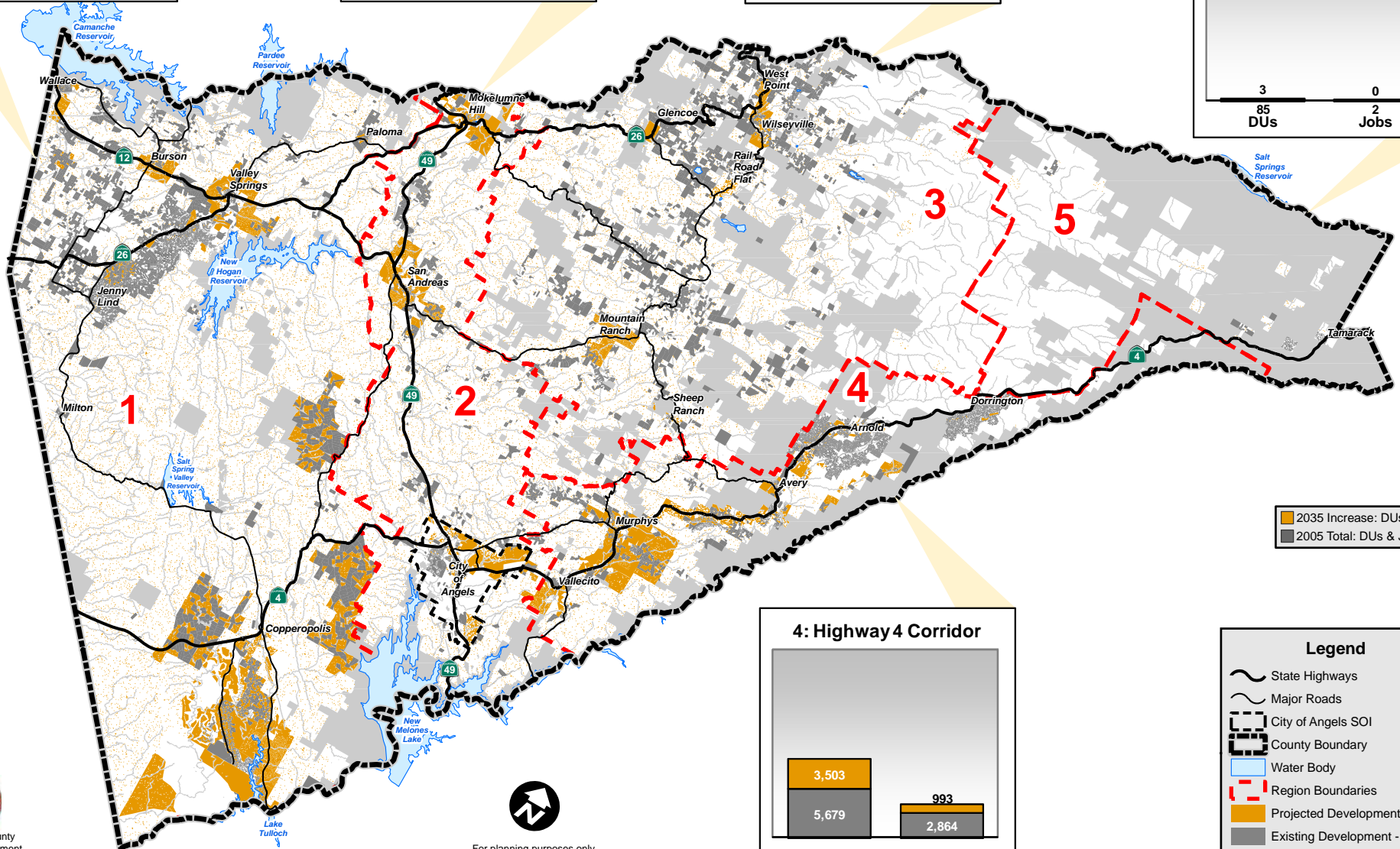
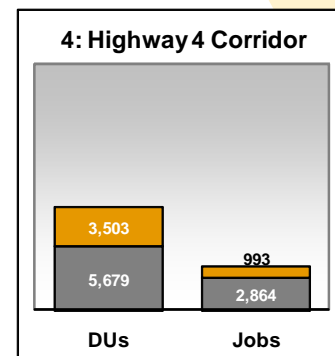
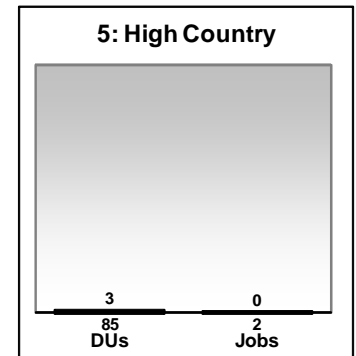
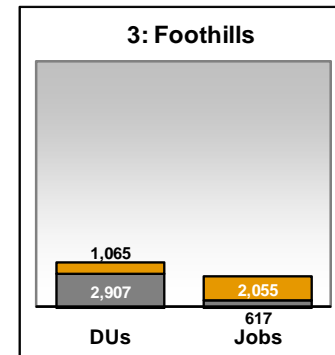
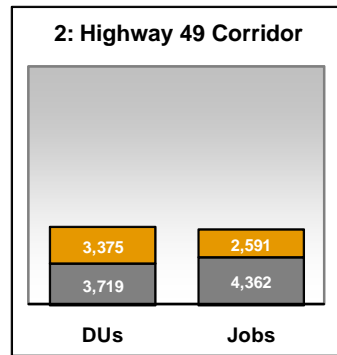
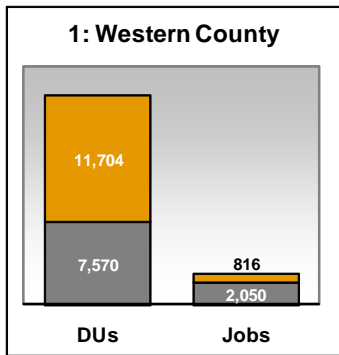
This page is intentionally left blank.

FIGURE 3
PROJECTED DEVELOPMENT
ALTERNATIVE A

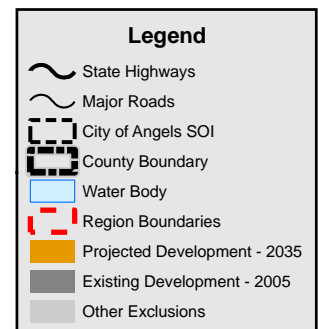


This page is intentionally left blank.

