5.1 LAND USE AND HOUSING

5.1.1 LAND USE

This section describes the current land use patterns and development trends within El Dorado County and the regulatory and planning environment under which future land use planning will or may occur. It identifies land use policies proposed in the four equal-weight General Plan alternatives that could have environmental impacts, analyzes those impacts, and identifies measures to mitigate significant land use impacts.

EXISTING CONDITIONS

Physical Environment

The physical environment of El Dorado County is an important influence on its land use and development patterns. The most important physical features affecting development are the Sierra Nevada range, U.S. Highway 50 (U.S. 50), large areas of the county dominated by forestland, and Lake Tahoe. Refer to Exhibit 3-2.

The Sierra Nevada divides El Dorado County into two distinct topographic areas—the west slope and Lake Tahoe Basin. The west slope extends from the Sacramento County line on the west to the summit of the Sierra Nevada on the east and contains most of the developed land in the county. Development on the west slope is concentrated near the county line and along U.S. 50, with several large-scale residential and commercial developments in the process of building and approved plans for additional future development. The density of residential and commercial development gradually decreases and the amount of open space (agricultural fields and forestland) increases heading east from the foothills to the Sierra Nevada summit. Placerville, located approximately 15 miles from the county line, is the only incorporated city on the west slope.

The Lake Tahoe Basin extends from the eastern side of the Sierra Nevada to the California/Nevada border. This mountainous area is characterized physically by rugged and steep terrain. The focal point of the east slope is Lake Tahoe, the southwest quadrant of which is in El Dorado County. The county's only other incorporated city, South Lake Tahoe, is located at the southern tip of Lake Tahoe.

U.S. 50 bisects El Dorado County, traveling east-west from the Sacramento County through Placerville to and past the California/Nevada border just south of Lake Tahoe. Historically, development in the county has closely followed this route, with the densest development in the

west. Major cities, towns, and developments along this corridor include El Dorado Hills, Cameron Park, Shingle Springs, Placerville, Pollock Pines, and South Lake Tahoe. In addition to being a development pathway, U.S. 50 is a major transportation corridor for residents living in El Dorado County and working in Sacramento County and for recreation-related traffic generated in areas outside of the county (Sierra Business Council 1997).

One reason for the clustering of development in the western portion of the county is the vast area of forestland that covers much of the eastern two-thirds of the county. Most of this land is in the Eldorado National Forest, administered by the U.S. Forest Service (USFS); other areas are privately owned commercial timberland. (For more information on the County's timberland, please refer to Section 5.2, Agriculture and Forestry.) Towns and individual residences are scattered throughout these areas. For the most part, pockets of any substantive development in the area east of Placerville are clustered along the U.S. 50 corridor.

Outside the U.S. 50 corridor, west-slope development follows the other two main highways in the county: State routes (SR) 49 and 193. SR 49 crosses the county from north to south and connects many of the original boom towns founded during the California Gold Rush of 1848. This route is a prime tourist destination, and the towns of Cool, Pilot Hill, Coloma, Lotus, Placerville, Diamond Springs, and El Dorado promote the mining heritage of the region with museums, historic districts, and commercial areas. SR 193 crosses the northern part of El Dorado County from SR 49 to Greenwood and Georgetown, then turns south through Kelsey and into Placerville.

The Lake Tahoe area occupies a unique position with regard to regional land use and economics. The lake is accessed from the west slope primarily by U.S. 50; SR 89 provides the major access route from U.S. 50 to the westerly area of the lake, north to Placer County and south to Alpine County. Geographically, El Dorado and Placer counties in California, and Washoe and Douglas counties in Nevada all include portions of the lake (see Exhibit 5.14-1). This complex geographic position coupled with the environmentally sensitive and popular nature of the lake has resulted in a complicated political and regulatory environment. The Tahoe Regional Planning Agency (TRPA) has primary jurisdiction over land use and regulatory decisions for the Lake Tahoe Basin area. This regulatory situation is discussed in more detail below and in Section 5.14, Lake Tahoe Basin.

Regulatory/Planning Environment

Land Use Patterns

El Dorado County has experienced rapid growth over the past 20 years. The countywide population increased from 85,812 in 1980 to approximately 163,585 in 2002 (see Table 4-1). Growth was relatively rapid in the 1980s and slowed somewhat in the 1990s as a result of an overall national economic slowdown during that period. The average annual growth rate for 1980–2002 was 3.0%.

The county had approximately 73,791 dwelling units and 45,300 jobs in 2002 (see Tables 4-2 and 4-3). The majority of this development, as described above, is focused in the area nearest to the Sacramento County line and along U.S. 50.

Land Uses

The county encompasses approximately 1,145,385 acres (Table 5.1-1). Excluding the waters of Lake Tahoe and Folsom Reservoir, the county encompasses 1,110,103 acres. Of this, approximately 46% is in public ownership and 54% is privately owned. Only 196,355 acres (approximately 17% of land in the County) have been developed, with the vast majority of this being residential units (Table 5.1-2). In addition, the County has existing commitments (projects that have received a building permit, have an approved tentative parcel map or subdivision map, or are part of an approved development agreement [DA]) for 14,565 additional dwelling units in the western part of the County (Economic & Planning Systems 2002).

Table 5.1-1
Developed and Undeveloped Land in El Dorado County

Category	Acres
Unincorporated-County Total	1,145,385
Lake Tahoe/Folsom Reservoir	35,282
Total (excluding major water bodies)	1,110,103
Developed	196,355
Undeveloped	913,748

Agricultural lands and forestlands make up a large percentage of the undeveloped lands in the county. Forestlands occupy 636,000 acres (55% of the County), with 377,000 acres being federally controlled timberland in the Eldorado and Tahoe National Forests and 259,000 acres

in private production (Shih, pers. comm., 2002). The County had 153,472 acres of agricultural land (farmland and grazing land) in 1997 (approximately 13% of the County), with 41,852 acres of that land being protected under the Williamson Act (National Agricultural Statistics Service 1997, El Dorado County Department of Agriculture 2001). More detailed information on agriculture and forestry is provided in Section 5.2, Agriculture and Forestry.

Table 5.1-2
Existing Developed Land in El Dorado County

Land Use	Acreage
Commercial	2,350
Industrial	1,925
Single-family residential	180,200
Multifamily residential	1,570
Other[1]	10,310
Total	**196,355**

[1] Land in other uses, such as public facilities and tourist recreation.

Sources: EDAW 2003, El Dorado County Surveyor's Office 2002

Nonjurisdictional Lands

Nonjurisdictional lands are an important factor in land use planning because such a large portion of the County is not subject to the County's land use planning decisions. A total of 531,924 acres (46% of the land) is regulated or owned by entities that are not under the planning jurisdiction of the County.

The largest nonjurisdictional landowners are the federal government (USFS, Bureau of Land Management [BLM]) and the State of California (Department of Parks and Recreation, University of California). The cities of Placerville and South Lake Tahoe are also considered nonjurisdictional lands because they are incorporated cities and serve as the planning authority within their own city boundaries. The Shingle Springs Rancheria is owned by the Shingle Springs Band of Miwok Indians, which for purposes of this EIR, is considered to act under federal law as a sovereign nation. Table 5.1-3 identifies the major categories of nonjurisdictional landholders in the County and their holdings. Exhibit 5.1-1 shows the nonjurisdictional lands identified in the County Surveyor's Office database.

Nonjurisdictional lands were indicated with an overlay designation in the 1996 General Plan.

Exhibit 5.1-1 (11x17) Non-Jurisdictional Lands

2nd page of 11x17 exhibit

Table 5.1-3 Major Holders of Nonjurisdictional Land in El Dorado County	
Owner	**Acreage**
U.S. Government (total)	521,210
Department of Veterans Affairs	1,259
Bureau of Land Management	101,847
U.S. Forest Service	313,166
Other federal agencies	104,938
State of California (total)	9,751
University of California	4,255
Other state agencies	5,496
Cities of Placerville and South Lake Tahoe	621
Other local jurisdictions	182
Shingle Springs Band of Miwok Indians[1]	160
Total	**531,924**

[1] These lands are assumed to be nonjurisdictional for purposes of this EIR. For a discussion of the contested status of these lands, see Chapter 3.

Note: Numbers do not total due to rounding.

Source: County Surveyor's Office parcel database 2002

Existing Patterns of Development

Market Areas

Strong geographic and economic influences contribute to land use and development patterns in El Dorado County. For this EIR, the County has been divided into 14 market areas focused around existing economic centers (see Exhibit 4-1 in Chapter 4, Land Use Forecasts and Development Estimates). These market areas are loosely grouped according to geographic proximity and common social and economic characteristics such as historic background and employment, as described below. (Market area numbers coincide with the numbering system in Exhibit 4-1 and are also used in the impact analysis.)

Market Area 1—El Dorado Hills: The El Dorado Hills market area (28,287 acres) is characterized by upscale suburban development. Many locations afford views of Folsom Reservoir and the Sacramento Valley. This is the most rapidly developing region of the county, dominated by high-end housing that serves primarily residents commuting to the Sacramento region. The El Dorado Hills Business Park is one of the largest employment centers in the County.

Market Area 2—Cameron Park/Shingle Springs/Rescue: Market Area 2 (20,747 acres) includes three distinct communities. Cameron Park is a suburban community comprising high-density and multifamily residential development surrounding a general aviation airport, with a large retail center at U.S. 50. Shingle Springs has a mixture of medium- and low-density residential development with a commercial district centered around the historic town site. Rescue is another historic town site surrounded by low-density and rural residential lots. This market area includes the highest concentration of multifamily housing in the western part of the county, as well as substantial areas of commercial, service, and retail uses along the U.S. 50 corridor.