FIGURE 4
PROJECTED DEVELOPMENT
ALTERNATIVE B

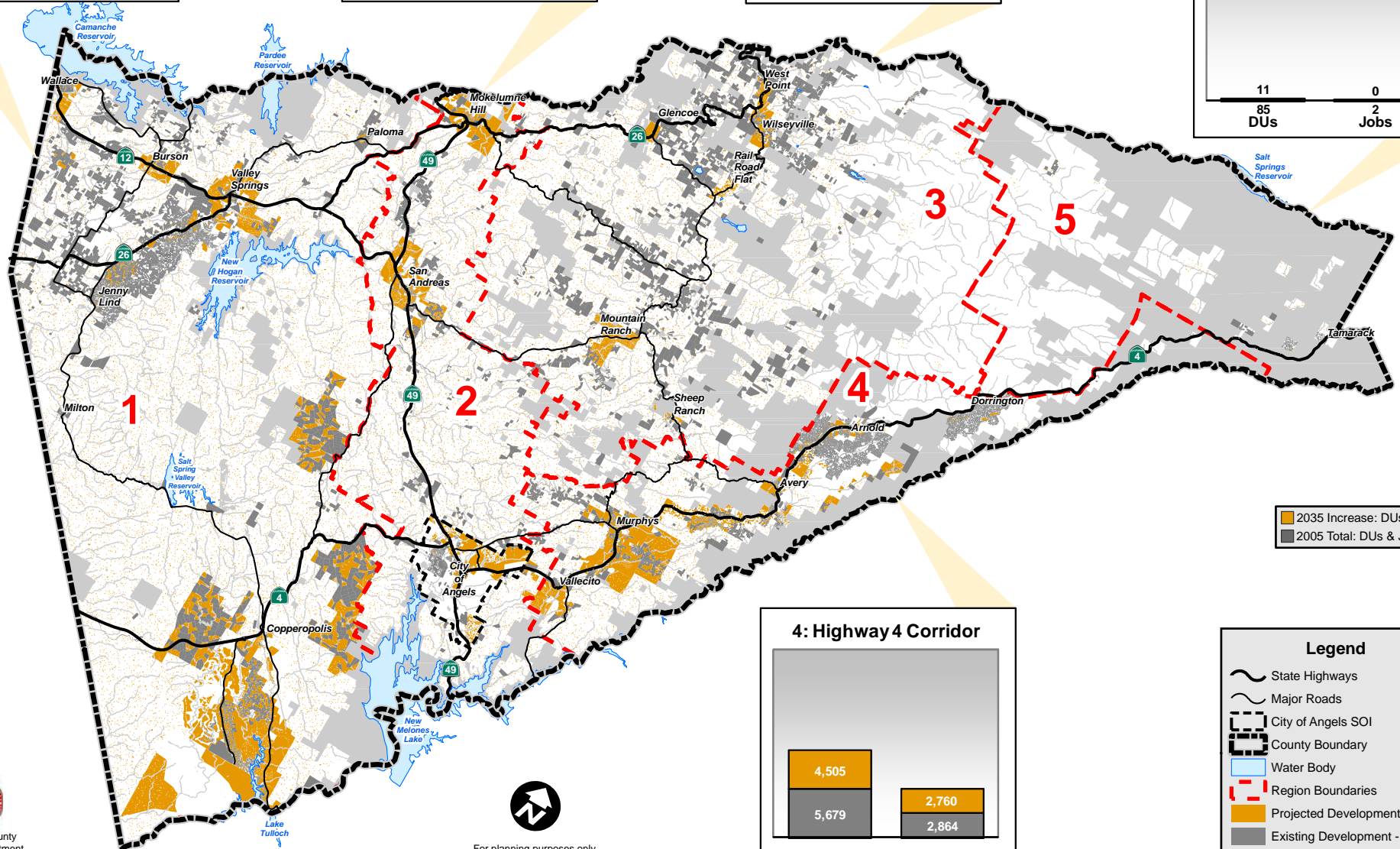
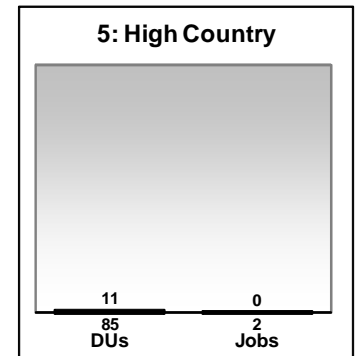
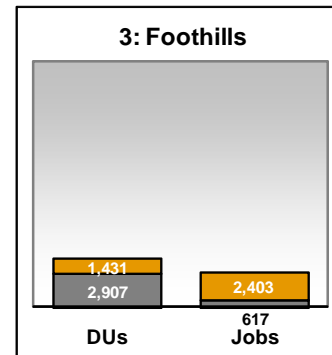
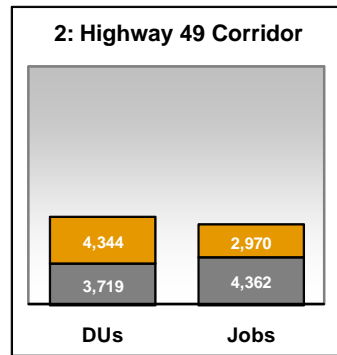
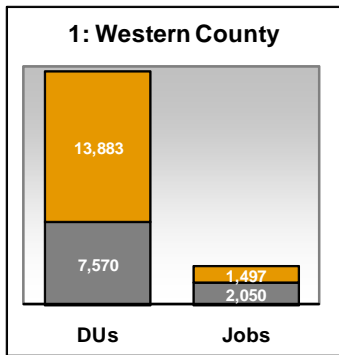


2035 Increase: DUs & Jobs
2005 Total: DUs & Jobs

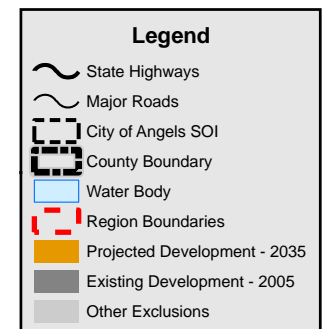
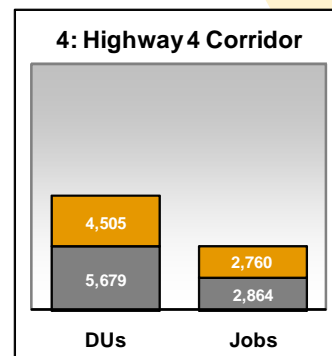


This page is intentionally left blank.

FIGURE 5
PROJECTED DEVELOPMENT
ALTERNATIVE C

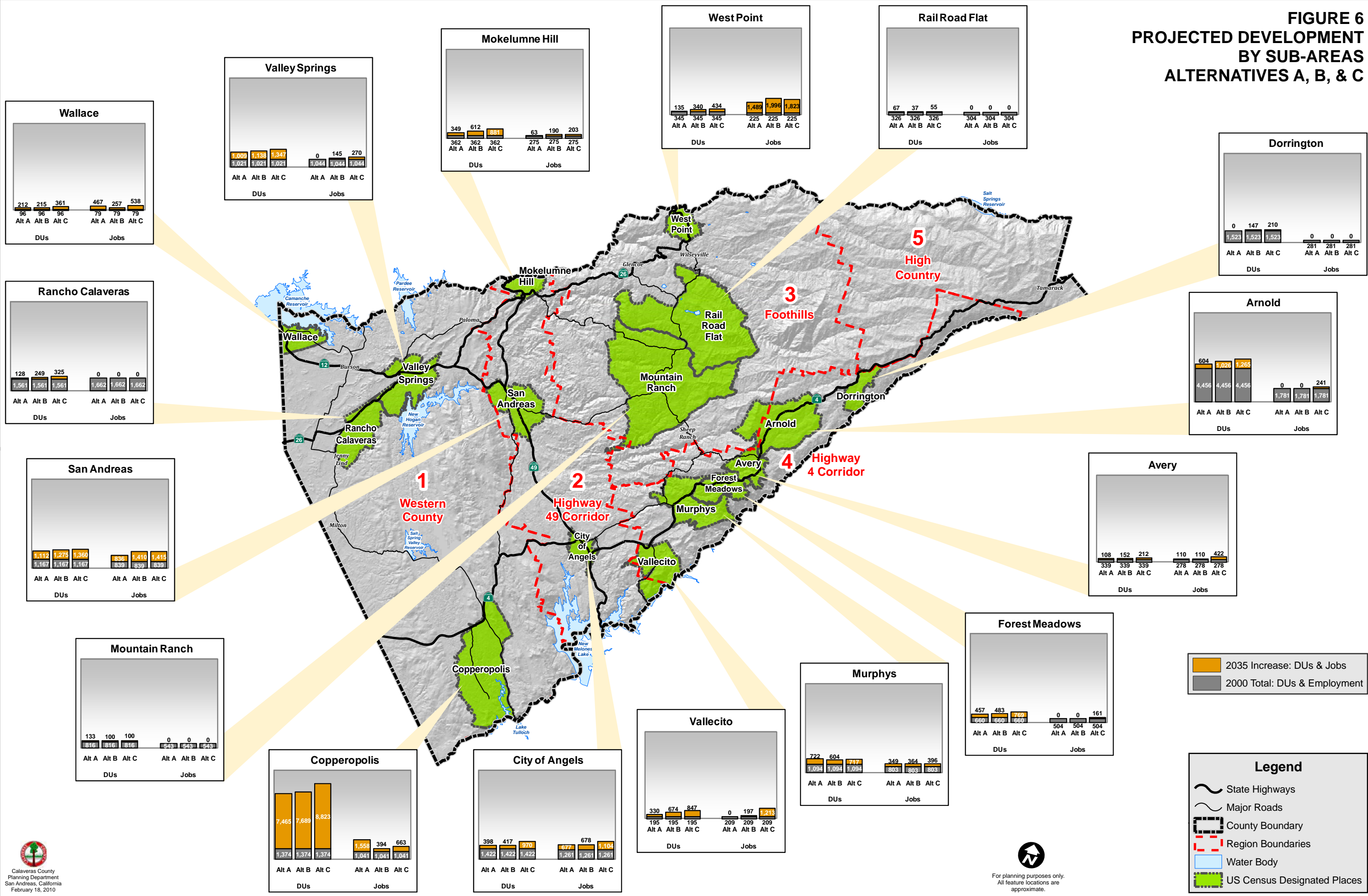


2035 Increase: DUs & Jobs
 2005 Total: DUs & Jobs



This page is intentionally left blank.