Market Area 3—Diamond Springs/El Dorado: The Diamond Springs/El Dorado market area (30,014 acres) consists of a range from high- to low-density residential development centered around the historic town sites of Diamond Springs and El Dorado. A broad mixture of land uses, including commercial, industrial, and multifamily, trends toward large rural home sites and ranchlands in the southern portion of the area.

Market Area 4—Placerville/Camino: Market Area 4 (26,198 acres) is a diverse region centered on the incorporated city of Placerville and the town of Camino and includes the Apple Hill agricultural region. Land uses include the full range of residential densities, commercial, industrial (including the Sierra Pacific lumber mill), and agricultural (orchards, Christmas tree farms, and vineyards) uses.

Market Area 5—Coloma/Gold Hill: The Coloma/Gold Hill market area (26,136 acres) is primarily rural, centered on the historic town site of Coloma and the Marshall Gold Discovery State Historic Park, as well as the agricultural area of Gold Hill. Land uses range from low-density residential to large agricultural and ranching pursuits. Coloma and the town of Lotus, located on the South Fork American River, are the centers for the county's river rafting industry.

Market Area 6—Pollock Pines: The Pollock Pines market area (27,532 acres) is a diverse region with a wide range of land uses, including high-density residential, mobile home parks, retail and service-oriented commercial, and recreational uses. The commercial district runs in a narrow band along the Pony Express Trail, the historic alignment of U.S. 50, and is surrounded by residential development of varying densities. Newer suburban development is situated south of U.S. 50 and west of Jenkinson Reservoir, a center for outdoor recreation.

Market Area 7—Pleasant Valley: The Pleasant Valley market area (43,235 acres) has a range from low-density to rural residential lots interspersed with vineyards, ranch lands, and some timberlands along the North Fork Cosumnes River canyon.

Market Area 8—Latrobe: Market Area 8 (35,309 acres) is characterized by large-lot rural homesites interspersed with ranchlands, centered around the historic town site of Latrobe. Suburban development is beginning to approach the area as it spreads southward from El Dorado Hills and Cameron Park in Market Areas 1 and 2.

Market Area 9—Somerset: The Somerset market area (48,733 acres) consists of low-density and rural residential development intermixed with vineyards and ranchlands. The Fairplay viticultural region lies in the center of the market area and is very important to El Dorado County's wine industry.

Market Area 10—Cool/Pilot Hill: The Cool/Pilot Hill market area (45,587 acres) is characterized by low-density and rural residential parcels and large-acreage ranch lands. Pockets of medium-density residential and commercial uses have been established near the two historic town sites. The Auburn State Recreation Area covers a large portion of the land along the North Fork American River.

Market Area 11—Georgetown/Garden Valley: The Georgetown/Garden Valley market area (134,818 acres) covers a large region and includes the historic towns of Georgetown, Garden Valley, Greenwood, and Kelsey. Commercial and limited industrial uses are located primarily in the two largest communities, Georgetown and Garden Valley, with predominantly medium- to low-density residential land uses surrounding those communities. The rest of the western portion of the market area consists of rural residential development trending toward private timberland and National Forest lands to the east.

Market Area 12—Tahoe: Market Area 12 (109,200 acres) is that portion of the county east of the Sierra Nevada crest. It consists of the city of South Lake Tahoe, surrounding suburban development, and National Forest lands on the east slope. Tourism and tourist-serving businesses are the primary commercial uses, centered on the Stateline gaming activities, skiing, and summer recreation at Lake Tahoe. Market Area 12 is part of the Lake Tahoe Basin, which is under the jurisdiction of TRPA.

Market Area 13—American River: The American River market area (499,212 acres) consists mainly of the National Forest and timberlands of the upland regions of the county. Market Area 13 includes scattered communities along U.S. 50 through the American River Canyon and Wentworth Springs Road. Tourism (primarily outdoor recreation) and timber production dominate the land use activity.

Market Area 14—Mosquito: The Mosquito market area (15,090 acres) includes the isolated community of Mosquito and its surrounding area. Access is difficult. In the sparsely developed Swansboro subdivision, lot sizes range from high-density to rural residential.

Planning Area Concepts

As described in Chapter 3, Description of the Project Alternatives, one element used in all of the alternatives is the concept of Community Regions, Rural Centers, and Rural Regions. The designations of Community Region and Rural Center are applied to existing communities. The designation of Rural Region is applied to the remaining unincorporated area. Community Regions and Rural Centers contain the highest concentration of high- and medium-density residential uses and commercial lands. Community Regions are centered on existing larger communities that generally have well-developed infrastructure. Rural Centers are centered on smaller communities that provide limited services but are focal points for the surrounding rural areas. The alternatives differ in the extent to which Community Regions and Rural Centers can expand and the extent to which General Plan policies direct future growth to Community Regions and Rural Centers.