FIGURE 6
PROJECTED DEVELOPMENT
BY SUB-AREAS
ALTERNATIVES A, B, & C



This page is intentionally left blank.

B. TOPICAL COMPARISON SUMMARY

How do the alternatives compare in terms of specific issues or topics such as economic development and public health and safety? Which alternative promotes a more compact land use pattern? Which alternative preserves more agricultural land or provides more opportunities for open space protection?

These questions, along with many others, are important considerations when comparing the alternatives. Some of these questions can be answered quantitatively by looking at the number of acres of potential development, the location, density, and intensity of land uses, the number of new dwelling units, or the projected employment to compare the alternatives. Some of these questions can only be answered qualitatively, by discerning how the overall land use pattern will affect any one subject (e.g., open space preservation or commercial development) in each alternative.

The following section summarizes the following major topic areas and asks how they are addressed by Alternatives A, B, and C.

- Countywide land use patterns and community identity
- Open space
- Economic growth
- Community infrastructure and services
- Transportation and mobility
- Air quality and greenhouse gas emissions
- Public health and safety

1. Countywide Land Use Patterns and Community Identity

Land use planning in Calaveras County has to take into account a diversity of land uses, ownerships, and development patterns. About one-fifth of county land is owned by State and Federal agencies. In terms of acreage, the GPU can have the most impact on the two-thirds of county land that is currently classified as “unimproved” by the County assessor, meaning it is used for ranching, agriculture, forestry, or mining. About half of this is currently designated for 5- to 40-acre single family residential uses, the majority of which is undeveloped but has significant potential for low density residential development.

One of the key issues in the GPU is addressing the conflict between low density rural residential development patterns and preservation of open space and provision of County services. Rural residential development outside of community centers fragments landscapes. It creates small pockets of development that are far from daily services and jobs that burden the road network with commuting and day-to-day trips to distant destinations

Communities in Calaveras County are excellent examples of California Gold Rush Era history in the Mother Lode. Each has a unique identity, many have downtown districts. Public participation in the GPU process to date shows that protecting the existing character and historic resources of these communities is a high priority.

Related Draft General Plan Guiding Principles:

- *The history of the Gold Rush era will be alive in the culture of distinctive communities that provide a high quality of life for generations of residents.*
- *Communities will have clear boundaries and be separated from one another by working landscapes, greenbelts, or parks.*
- *Communities will have distinct centers where shopping, medical services, childcare, schools, jobs, and infrastructure are available. They will provide a range of housing types and affordability so people of all income levels can live in the same community.*

The following compares how each alternative impacts countywide land use patterns and community identity.

Regardless of the alternative, GPU policies and implementation programs can support the protection of community identity and historic and cultural resources. However, Alternatives B and C provide greater opportunities to do this.

Alternative A continues the current County General Plan land use designation configuration. Over one-fourth of county land remains in 5- to 40-acre rural residential designations which facilitates dispersed low density development.

Alternative A provides for less focused growth in community centers than Alternatives B and C and is less likely to preserve the feeling of separate, distinct communities.

Alternative B has significantly more acres of agricultural-designated land and less rural residential land. This shift reduces the potential for further parcelization of agricultural and rural residential areas and will minimize scattered, large-lot rural residences.

Alternative B emphasizes more compact growth within community centers with higher density housing types (greater than one unit per acre) where water and wastewater services are located.

Alternative C is similar to Alternative B. The additional growth in Alternative C is projected primarily in Region 1 (Western County) and Region 2 (Highway 49 Corridor) for housing, and in Region 1 and Region 4 (Highway 4 Corridor) for jobs.

2. Open Space

Open space includes working landscapes (e.g., agriculture, forest, and mining); rural landscapes (e.g., undeveloped or sparsely developed lands); scenic vistas (e.g., scenic highways and oak woodland); natural resource lands (e.g., lakes, rivers, forests, oak woodlands, preserves); and recreational lands (e.g., reservoirs, parks, and trails).

Open space can perform multiple functions and benefits. The loss of these benefits has broad implications for species and ecological functions. Fragmentation of open space, especially agricultural lands, increases the likelihood of conflicting uses and nuisances.

Related Draft General Plan Guiding Principles:

- *Open space, wildlife habitat, scenic vistas, agricultural lands, forests, rivers, and lakes will be protected and maintained for wildlife habitat, productive grazing and agricultural lands, and recreation.*

The following compares how each alternative protects open space.

<p>Alternative A allows for more fragmentation of large open space areas with large-lot (5 to 40 acres) rural residential development. This could have a negative impact on habitat connectivity and wildlife movement.</p> <p>Alternative A has more than twice the potential impact (i.e., acreage of development) on sensitive habitat areas (e.g., oak woodlands, vernal pools) and species (e.g., tiger salamander, fairy shrimp) than Alternatives B and C.</p> <p>Alternative A has higher potential impact on Oak Woodland habitat than Alternatives B and C based on increased scattered rural residential development potential in lower elevations.</p>	<p>Alternative B converts residential-agricultural land use designations to agricultural designations which reduces potential for habitat fragmentation.</p> <p>Alternative B allows for increased connectivity between areas with high natural resource value (e.g., timber, biological, public lands) which adds to overall quality of natural resources.</p>	<p>Same as Alternative B.</p>
--	---	-------------------------------

3. Economic Growth

There is significant opportunity for Calaveras County to diversify its economic base by increasing the number and quality of jobs, promoting small-business growth, and capitalizing on agricultural industries and tourism. While the county has a strong base for economic diversification, there are still significant challenges to overcome, including a high rate of travel out-of-county due to a lack of job opportunities and limited retail options.

Calaveras County has recently experienced large amounts of population and housing growth, but local jobs have not grown at the same pace. While there has been an increase in retirees and second homes in the county, Calaveras communities are also increasingly serving as bedroom communities to residents commuting to jobs outside of the county. Providing jobs near housing can reduce vehicle miles traveled and decrease the automobile emissions that impact global warming.

Participants at community workshops identified limited service and retail options as a problem in Calaveras County and stated that they have to leave the county for a majority of their shopping needs. Many residents felt that existing communities should be centralized hubs for shopping and services, so that residents do not have to travel far to purchase needed items.

Tourism and travel-related businesses play a major role in Calaveras County's economy. Calaveras has many historical and recreational assets, including national forests and State parks, lakes, rivers, caverns, a major ski resort just over the county line in Alpine County, several golf course resorts, the Gold Rush legacy and historic Gold Rush-era towns, wineries, and a growing number of events, music, and other arts and culture-related programs and facilities. Also, agriculture is an important economic sector with multiple values, including jobs and revenues, locally grown food products, support for other industries (e.g., tourism), community identity, aesthetics, biological (e.g., species habitat), and hydrology (e.g., watersheds and groundwater recharge areas).

Related Draft General Plan Guiding Principles:

- *Businesses will thrive in a strong local economy based on sustainable natural resources and innovative industries. New opportunities for economic development will capitalize on advanced technology and catalyze growth and innovation.*
- *Visitors from around the state will be attracted to Calaveras County's historic communities, local businesses, recreation areas, and wineries. Tourism will play a major role in the local economy and protection of natural and scenic resources, recreation.*

The following compares how each alternative impacts the potential for economic growth.

Regardless of the alternative, GPU policies and implementation programs can support regional marketing and business attraction efforts as well as small business startups and development. The GPU provides an opportunity to implement economic development policies and programs to create and maintain additional quality jobs in the county to provide an improved balance of jobs and housing within the county.

In Alternative A economic growth will be dispersed throughout the county with the highest number of new jobs (about 2,000) in Region 1 (Western County).

In Alternative B the highest number of new jobs (about 3,000) will be in Region 2 (Highway 49 Corridor).

Alternative B has more economic development in mixed use community centers than Alternative A.

In Alternative C economic growth will be higher than in Alternatives A and B. Jobs will be focused in community centers.

Alternative C assumes additional focus on economic development efforts, including broader retail options, educational institutions, increased tourism, and larger residential developments.

4. Community Infrastructure and Services

Calaveras County's infrastructure is underdeveloped, under-funded, and poorly maintained. Calaveras County infrastructure has been further impacted by new development in areas that have limited capacity and under-financed maintenance backlogs. In areas without water and sewer connections, there is the potential for groundwater contamination due to septic systems.

Many of the communities need additional investment in facilities such as parks and sidewalks, and services such as public transit, water, sewer, and trash collection. Land use patterns influence how much new development is projected in a community, and whether it can be accommodated by water and wastewater services.

Related Draft General Plan Guiding Principles:

- *Development will not outpace the ability of County government to provide adequate services and infrastructure or reduce the level of service provided to existing communities.*
- *Water quality and water rights will be protected to ensure that they are sustained for future generations.*

The following compares how each alternative impacts community infrastructure and services.

Alternative A continues the current trend of low density development outside of areas with existing water and sewer service. This creates a capacity problem such that new development is not at sufficient densities to expand water and wastewater services to new areas.

Alternative A projects that the majority of new development potential is outside of community boundaries in areas without existing water and wastewater capacity. New development in these areas would require well and septic systems.

Alternative B concentrates new development in community plan areas and areas with existing water and wastewater service and capacity.

Alternative C, similar to Alternative B, concentrates new development in community plan areas and areas with existing water and wastewater service and capacity.

Alternative C also allows for additional development in Valley Springs and Copperopolis, which would require additional capacity and service for water and wastewater in those two communities.

5. Transportation and Mobility

The transportation system in Calaveras County comprises a network of State, regional, county, local, and private roads that are heavily used by commuters, tourists, and trucks. Road care and maintenance is a constant struggle due to limited Federal and State funding for projects, increased roadway wear due to increase in population and interest in local attractions, and deferred maintenance for rehabilitation. Generally, transportation systems in Calaveras County are challenged by increasing local, regional, and interregional traffic, multiple closely-spaced unplanned access points, poorly configured intersections, inadequate funding to expand facilities, and a lack of extensive local road network.

Calaveras County has limited public transit services available for travel between existing communities within the county or to surrounding destinations. There is no convenient public transit connection to regional transit such as Amtrak.

There is potential to increase the number of people who walk or cycle to work or school because of the small size of communities, moderate density surrounding downtowns, a favorable climate for year-round cycling, and a culture that values fitness, outdoors, and nature. However, currently, bicycle and pedestrian facilities in the county are few and poorly connected.

Related Draft General Plan Guiding Principles:

- *Highways and streets will be well-maintained and well-connected. Public transit and bike and pedestrian facilities will provide choices for travel within communities and to major destinations.*

The following compares how each alternative impacts transportation and mobility.

The alternatives analysis assumes no change in the roadway network or intersection geometrics from current (2008) conditions. Further analysis to be conducted later in the GPU process will identify the improvements necessary to mitigate identified deficiencies. In general, there is very little difference in the LOS results between the alternatives. Considering the current LOS C standard, the differences in traffic volumes only result in a different outcome in terms of attaining LOS at a single location among all the key intersection and roadway segments among the alternatives (threshold exceeded under Alternative A for Mountain Ranch Road east of San Andreas).

Regardless of the land use alternative, GPU policies and implementation programs can be created to address issues such as maintenance, unplanned access points, and encouraging alternative transportation modes. While Alternatives B and C have the potential to generate more traffic congestion within community centers than Alternative A, on the other hand they also have a greater potential to encourage more bicycle and pedestrian trips, and the increase the feasibility of the provision of transit services.

<p>The more dispersed development pattern in Alternative A results in slightly lower traffic volume impacts than Alternative B in the TransCAD model.</p> <p>Alternative A continues existing low-density dispersed residential development patterns that are difficult to serve with alternative transportation modes.</p>	<p>While the TransCAD model shows slightly lower figures for Alternative A, it is likely that the real-world impacts of concentrating development within community centers in Alternative B would lead to shorter trips and reduced traffic volumes.</p> <p>Alternative B creates more opportunities for improving the public transit, walking, or cycling network through higher densities in community centers.</p>	<p>Same as Alternative B, but with increased traffic volumes.</p>
---	---	---

6. Air Quality and Greenhouse Gas Emissions

In 2006 the California legislature enacted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act. They stated that “global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California.” The California Air Resources Board (CARB) will be developing the regulatory framework for implementing AB 32, which will provide both challenges and opportunities to reduce emissions. Once greenhouse gas (GHG) emissions standards are developed by CARB, the Calaveras County will work with State agencies to meet the new emissions standards. More efficient energy consumption and improved air quality will have a beneficial impact on households, businesses, and the public sector, and will contribute to Calaveras County’s reputation as a desirable location for residents and businesses.

The following compares how each alternative impacts air quality and GHG emissions.

Alternative A will continue current development patterns and practices that include inefficient circulation and land use patterns that negatively impact air quality and increase localized GHG emissions.

Because the projected transportation impacts are slightly higher for Alternative B compared to Alternative A, the modeled air quality and GHG impacts from mobile sources are also higher.

However, it is likely that the real-world impacts of concentrating development within community centers in Alternative B would lead to reduced air quality and GHG impacts from mobile sources.

Alternative B is consistent with State recommendations for improving air quality/reducing GHG emissions through a more efficient circulation system and land use patterns.

Alternative C is consistent with State recommendations for improving air quality/reducing GHG emissions through a more efficient circulation system and land use patterns.

Alternative C has higher air quality and GHG impacts than Alternative B due to larger development projections.

7. Public Health and Safety

While a rural lifestyle is one of Calaveras County's primary assets, there are challenges that it presents for emergency responders, fire departments, and police departments. Low density development increases response times and the likelihood of injury, death, and property damage from wildfires.

Rural or low density development strains limited police, fire, and emergency services by dispersing development and population throughout the county, which increases travel and response times. In addition, there are many areas in the county that have limited cell phone service, which further hinders emergency responders.

Calaveras County has urban and wildland fire hazards, both of which create the potential for injury, loss of life, and property damage. According to the California Department of Forestry and Fire, in 2004 about half of the county was classified as Very High fire threat and another third was classified as High fire threat.

The county also has threats from flooding, particularly in areas downstream of larger reservoirs and areas immediately adjacent to Camanche Reservoir, New Hogan Lake, New Melones Reservoir, and Cosgrove Creek.

Related Draft General Plan Guiding Principles:

- The risks of flooding, fire hazards, and climate change will be mitigated to the greatest extent possible to protect residents.
- Residents will have access to medical and emergency services, and opportunities for life-long learning and enrichment at educational institutions.

The following compares how each alternative impacts public health and safety.

In Alternative A scattered growth patterns decrease the ability of emergency services to access remote areas and increase response times.	In Alternative B concentrated growth in community centers increases the ability of centralized emergency services to serve greater populations and decrease response times.	In Alternative C concentrated growth in Copperopolis and other community centers increases the ability of centralized emergency services to serve greater populations and decrease response times.
In Alternative A scattered development potential in higher elevations increases the risks of wildfire damage to residences.	In Alternative B development potential in higher elevations increases the risks of wildfire damage to residences; however, this risk is moderated because development is concentrated within community centers.	Same as Alternative B
Alternative A projects slightly higher growth potential for areas within and close to the FEMA 200-year floodplain than Alternatives B and C.	Alternative B has some potential for development within and near to FEMA 200-year floodplains	Same as Alternative B

APPENDIX A. GENERAL PLAN UPDATE OVERVIEW: PROCESS/SCHEDULE

The major objectives of the Calaveras County GPU as set out in the Work Program (June 2007) for the project are as follows:

- Involve a broad range of the community and stakeholders throughout the entire GPU process;
- Create a new community vision that will guide decisions about development, redevelopment, and resource protection over the next 25 to 30 years;
- Revise the General Plan Policy Document to realize this new vision;
- Ensure the consistency of the General Plan with State law;
- Make use of the informational Baseline Report produced in Phase 2 of the GPU process to help guide planning decisions;
- Refine and, where necessary, develop GIS information that will be used during the GPU as well as after the General Plan has been adopted; and
- Produce a General Plan that is both functional and user-friendly.