County Planning Processes

The County's land use planning efforts are driven in large part by state law (Government Code §§65300–65307), which requires that each county or city planning agency prepare a "comprehensive, long-term general plan for the physical development of the county or city." Land use and housing are required elements of the general plan.

In El Dorado County, a wide range of planning documents have been used to guide local land use decisions and establish the current land use pattern. Before the 1990s, land use policy for jurisdictional lands was developed through a set of 24 area plans that covered specific communities in the county. The primary objective of each area plan was to correlate land use and development policies with the goals and desires of local residents for their communities. These area plans addressed the planning concerns of the various areas but did not contain all the required elements of a general plan, such as a coordinated circulation element and a housing element. The need to centralize land use planning efforts resulted in the development of an updated general plan in the 1990s.

County General Plan and Writ of Mandate

The process of developing a general plan began in 1989 and culminated with adoption in 1996. (The development process for the General Plan is described in detail in Chapter 3.)

Litigation challenging the General Plan and General Plan EIR was filed immediately after its adoption. In 1999, the lawsuit was decided in favor of the litigants. To govern land use decisions until a General Plan could be reconsidered, the court issued a Writ of Mandate (Writ) defining the limits of the County's approval authority. The Writ permitted continued development of residential projects in the county for which a DA or tentative subdivision map had already been approved. Aside from already approved projects, the Writ prohibited new discretionary approvals of residential development. Limitations on commercial and other nonresidential development were less restrictive. Development was permitted to proceed on ministerial actions (e.g., approval of residential building permits, grading permits, limited multifamily projects, and final subdivision maps for which tentative maps were approved before the Writ was issued), remodels and minor modifications, projects exempt from CEQA, projects approved by TRPA or consistent with TRPA regulations, and capital improvement projects to serve existing growth. The court ordered the County to apply the policies of the 1996 General Plan where necessary to review applications for development that was allowed by the Writ.

Once a new general plan has been adopted, the County will petition the court to remove development restrictions established by the court. When the court discharges the Writ, the new General Plan will become the basis for land use decisions in the county.

El Dorado County Zoning Ordinance

The County's primary regulatory tool for implementing the General Plan is its Zoning Ordinance (County Code Title 17). Zoning regulations restrict the extent and type of development that can occur in the unincorporated areas of the county. The ordinance identifies uses that are allowed by right in each zoning district and uses that require a special-use permit, temporary-use permit, or other permit or approval. In addition, the Zoning Ordinance identifies standards for development in various districts, including sign standards, off-street parking requirements, height, and setback requirements. Development standards vary for each zoning district and may specify limitations on the dimensions of buildings, parcel sizes, setback dimensions, and uses.

El Dorado County Subdivision Ordinance

Along with the state Real Estate Act and Subdivision Map Act, the County's Subdivision Ordinance (County Code Title 16) provides standards governing the design, improvement, survey, and official map approval processes for major land divisions. The ordinance addresses County requirements for preliminary, tentative, and final subdivision maps; surveys and lot line adjustments; improvement standards; and special assessment districts.

Development Approval Process

The distinction between uses permitted by right (or "ministerially") and uses requiring a discretionary permit is a critical factor in the development approval process in El Dorado County. Uses permitted by right are, by definition, those uses and permits, such as building permits, that the County (through the General Plan and/or Zoning Ordinance) has exempted from discretionary action. As ministerial projects, these permits are generally exempt from CEQA review. A landowner wishing to develop a parcel of land with a use permitted by right is required to submit an application to the County Building Department and pay appropriate fees. The Planning Department reviews the application to ensure that the following conditions are met:

- the use is indeed permitted by right in the zoning district where it would be located;
- the project satisfies the standards and requirements identified in the Zoning Ordinance (possibly including a site plan review to ensure that standards regarding setbacks, architectural design, landscaping, and signage are met) or a variance request has been filed; and
- the site has no existing violation of the Zoning Ordinance, Subdivision Map Act, Subdivision Ordinance, or any other land use entitlement such as conditions of approval.

If these conditions are met, the appropriate County departments review the application. If it meets all standards and applicable ordinances, the permit is granted.

For uses requiring a discretionary permit or approval (such as a subdivision, design review [regarding issues such as form, scale, and frontage improvements] or development plan approval through an overlay designation based on the zoning designation), the developer submits an application to the Planning Department (County Code §17.22.120). The department then has 30 days to review the application; if it is determined to be complete, it is accepted for processing. During this process, the project undergoes environmental review unless it is determined to be exempt from CEQA. Following environmental review, the Planning Department staff makes a recommendation to the zoning administrator or Planning Commission. The appropriate authority then makes a decision regarding approval of the project and either approves or denies the proposal.