A. GPU PHASES

The Calaveras County General Plan Update consists of the following phases as described in the GPU Work Program (June 2007). The Alternatives Report is part of Phase 4.

- **Phase 1: Program Initiation** (April-July 2007)
- **Phase 2: Baseline Report** (April 2007-February 2008). This phase focuses on existing conditions and trends, and the regulatory framework affecting the issues addressed.
- **Phase 2b: Baseline Report Supplement on Economics** (June-October 2008). Phase 2b is an expansion of the Baseline Report to include economic and fiscal baseline information.
- **Phase 3: Issues, Opportunities, and Vision** (December 2007-October 2008). This phase identifies key issues and opportunities, and develops an overall vision for the future of Calaveras County.
- **Phase 4: Alternatives** (February 2009 to April 2010). This phase develops, evaluates, and selects land use alternatives that will create a framework for the new General Plan.
- **Phase 5: Goals and Policies Report**. This document will contain the vision statement and guiding principles, and the goals, policies, and implementation programs that make up the heart of the General Plan update. The setting information contained in the Baseline Report will be bound separately from the General Plan Goals and Policies Report. This allows the setting information to be shared by the General Plan and the EIR, thereby eliminating redundancy and making the baseline information easier to maintain.
- **Phase 6: Environmental Impact Report**. Building on the environmental setting information collected for the County's Baseline Report, the EIR will include a thorough discussion of the impacts of future development and will identify General Plan policies that will mitigate or minimize any potentially adverse impacts of development identified under the General Plan. This self-mitigation approach will minimize ongoing reliance on external mitigation measures and will allow for ongoing monitoring of mitigating policies through routine implementation of the General Plan. The program EIR will establish the cumulative framework for consideration of the environmental impacts of subsequent development projects.
- **Phase 7: Fiscal Impact Assessment**. The fiscal impact assessment of the land use plan of the Draft General Plan will determine the fiscal impacts of projected growth.
- **Phase 8: Public Review**. During this phase the General Plan Team will assist the community, Planning Commission, and Board of Supervisors in the review of the Public Review Draft General Plan and EIR, and culminating in Board direction on changes to the Draft General Plan.

- **Phase 9: Final Documents and Adoption.** During this phase the General Plan Team will prepare the final versions of the General Plan Baseline Report, Goals and Policies Report, and EIR for final review and adoption by the Planning Commission and Board of Supervisors.

B. GENERAL PLAN DOCUMENTS

The updated Calaveras County General Plan will consist of two documents: the Baseline Report and Policy Document. The following is a summary of these two component documents:

- **Baseline Report.** The Baseline Report provides a “snapshot” of Calaveras County’s existing conditions and trends. It provides a detailed description of a wide range of topics within Calaveras County (i.e., Planning Area), such as demographics, land use, public facilities, and environmental resources. The report provides decision-makers and the public with the context and background for making policy decisions. Unlike the Policy Document, the Baseline Report is objective and policy-neutral. The document also will serve as the “Environmental Setting” section of the Environmental Impact Report (EIR) that will be prepared for the GPU. The Public Review Draft Baseline Report was published in February 2008, with a supplementary chapter (Chapter 12: Economics) published in September 2008. The Baseline Report is organized into 12 chapters, as follows:
 - Chapter 1: Introduction
 - Chapter 2: Population and Demographics
 - Chapter 3: Land Use
 - Chapter 4: Scenic and Community Character
 - *Chapter 5: Housing (prepared under separate cover as part of the Housing Element Update)*
 - Chapter 6: Circulation
 - Chapter 7: Public Facilities, Services, and Utilities
 - Chapter 8: Recreation and Historical Resources
 - Chapter 9: Natural Resources
 - Chapter 10: Safety
 - Chapter 11: Noise
 - Chapter 12: Economics
- **Policy Document.** The Policy Document is the core of the General Plan. It contains the Land Use Diagram, the Circulation Diagram, and the goals and policies that will guide future decisions within the county. It also identifies implementation programs that will ensure the goals and policies in the General Plan are carried out. The Policy Document will be drafted after the Board of Supervisors selects a “preferred land use alternative” at the conclusion of the Alternatives phase.

C. GPU SUPPORT DOCUMENTS

As part of the GPU the County is preparing several General Plan support documents that serve as the building blocks for the Policy Document and will analyze the environmental impacts associated with implementing the General Plan, as follows:

- **Working Draft Vision Statement and Guiding Principles.** The Working Draft Vision Statement and Guiding Principles document, released simultaneously in June 2008 with the Issues and Opportunities Report (see below), was developed based on input received at the second round of community workshops held in December 2007. The document will be refined following the selection of the preferred land use alternative, and will ultimately be included in the preface of the Policy Document.
- **Issues and Opportunities Report.** The Issues and Opportunities Report is an important intermediary step in the GPU process that synthesizes Baseline Report data and community input to frame key policy questions for the alternatives phase. This report discusses issues and opportunities for eight key topic areas. These topic areas were not intended to match the Baseline Report chapters or the proposed Policy Document

elements/chapters, but instead are based on the key points of discussion in the community workshops. The topic areas are as follows:

- 1) Community planning and open space protection
- 2) Economic development, opportunities, and markets
- 3) Infrastructure capacity, financing, and maintenance
- 4) Transportation and mobility
- 5) Public health and safety
- 6) Housing affordability and diversity
- 7) County government operations
- 8) Social infrastructure

Each topic area section is divided into subsections that discuss specific issues and opportunities. Finally, each topic area section concludes with a list of questions that frame the key policy considerations and choices. The key policy questions were used to develop the land alternatives and will be used to develop General Plan goals, policies, and programs in the next phase of the project.

The Public Review Draft Issues and Opportunities Report, along with the Working Draft Vision and Guiding Principles, were published in June 2008. During meetings on August 5, 2008, and September 9, 2008, the Board of Supervisors received public comment from the general public and local organizations and discussed two documents. The Calaveras County Department of Public Works (DPW) and Our Children Our Communities (OCOC) submitted formal comments in writing with corrections and additions to the draft report. The Board agreed to include the information from these two sources as an addendum to the report. Because the Issues and Opportunities Report is strictly a working document, it was not formally revised, but the comments from DPW and OCOC are included as an appendix in a memorandum prepared by Mintier Harnish to County staff on October 13, 2008.

- **Alternatives Report.** The Alternatives Report describes growth alternatives to enable the community and decision-makers to weigh the pros and cons of future development options within Calaveras County.
- **Environmental Impact Report.** The Environmental Impact Report (EIR) will be prepared in response to requirements of the California Environmental Quality Act (CEQA). The public, other public agencies, the Planning Commission, and Board of Supervisors will use the EIR during the GPU process in order to understand the potential environmental implications associated with implementing the General Plan.

D. GPU COMMUNITY WORKSHOPS, STUDY SESSIONS, AND HEARINGS

Community Workshop Round #1 (Program Initiation). During May and June 2007 the Calaveras County Community Development Agency held seven public workshops to help kick off the GPU. Over 500 people attended workshops in San Andreas, Murphys, Copperopolis, Arnold, Rail Road Flat, Valley Springs, and Jenny Lind. The workshops provided an opportunity for the public to offer their thoughts on what they like and do not like about their communities and the county as a whole, and what issues should be addressed in the GPU process.

Community Workshop Round #2 (Issues, Opportunities, and Vision). During December 2007 the Calaveras County Community Development Agency held a second round of six public workshops. Approximately 300 people attended workshops in Arnold, Copperopolis, West Point, Murphys, San Andreas, and Valley Springs. This round of workshops focused community attention on crafting guiding principles statements for nine broad topic areas. Input from this round of workshops was incorporated into the Issues and Opportunities Report and the Working Draft Vision Statement and Guiding Principles document.

Board of Supervisors Study Sessions (Issues, Opportunities, and Vision). The Board held two workshops in August and September 2008 to discuss the Public Review Draft Issues and Opportunities Report and the Working Draft Vision Statement and Guiding Principles document.

Community Workshop Round #3 (Alternatives). The County will conduct a series of six workshops to solicit input on the Alternatives Report in March 2010.