Regardless of which type of project is proposed, the property owner must also obtain some or all of the following permits or approvals, depending on whether the project is residential or nonresidential:

- approval of improvement plans, indicating that the appropriate County agencies have reviewed and approved the project's connection to public utilities and roadways;
- a grading permit under the Grading, Erosion, and Sediment Control Ordinance (County Code §15.14), if the project would disturb more than 300 yards of soil;
- pad certification, which requires that a soil engineer confirm that the site is adequately compacted to meet engineering requirements and a surveyor or engineer verify that the site is elevated above the floodplain; and
- a building permit, which requires payment of various fees (e.g., schools, roads), site plan review, and presentation of various other permits obtained from County departments relating to traffic, public services, and safety (this process is described in more detail in various sections of Chapter 5).

Specific Plans and Development Agreements

As described above, various projects were approved prior to the 1996 General Plan's being overturned. Included in the already approved projects are DAs for six developments (Table 5.1-4).

Carson Creek Specific Plan and Development Agreement

The Carson Creek Specific Plan area encompasses approximately 1,000 acres along the Sacramento County line, south of U.S. 50 in the El Dorado Hills market area. The plan area permits approximately 1,470 residential units ranging from 3 to 20 dwelling units per acre (du/ac), 40,000 square feet (sf) of commercial uses, 449,605 sf of research and development uses, two schools, 44 acres of parks and public facilities, 780,279 sf of industrial uses, and 199 acres of open space. Land uses adjacent to the project include the El Dorado Hills Specific Plan area to the east and agricultural land in Sacramento County to the west (Michael Brandman Associates 1999). This property is subject to a development agreement.

The Promontory Specific Plan and Development Agreement

The Promontory Specific Plan area is located south of Folsom Reservoir in the El Dorado Hills market area, north of U.S. 50. The project site consists of approximately 1,000 acres along the Sacramento County line. The development permits of 1,097 residential units, 7 acres of commercial and office uses, and 101 acres of public open space. The primarily residential project is located in the midst of other residential subdivisions under county jurisdiction (Environmental Science Associates 1999). This property is subject to a DA.

Table 5.1-4
Approved Development Agreements

Land Use[1] (acres)	Specific Plan					
	Bass Lake Hills Specific Plan	Carson Creek Specific Plan	El Dorado Hills Specific Plan (EDH Investors–Serrano)	Marble Valley Tentative Map	Promontory Specific Plan	Valley View Specific Plan
MFR	0	192	0	0	6	93[2]
HDR	198	177	2,021	0	441	800
MDR	437	0	0	0	409	378
LDR	532	0	0	2,341	0	0
OS	151	199	808	1,271	101	617
Parks/PF	31	44	60	54	35	110
C	0	5	301	0	7	40[3]
I/RD	0	94	0	0	0	0
Total Number of Residential Units	1,025[4]	1,470[5]	4,481[6]	398	1,097	2,837

[1] The land use designations shown here are based on the density range of the project (i.e., HDR=1-5d.u./acre, MFR=more than 5 du/acre). They are close approximations of the appropriate General Plan designations but do not necessarily reflect the General Plan land use map. Actual housing types may vary.
[2] Includes mixed-use areas of commercial.
[3] Includes 22 acres of mixed use that are also included in MFR total.
[4] Decreased from 1,458 dus in Specific Plan based on executed DAs.
[5] Decreased from 1,700 dus in Specific Plan as a result of Settlement Agreement.
[6] Serrano's DA allowed for 6,162 units. The maps submitted by Serrano to date have substantially reduced densities. The Community Facilities District bonds issued by Serrano assume buildout of 4,481 units.

Source: Maurer, pers. comm., 2003

Valley View Specific Plan and Development Agreement

The 2,837-acre Valley View Specific Plan area is in the southern portion of the El Dorado Hills market area, south of U.S. 50. The plan calls for development of up to 2,840 residential units, 40 acres of commercial uses (including mixed-use areas), two schools, 86 acres of multiuse open space, and 617 acres of passive open space and buffer areas. Most of the residential development is designated estate residential, ranging from 0.25 to 2 du/acre (El Dorado County 1998). This property is subject to a DA.

Bass Lake Hills Specific Plan and Development Agreements

The Bass Lake Hills Specific Plan area consists of approximately 1,166 acres, approximately 3 miles east of the Sacramento County line and north of U.S. 50 between El Dorado Hills and Cameron Park in the Cameron Park/Shingle Springs/Rescue market area. The executed DAs

allow development of 1,025 medium- and high-density residential units (El Dorado County Planning Department 2003).