Board of Supervisors/Planning Commission Study Sessions (Alternatives). The Board and Planning Commission will jointly hold two workshops to review the Alternatives Report and the discussion in the Community Workshops, and to receive further comments from the public. The Board of Supervisors will select a preferred land use alternative for guiding development within the county out to the GPU horizon year of 2035.

Community Workshop Round #4 (Goals and Policies Report). The County will conduct a series of workshops to solicit input on the Public Review Draft Goals and Policies Report.

Board of Supervisors/Planning Commission Study Sessions (Alternatives) (Goals & Policies Report). The Board and Planning Commission will jointly hold a workshop to review the Public Review Draft Goals and Policies Report and the discussion in the Community Workshops, and to receive further comments from the public. The Board Supervisors will provide direction for finalizing the goals, policies, and programs of the GPU.

Public Hearings: The Work Program outline calls for two public hearings each at the Planning Commission and Board of Supervisors in Phase 8 and one each in Phase 9 leading to General Plan approval and adoption. More hearings may be necessary or desirable.

E. OTHER GENERAL PLAN WORK

There are several other major work efforts on separate schedules that are being integrated into the GPU process.

1. Water Element

On August 5, 2008, the Calaveras County Board of Supervisors approved the inclusion of a Water Element in the GPU. The Board action required that the Water Element be developed through a collaborative process that included the County, local water and wastewater agencies, and other public and private interests.

The Water Element was developed through a series of facilitated Water Element Group meetings from September to January 2009. Meeting participants discussed information regarding county water issues and needs. The group used this information to craft, and ultimately agree upon, nine goals and associated policies and implementation programs. In February 2009 the group submitted a Water Element Goals and Policies Report and Water Element Baseline Report Supplement to the County for inclusion in the General Plan Update. The Baseline Report Supplement describes the conditions and trends associated with water throughout the county, providing the context and background under which goals, policies, and implementation programs for the Water Element exist.

Both of these documents will be incorporated in the General Plan Update following a review by County staff to ensure consistency with the other elements of the General Plan.

2. Housing Element

Calaveras County is currently (February 2010) updating the Housing Element of the General Plan on a separate track from the overall GPU. Calaveras County last updated its Housing Element in 2005. The 2005 Element covered a 7½-year planning period from January 1, 2001, to June 30, 2008. The 2009 Housing Element is an update of the 2005 Housing Element for a 7½-year planning period from January 1, 2007, to August 3, 2014. A draft of the Housing Element is currently (February 2010) being reviewed by the California Department of Housing and Community Development (HCD) for compliance with State law. The Housing Element will be adopted prior to General Plan adoption (in Spring 2010), but will be integrated into the final General Plan documents.

3. Economic Element

The original GPU Work Program includes components addressing economic and fiscal topics including: the Baseline Report Supplement on Economics (Chapter 12 of the Baseline Report); limited policy work on economic issues; and preparation of a Fiscal Impact Assessment. In November 2008 the Board of Supervisors amended the GPU contract to add the preparation of a separate Economic Element in the GPU. The purpose of the work is to expand consideration of economic development issues that affect Calaveras County beyond what would be typically covered in a GPU. This work, coupled with the Economic Summit held on July 11, 2008, and the Economic Forum

held on October 15, 2009), will culminate in the preparation of an Economic Element that will be a part of the General Plan Policy Document.

4. Agriculture Element

A coalition of agriculture stakeholders submitted an initial draft Agriculture and Forestry Element to the Board of Supervisors in February 2009. Staff provided comments on this document in March 2009 and the Coalition submitted a final draft in July 2009. In Phase 5 of the GPU, staff and consultants will continue to work with the Coalition and the community on integrating the draft Element into the GPU.

5. Community Plans and Community Visions

Community plans are considered part of the General Plan under State law. While the existing Calaveras County community/special plans are stand-alone documents that read essentially as self-contained policy plans (almost like general plans for each community plan area), these plans will be incorporated in the GPU to supplement countywide policy. The GPU Work Program calls for the existing community/special plans to be reorganized, streamlined, and physically incorporated into the GPU documents and maps. The GPU contract was amended in May 2009 to incorporate new and revised community plans and community visions into the GPU.

The GPU will integrate existing adopted community plans and special plans, new community plans, and new community vision statements into a single section/chapter of the General Plan Policy Document. Each community plan/special plan and community vision will have a consistent format and include only policies and programs that supplement countywide policy.

The policy content of existing community plans will not change substantially. The revisions made to these plans are focused on incorporating the documents into the new General Plan structure. Updating of policies will only be done to eliminate redundancy and ensure internal consistency with countywide General Plan policies.

There has been substantial work done by community groups to develop updates to adopted plans (i.e., Mokelumne Hill, San Andreas, and Valley Springs). In addition, community groups have developed new community visions for Glencoe/Railroad Flat, Mountain Ranch, Paloma, Sheep Ranch, Wallace, West Point, and Wilseyville; and a new community plan for Copperopolis. The County and Consultants will continue to work with the community groups to incorporate these documents into the GPU process. The maps created through the end of 2009 during these community plan and visioning processes were reviewed and are substantially reflected in the alternatives maps in this report (see Figures 1 and 2). The Valley Springs Community Plan (VSCP) is currently (Spring 2010) being updated in a separate process. As of the writing of this report, the new VSCP boundary has yet to be defined, so it is not shown in Figures 1 and 2.

APPENDIX B. LAND USE DESIGNATIONS

A. BACKGROUND AND METHODOLOGY

The current General Plan, community plans, and special plans collectively use about 120 individual land use designations. These designations are redundant and inconsistent. One of the objectives of the GPU is to consolidate and streamline these designations to create a simple, complete, and consistent set of land use designations for the new General Plan.

As a starting point, the names and standards in the 1996 General Plan were used to extract the existing General Plan land use designations. These designations were compared to the other sources of information in the General Plan, including the existing Land Use Chapter text and the Future Land Use Plan map. The result was a list of 21 land use designations (as listed in Table II-4 from the Existing Land Use Chapter) plus 1 land use designation (Mixed Use/Master Project Area) that is only listed in the Existing Land Use Chapter Text, for a total of 22 designations.

A similar process was undertaken for the community and special plans. Each plan was reviewed to ensure accuracy in reporting land use designation information and standards. The summary of community and special plan land use designations in Appendix II of the 1996 General Plan was also used. Approximately 100 land use designations were extracted from the community and special plans.

Next, the General Plan and the community and special plan land use designations were combined into one table that contained about 120 land use designations. All of the General Plan and community plan land use designations were summarized for the maximum allowed density range and lot coverage. Next, the land use designations were organized by category (i.e., Natural Resource Lands, Residential, Commercial/Industrial, and Other). Then each designation was analyzed for commonalities in allowable uses and the range of density/intensity standards.

Finally, a single set of land use designations was developed with density and intensity standards based on the analysis of the existing land use designations, land use designations used in similar communities, and work that has been done by various community groups.

B. PROPOSED LAND USE DESIGNATION SYSTEM

Table 1 below shows the proposed land use designation system for the GPU. The land use designations are organized under the following five categories:

- Natural Resource Lands
- Residential
- Mixed Use
- Commercial/Industrial
- Other

For each land use designation, the table shows the minimum parcel size, allowed residential density range (where applicable), allowed non-residential floor area ratio (where applicable), and a description. These are preliminary draft descriptions and are subject to comment and revision during the GPU process. Land use designation descriptions will be refined and expanded in the Draft General Plan and each one will ultimately include a description of purpose, description of areas where it applies, allowed uses, and residential and non-residential intensity standards.

**TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS**

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Natural Resource Lands					
Agricultural Lands	AG	40 to 80	1 per parcel	—	<p>The purpose of this designation is to preserve and protect lands capable of and generally used for the production of food, fiber, and plant materials.</p> <p>Allowed uses include all land-dependent and non-land-dependent agricultural production and related activities.</p>
Public Lands	PL	40	—	—	<p>The purpose of this designation is to preserve and protect lands that are publicly- and quasi-publicly-owned whose purposes include habitat and resource protection, forestry, mineral production, agriculture, public uses, and low intensity recreation uses.</p> <p>Applies to publicly-owned natural resource lands, including USFS land, BLM land, and State-owned land.</p> <p>Allowed uses are determined by the entity owning the land.</p>
Biological Resource	BR	40	1 per parcel	—	<p>The purpose of this designation is to preserve and protect areas containing sensitive biological habitat.</p> <p>Applies primarily to watershed areas adjacent to lakes and reservoirs, including publicly- and utility-owned watershed resource lands such as EBMUD properties surrounding reservoirs and PG&E lands along the Mokelumne River, and forest areas outside of USFS land. Properties with conservation easements are also included (e.g., California Wildlife Conservation Board areas near Sheep Ranch, Department of Fish and Game properties, and Mother Lode Land Trust properties).</p>

TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Timber Resource	TR	40	1 per parcel	—	<p>The purpose of this designation is to preserve and protect timber lands from conversion to other uses and encroachment of incompatible land uses that may adversely impact timber production.</p> <p>Applies to land in private ownership where significant timber production resources have been identified. Intended to distinguish timber resource land that doesn't have Timber Production Zone (TPZ) status from TPZ land.</p>
Timber Production Zone	TPZ	160	1 per parcel	—	<p>The purpose of this designation is to encourage the production of timber, to protect immature trees so that they may eventually be harvested, and to provide for restricting uses of timber land to the production of timber products in compatible uses.</p> <p>Applies to land in private ownership designated as a Timber Production Zone consistent with the requirements of the California Z'berg-Warren-Keene-Collier Forest Taxation Reform Act of 1976. Intended for those areas dedicated to the growing, conserving, and production of timber in areas of sufficient size to be economically feasible.</p>
Parks and Recreation	PR	—	—	—	<p>The purpose of this designation is to provide land for recreational uses.</p> <p>Applies to publicly-owned parks and recreation facilities (e.g., city, County, and State parks facilities). It also applies to privately-owned facilities (e.g., community- or homeowner association-operated facilities).</p> <p>Allowed uses include public, quasi-public, and private recreation uses, either exclusively or in combination with compatible or ancillary uses. The construction of new residences or general commercial uses is not allowed.</p>

**TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS**

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Water Body	WB	—	—	—	<p>The purpose of this designation is to delineate water bodies from lands with other designated uses.</p> <p>Applies to the reservoirs and lakes within the county, including Camanche, Pardee, New Hogan, Salt Springs, Copperopolis, Tulloch, and New Melones Reservoirs and smaller lakes and ponds.</p>
Residential					
Residential-Agricultural	RA	5 to 40	1 per parcel	—	<p>The purpose of this designation is to provide for rural residential and smaller-scale agricultural uses including limited animal husbandry, and family garden, orchard, or supplementary agricultural income.</p> <p>Applies to agricultural lands that have been subdivided into 5 to 40 acre lots. Each lot allows for one single family home.</p>
Residential-Rural	RR	1 to 5 (varies by services available)	1 per parcel	—	<p>The purpose of this designation is to provide for rural residential uses with a range of lot sizes from one to five acres. One-acre minimum lot sizes are allowed in areas served by public water. Five-acre minimum lot sizes are required in areas without public water service.</p> <p>Allowed uses include detached single family homes and accessory structures, with keeping a limited number of livestock.</p>
Residential-Low Density	RL	—	1.0 to 6.0	—	<p>The purpose of this designation is to provide for single family residential development in urban areas served by public water and sewer systems.</p> <p>Allowed uses include detached single family homes and accessory structures.</p>

TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Residential-Medium Density	RM	—	7.0 to 12.0	—	<p>The purpose of this designation is to provide for single family or multi-family uses in urban areas with public water and sewer service.</p> <p>Allowed uses include detached single family homes, duplexes, mobile home parks, and multi-family units such as condominiums, townhouses, and apartments.</p>
Residential-High Density	RH	—	12.0 to 20.0	—	<p>The purpose of this designation is to provide for higher density residential uses in urban areas with public water and sewer service.</p> <p>Allowed uses include attached single family homes, duplexes, and multi-family units such as condominiums, town houses, and apartments.</p>
Mixed Use					
Community Center-Local	CCL	—	1.0 to 12.0	0.1 to 0.5	<p>The purpose of this designation is to provide for smaller rural towns and service centers with relatively compact clusters of residences, commercial, industrial, and public service uses serving one or more smaller local communities. These areas include a mix of residential, commercial, public, and industrial uses similar to the traditional development pattern of rural communities.</p> <p>This designation concept differs from traditional land use designations in that the General Plan will establish a boundary for each community center and then specify a mix of desired land uses within the community center in the community plan section of the Policy Document</p> <p>Applies only within community plan and Town Center boundaries. The community plans and vision statements would be expected to address the community centers in more detail including specific text policies, and possibly conceptual plans. It is expected that these will provide a general guide to future development, rather than prescribing a set of absolute permitted uses, densities, or intensities applicable to each parcel.</p>

**TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS**

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Community Center-Historic	CCH	—	TBD	0.1 to 2.0	The purpose of this designation is to preserve and protect the historic commercial core of existing communities. Applies only within community plan areas. The community plans would be expected to address the community centers in more detail including specific text policies.
Community Center-Regional	CCR	—	1.0 to 20.0	0.1 to 1.0	The purpose of this designation is to provide for larger-scale service centers with combinations of residences, commercial, industrial, and public service uses serving countywide or regional needs. These areas allow uses with higher densities and intensities than those found in the Community Center-Local designation. Applies only within community plan areas. The community plans would be expected to address the community centers in more detail including specific text policies.
Commercial/Industrial					
Commercial	C	—	—	0.1 to 1.0	The purpose of this designation is to provide for a broad range of general and heavy commercial uses found in neighborhood, community, thoroughfare, and highway settings. Allowable uses include retail, stores, offices, services, institutional, public, semi-public, and religious uses.
Commercial- Recreation	CR	—	—	0.1 to 1.0	The purpose of this designation is to provide for a range of privately-operated recreational uses, including marinas and similar facilities, resorts, campgrounds, golf courses, and outdoor sports and athletics complexes.
Office/Business Park	O	—	—	0.1 to 2.0	The purpose of this designation is to provide for a mix of commercial, office, public and semi-public, and light industrial uses that are compatible with adjacent commercial and residential uses through adherence to landscaping, buffering, and design standards.

TABLE B-1
GENERAL PLAN UPDATE PROPOSED LAND USE DESIGNATIONS

Category/ Designation	Code	Minimum Acreage (Parcel size)	Residential Density (units/acre)	Floor Area Ratio (FAR)	Description
Industrial	I	—	—	0.1 to 0.67	The purpose of this designation is to provide for a broad range of light and heavy industrial activities such as processing, packaging, machinery repair, fabricating, distribution, warehousing and storage, research and development, and similar uses.
Other					
Public Services	PS	—	—	0.1 to 1.0	The purpose of this designation is to provide for public, quasi-public, or public utility sites such as schools, community centers, libraries, schools, airports, cemeteries, fire stations, sewer and water treatment facilities, and power substations.
Urban Planning Area (Angels Camp)	UPA	—	varies	varies	Applies to the area under the jurisdiction of the City of Angels (Angels Camp).
Right of Way	ROW	—	—	—	Applies to major publicly-owned transportation rights of way such as streets and highways.

APPENDIX C. MODELING GROWTH PROJECTIONS

Multiple computer modeling tools were used to allocate projected growth within the county and to analyze growth impacts of the three alternatives. These included UPlan, TransCAD, and EMFAC models, which were used to model land use, transportation, and air quality impacts.

A. LAND USE

UPlan is a land growth modeling tool (developed by the UC-Davis Information Center for the Environment (ICE)) that projects land development patterns according to input assumptions about growth projections, development densities, environmental constraints, and local land use plans. County staff worked with the Consultants and UC-Davis ICE staff to construct a UPlan model for the three land use alternatives.

The UPlan model starts with the overall growth projections for Calaveras County discussed in Section IIE of this report, and shown in Table 1. Then various other assumptions such as percent of households in each density class, average parcel size for each density class, and average land area per worker are input. These calculations produce a land demand table for each land use type from which the model operates its land allocation routine.

The UPlan growth allocation model is constrained by the land use designations in each alternative and, within allowable growth areas, the location for growth is determined by the proximity to weighted features that attract or discourage (or provide opportunities and constraints for) growth. For example, it is assumed that development will occur in areas that are attractive due to proximity to existing developed areas and transportation facilities. The UPlan model also assumes that the closer a vacant property is to an attraction, the more likely it will develop in the future. There are other areas, such as floodplains, that serve as discouragement to growth allocation in the model. There are also areas where development cannot occur that are called exclusions. Exclusions include features such as lakes and rivers, public open space, existing built-out areas, and other such areas where development is assumed unable to occur.