El Dorado Hills Specific Plan and Development Agreement (EDH Investors—"Serrano")

The El Dorado Hills Specific Plan provides a blueprint for development of 3,646 acres located in the eastern part of the El Dorado Hills market area, north of U.S. 50 and south of Green Valley Road. A portion of the specific-plan area that lies south of U.S. 50 consists of commercial land uses. The plan includes 4,481 high-density residential units intermixed with 808 acres of open space and 301 acres of commercial development. A residential/commercial area is identified near Bass Lake, which is designated for open space and recreation (Wade Associates 1988). This property is subject to a DA.

Marble Valley Tentative Map and Development Agreement

The 2,418-acre Marble Valley development, located south of U.S. 50 east of Clarksville in the Cameron Park/Shingle Springs/Rescue market area, includes 398 low-density residential units, 1,271 acres of open space, and 54 acres of parks and public facilities. This property is subject to a DA but is not included in a specific plan.

Other Plans Applicable to the County

Various other entities and agencies have long-range planning documents or tools that they use to define, control, and regulate development and ongoing management activities within their areas of responsibility. Many of these plans are identified below, and some are described in more detail in the referenced sections of this EIR.

Air Quality Plans

In coordination with the air quality management districts and air pollution control districts of Sacramento, Yolo, Solano, Placer, and Sutter counties, the El Dorado County Air Quality Management District prepared and submitted the 1991 Air Quality Attainment Plan to the U.S. Environmental Protection Agency in compliance with the California Clean Air Act. This plan addressed the nonattainment status of the region for ozone and particulate matter. These agencies also prepared the 1994 Sacramento Area Regional Ozone Attainment Plan, which was incorporated as part of the State Implementation Plan (SIP) to meet the requirements of the federal Clean Air Act. These plans are discussed in more detail in Section 5.11, Air Quality.

Parks and Recreation Plans

The County Department of Parks and Recreation has several plans that guide its planning efforts, including the El Dorado County River Management Plan (2001); Bikeway Master Plan (1979); and Hiking and Equestrian Trails Master Plan (1989). These plans are referred to and used in the analysis conducted in the Recreation portion of Section 5.7, Public Services.

Transportation Plans

The California Department of Transportation has prepared transportation concept plans to identify proposed improvements to keep pace with growth in the county on state highways. Four plans have been prepared, one each for U.S. 50, SR 49, SR 193, and SR 89.

In addition, the County Department of Transportation has prepared or works with various reports and plans to guide it in developing and maintaining the transportation network in El Dorado County. These include the Metropolitan Transportation Plan for 2025 and the 2003/05 Metropolitan Transportation Improvement Program, both of which have been prepared by the Sacramento Area Council of Governments.

Local plans include the County Transportation Commission's Bicycle Transportation Plan (1997), Sacramento-Placerville Transportation Corridor Master Plan (2000), and El Dorado County Long-Range Transit Plan (1995), and TRPA's Regional Transportation Plan. These plans are addressed in more detail in Section 5.4, Traffic and Circulation, and Section 5.12, Lake Tahoe Basin.

Comprehensive Land Use Plans

El Dorado County has four airports that are governed by comprehensive land use plans (CLUPs). The Foothill Airport Land Use Commission prepared CLUPs for the Cameron Airpark, Georgetown, and Placerville Airports (Foothill Airport Land Use Commission 1986, 1996a, 1996b). The City of South Lake Tahoe prepared and manages the Lake Tahoe Airport CLUP. Each CLUP identifies the decibel-level contours that would affect surrounding land uses during airport operation and designates safety zones in which land uses are restricted to prevent interference with airport operations and ensure the safety of surrounding land uses. Although standards established by the Federal Aviation Administration form the basis of the safety and noise restrictions, the Foothill Airport Land Use Commission is responsible for adopting and tailoring these standards to the specific airport and for enforcing them. These standards are addressed in detail in Section 5.10, Noise.

Community Action Plans

The Sierra Economic Development District (SEDD) prepared Community Action Plans (CAPs) for several towns in El Dorado County. SEDD is a nonprofit organization that was established through a joint powers authority between the Counties of El Dorado, Placer, Nevada, and Sierra to help small rural communities plan for their community and economic development. Through grants provided by USFS, SEDD prepared CAPs for the communities of Camino, Cool/Pilot Hill, Coloma/Lotus, Garden Valley, Georgetown, and Mosquito/Swansboro. These plans were not reviewed or adopted by the County; they serve as local advisory documents and do not affect the County's planning process.

The CAPs were prepared following a series of surveys and workshops in each community to solicit input from the public and various economic sectors. Each CAP includes information about the infrastructure, economy, and population of the community. Community goals are identified and a strategic action plan is outlined to accomplish those goals. Common elements of the CAPs include improving services and infrastructure, improving the range and number of businesses providing services and retail opportunities to the local community, and preserving the rural atmosphere of these towns. The CAPs can be viewed online at <http:\\www.sedd.org>.

Nonjurisdictional Management Plans

Nonjurisdictional lands in the county are often covered under separate management plans. The following management plans apply to nonjurisdictional lands within El Dorado County.