UPlan creates a composite suitability index for each land use designation based on the combination of all of the development attractions, discouragements, and exclusions in the model. This composite index becomes the template for the allocation of projected land development in the future. The model allocates future development starting with the most attractive areas. As the higher-valued areas are consumed, the model looks for incrementally lower-valued areas until all of the projected land consumption in each land use designation is allocated.

B. TRANSPORTATION

The land use forecasts generated by UPlan were used to produce vehicle trip (VT) and vehicle miles traveled (VMT) outputs in a travel demand modeling process. Calaveras Council of Government (COG) staff and the consulting firm of Fehr & Peers used the countywide traffic forecasting model developed using TransCAD software to produce outputs for existing conditions and the three UPlan land use alternatives. The model was calibrated by comparing estimates of existing land uses with observed traffic volumes.

The existing conditions analysis developed a baseline transportation assessment to establish a comparison baseline for future traffic congestion levels, air pollution emissions, and GHG emissions. The Calaveras County TransCAD model was calibrated to the year 2005 as the baseline for land use and transportation system conditions.

The results were then provided to LSC Transportation Consultants, Inc. to analyze roadway segment and intersection traffic operations using model volumes and standard volume-to-capacity ratios/level of service relationships. LSC conducted an analysis of 12 key intersections and 14 key roadway segments that were selected to provide a picture of projected conditions at crucial locations throughout the county. This analysis was reviewed and approved by Calaveras County Department of Public Works staff. This analysis is summarized later in this report. LSC used several modeling tools to conduct their analysis, including the direct output from the TransCAD model, Traffix 8.0, and Synchro/Sim, and Highplan.

C. AIR QUALITY/GREENHOUSE GAS EMISSIONS

Using the TransCAD model outputs provided by Fehr & Peers, Sierra Research analyzed the air pollution (EPA criteria pollutants) and greenhouse gas (GHG) emissions related to the three land use alternatives.

Sierra Research used the most current version of the California Air Research Board's (CARB) mobile source emission factor model, currently EMFAC2007 v2.3, to quantify both greenhouse gas and criteria pollutant emissions for existing conditions (in 2005) and the three alternatives forecasts for 2035. Both model-wide and per household GHG and criteria pollutant emissions were reported. This analysis is summarized in Section IIIA(4) of this report.

Emission estimates only included transportation-related (mobile source) emissions. Emissions related to the construction and daily use of homes and businesses were not included in the analysis. This further level of analysis will be conducted later in the GPU as part of the EIR work for the preferred alternative.

APPENDIX D. DETAILED ALTERNATIVES TABLES

TABLE D-1
2005-2035 UPLAN ALLOCATION BY GPU LU DESIGNATIONS

LU	Alt A						Alt B					Alt C				
	Code	DU	Pop.	Res. Acres	Comm. & Ind. Jobs	Comm. & Ind. Acres	DU	Pop.	Res. Acres	Comm. & Ind. Jobs	Comm. & Ind. Acres	DU	Pop.	Res. Acres	Comm. & Ind. Jobs	Comm. & Ind. Acres
Agricultural Lands	AG	225	257	6,595	0	0	440	508	12,973	0	0	438	586	12,949	0	0
Biological Resource	BR	55	60	1,079	0	0	62	67	1,034	0	0	60	70	1,024	0	0
Commercial	C	1	1	1	1,743	72	0	0	0	974	39	0	0	0	1,615	66
Community Center-Historic	CCH	59	73	19	0	0	88	107	27	144	6	339	505	112	158	7
Community Center-Local	CCL	5,002	6,130	1,952	4,192	257	2,085	2,553	1,400	3,493	213	2,649	3,945	1,510	5,413	320
Community Center-Regional	CCR	84	102	24	107	9	1,686	2,068	358	1,509	83	2,116	3,149	496	1,854	113
Commercial-Recreation	CR	2	2	19	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	I	0	0	0	108	8	0	0	0	31	2	0	0	0	31	2
Mineral Resource	MR	532	612	8,712	0	0	0	0	0	0	0	0	0	0	0	0
Office/Business Park	O	1	1	8	275	11	0	0	0	291	11	0	0	0	550	21
Public Lands	PL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parks and Recreation	PR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Public Service	PS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential-Agricultural	RA	4,998	6,065	42,017	203	8	1,425	1,734	16,319	0	0	1,514	2,226	16,551	0	0
Residential-High Density	RH	186	228	18	0	0	143	175	14	0	0	186	277	18	0	0
Residential-Low Density	ROW	4,557	5,574	1,814	0	0	6,517	7,976	2,139	0	0	8,319	12,402	2,729	0	0
Residential-Medium Density	RL	2,831	3,472	337	0	0	4,320	5,299	527	0	0	5,708	8,498	693	0	0
Right of Way	RM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Residential-Rural	RR	1,372	1,675	4,270	0	0	2,890	3,540	7,028	0	0	2,874	4,269	6,911	0	0
Timber Production Zone	TPZ	12	12	64	145	6	8	8	46	0	0	10	10	44	0	0
Timber Resource	TR	74	77	1,129	0	0	103	106	1,316	0	0	103	114	1,345	0	0
Total		19,991	24,341	68,058	6,773	371	19,767	24,141	43,181	6,442	354	24,316	36,051	44,382	9,621	529

TABLE D-2
2005-2035 PROJECTIONS BY SUB-AREA

	2000			2005 2035 UPLAN Growth Allocation								
				Alt A			Alt B			Alt C		
	Population	Housing Units	Employed Population ¹	Population	Housing Units	Jobs	Population	Housing Units	Jobs	Population	Housing Units	Jobs
Region 1: Western County												
Copperopolis CDP	2,363	1,374	1,041	9,151	7,465	1,558	9,427	7,689	394	13,143	8,823	663
Rancho Calaveras CDP	4,182	1,561	1,662	157	128	0	305	249	0	483	325	0
Valley Springs CDP	2,560	1,021	1,044	1,237	1,009	0	1,396	1,138	145	2,005	1,347	270
Wallace CDP	220	96	79	260	212	467	264	215	257	538	361	538
Region 2: Highway 49 Corridor												
City of Angels	3,004	1,422	1,261	487	398	677	511	417	678	1,445	970	1,104
Mokelumne Hill CDP	774	362	275	428	349	63	750	612	190	1,312	881	203
San Andreas CDP	2,615	1,167	839	1,362	1,112	836	1,564	1,275	1,410	2,026	1,360	1,415
Region 3: Foothills												
Mountain Ranch CDP	1,557	816	543	163	133	0	123	100	0	149	100	0
Rail Road Flat CDP	549	326	304	82	67	0	45	37	0	81	55	0
West Point CDP	746	345	225	165	135	1,489	417	340	1,996	647	434	1,823
Region 4: Highway 4 Corridor												
Arnold CDP	4,218	4,456	1,781	740	604	0	1,257	1,026	0	1,884	1,265	241
Avery CDP	672	339	278	132	108	110	186	152	110	315	212	422
Dorrington CDP	727	1,523	281	0	0	0	180	147	0	313	210	0
Forest Meadows CDP	1,197	660	504	559	457	0	592	483	0	1,145	769	161
Murphys CDP	2,061	1,094	803	886	722	349	741	604	364	1,069	717	396
Vallecito CDP	427	195	209	405	330	0	827	674	197	1,262	847	1,213
Region 5: High Country												
Subtotal of CDPs	18,547	12,705	7,303	16,214	13,229	5,549	18,585	15,158	5,741	27,817	18,676	8,449
Remainder of county	22,007	10,241	15,643	7,470	6,091	1,176	5,099	4,162	984	7,709	5,173	1,639
County Total	40,554	22,946	22,946	23,684	19,320	6,725	23,684	19,320	6,725	35,526	23,849	10,088

¹ The 2000 baseline figures use Census employment which is a measure of the number of employed residents, not the actual number of jobs in a given locale (jobs by location are not available at the sub-county level). This baseline employment figure is not directly comparable with the projections of job growth by location for the three alternatives.