Sierra Nevada Forest Plan and Amendment

The Sierra Nevada Forest Plan regulates land use and habitat management for 11 national forests, including the Tahoe and Eldorado National Forests and the Lake Tahoe Basin Management Unit (USFS 2002). The Sierra Nevada Forest Plan Amendment (SNFPA), published in 2001, updates the plan and is currently being supplemented by USFS. These plans, along with the management plan for the Eldorado National Forest, are described in Section 5.2, Agriculture and Forestry.

City of Placerville General Plan

The City of Placerville is located at the junction of U.S. 50 and SR 49, midway between Sacramento and Lake Tahoe. The city occupies 3,711 acres, has a population of 9,610, and is one of only two incorporated cities in the county. Placerville extends along both sides of

U.S. 50, with the historic downtown district as a focus of commercial activity and less dense uses spreading to the north and south away from the highway (City of Placerville 1989).

City of South Lake Tahoe General Plan

The City of South Lake Tahoe (population 23,000) is located at the south end of Lake Tahoe, at the junction of SR 89 and U.S. 50 in the Lake Tahoe Basin portion of the county. The city encompasses 10,558 acres and is entirely within the boundaries of TRPA jurisdiction. The City relies on the Plan Area Statements of the TRPA for its land use planning information, rather than preparing a separate general plan. The Plan Area Statements identify appropriate land use designations and desired uses for areas throughout the city.

Regional Land Use Planning

Regional Plan for the Lake Tahoe Basin

As discussed in greater detail in Section 5.14 of this EIR, the Tahoe Basin portion of the County is within the jurisdiction of TRPA and is subject to regulatory framework established by TRPA, which includes the Regional Plan for the Lake Tahoe Basin, the Code of Ordinances, a number of Plan Area Statements, the Meyers Community Plan, and other land use plans and regulations. TRPA has primary permitting authority in the Basin, but has authorized the County to grant permits for various purposes and to collect fees on behalf of TRPA.

USFWS Recovery Plans for Gabbro Soil Plants and California Red-Legged Frog

The U.S. Fish and Wildlife Service (USFWS) has released recovery plans for two special-status biological species groups found in El Dorado County. In 2002, USFWS released the Recovery Plan for Gabbro Soil Plants of the Central Sierra Nevada Foothills, which identifies goals to recover and/or protect six plants that grow only on the gabbro soils found in western El Dorado County. The Recovery Plan for the California Red-legged Frog was also released in 2002, with a goal of sufficiently reducing threats and improving the population status of the species to warrant delisting. These recovery plans are described in more detail in Section 5.12, Biological Resources.

General Plans of Adjacent Jurisdictions

Land use in El Dorado County is also influenced by jurisdictions adjacent to the county's boundaries. Four California counties border El Dorado County: Amador, Placer, Sacramento,

and Alpine counties. These four counties have active General Plans guiding land use in each respective area. Douglas County in the State of Nevada also borders El Dorado County and is governed by a comprehensive/master plan process.

Alpine County General Plan

Alpine County is located southeast of El Dorado County in the Sierra Nevada. Much of the land in Alpine County is owned and administered by USFS or BLM. Recreation and tourism are the primary economic mainstays, followed by agriculture, timber, and mining. The resort area of Kirkwood straddles the boundary between Alpine, Amador, and El Dorado counties, on SR 88. The area of Alpine County adjacent to El Dorado County is identified as primarily open space, with some wilderness areas near the resort (Alpine County 1999).

Amador County General Plan

Amador County is the southern neighbor along the western and central portions of the El Dorado County border, abutting Alpine County on the east. The county is primarily rural, with the towns of Sutter Creek and Jackson attracting Gold Country tourists on SR 49 in the western portion and most of the eastern portion occupied by National Forest land. Land use designations identified in the plan for the boundary area are agricultural (40-acre minimum), residential (one single-family home per acre, limited by available services), timber protection zone, and natural resource lands (Amador County 1973).

Douglas County, Nevada, Master Plan

Douglas County, Nevada, is adjacent to Lake Tahoe and abuts the eastern border of El Dorado County. The portions of Douglas County that affect El Dorado County are the Tahoe and Sierra Planning Areas. The Tahoe area is not included in the Douglas County Master Plan because it is under TRPA jurisdiction. Most of the Sierra Planning Area is publicly owned, aside from the areas occupied by the Tahoe Village and Summit Village areas and portions of the Heavenly Valley ski resort. The area affecting El Dorado County is designated forest and rangeland (Douglas County 1996).

Placer County General Plan

Placer County is located north of the El Dorado County border, extending from the Sacramento County line in the west to Lake Tahoe in the east. Land use areas along the El Dorado County boundary include portions of Folsom Reservoir, the Granite Bay Community Plan area, the American River and portions of the Auburn State Recreation Area,

the town of Auburn, and the Foresthill Community Plan area. Land uses designated in the General Plan include urban areas at Granite Bay and Auburn, rural residential along Folsom Reservoir, resource protection in the central portion of the county, and large areas of timberland from the central to eastern areas (Placer County 1994).

Sacramento County General Plan

Sacramento County is located west of El Dorado County and includes part of Folsom Reservoir along that joint boundary. Many residents of El Dorado County work in the greater Sacramento area, commuting along U.S. 50. Development in Sacramento County is focused in the western and central portions of the county, with the lands near El Dorado County designated primarily for agricultural uses. The lands adjoining El Dorado County south from the outer edges of El Dorado Hills toward Latrobe are designated General Agriculture, 80-acre minimum for most of that area (County of Sacramento 1993).

City of Folsom General Plan

The City of Folsom is located on U.S. 50 in Sacramento County, just west of El Dorado Hills across the Sacramento County line. Folsom is a rapidly growing city that provides housing for many residents who commute to the Sacramento area for work. The northern portion, adjoining the El Dorado Hills area, is within the Folsom city limits and is designated Low-Density Residential (1-12 du/ac) and Medium-Density Residential (13-30 du/ac) (City of Folsom 1993). The Empire Ranch Specific Plan is a 1,738-acre residential community proposed for development in the east area of Folsom, just across the county line from El Dorado Hills. The development includes various types of housing, a golf course, parks and open space, and areas of wetlands and riparian habitat. Areas abutting El Dorado County are primarily designated for open space and single-family residential uses, with small regional and neighborhood commercial areas included in the central portion of the project site (LSA Associates 2000). The city recently gained approval to expand its sphere of influence boundary to the area south of U.S. 50 and adjacent to El Dorado County. There are no development plans for this area.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

The General Plan would result in a significant impact if development would:

- physically divide an existing community;

- conflict with applicable land use plans, policies, or regulations of other agencies;
- create substantial incompatibilities between land uses; or
- substantially alter or degrade the existing land use character of the County and/or sub-area.

Impact 5.1-1

Inconsistency with Applicable Plans and Policies of Other Agencies. General Plan policies and land use designations identified in the land use map are generally consistent with plans and policies of other agencies. However, the Roadway Constrained 6-Lane "Plus" and Environmentally Constrained Alternatives do not directly address coordinated planning with other jurisdictions, which could lead to potential future land use incompatibility. This impact is considered **significant** for the Roadway Constrained 6-Lane "Plus" and Environmentally Constrained Alternatives and **less than significant** for the No Project and 1996 General Plan Alternatives. The severity of this impact would be the same for both the Roadway Constrained 6-Lane "Plus" and Environmentally Constrained Alternatives. Impact significance before and after mitigation is shown in the table below.

Impact	Significance Before Mitigation*							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-1: Inconsistency with Applicable Plans and Policies of Other Agencies	LS	LS	S_1	S_1	S_1	S_1	LS	LS
Mitigation	**Significance After Mitigation***							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-1, Pursue Land Use Coordination among the County and Adjacent Jurisdictions	LS	LS	LS	LS	LS	LS	LS	LS

* Notes: LS = Less than Significant; N/A= Not Applicable; S = Significant; SU = Significant and Unavoidable. Significant impacts are ranked against each other by alternative for the 2025 scenario and the buildout scenario, from 1 (Worst Impact) to 4 (Least Impact). Where the impact under two different alternatives during the same time frame would be roughly equal in severity, the numerical ranking is the same.

El Dorado County participates in a Joint Powers Agreement (JPA) with the City of Folsom. The JPA was established to provide a forum to address issues of mutual concern in the Folsom/El Dorado Hills area. Another JPA was formed with El Dorado, Amador, and Alpine Counties (Tri-County JPA) to coordinate land use and transportation planning activities between the three Counties, particularly along the SR 88 corridor. The Folsom-El Dorado JPA meets quarterly, with representation by City Council and Board of Supervisors members. A Tri-County Technical Advisory Committee (Tri-TAC) has been established, consisting of representatives of the planning departments of each of the three Counties, along with representatives of the U.S. Forest Service and Caltrans as ex-officio members. Tri-TAC meets monthly, serving as an advisory body to the Counties' Planning Commissions and Boards of Supervisors, and has limited land approval authority as set forth in the Kirkwood Master Plan. No similar arrangements have been made with the other adjacent jurisdictions or the cities within the county, although one Board member sits on the TRPA Governing Board.

Table 5.1-5 (found at the end of this section) presents an analysis of the consistency of each alternative with applicable plans and policies of other agencies. The table also considers the consistency of the equal-weight alternatives with existing County specific plans that are subject to development agreements. The discussion below presents the consistency-related policies for each alternative, summarizes inconsistencies, and presents recommended mitigation measures for those inconsistencies.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies included in the 1996 General Plan that are applicable to the No Project Alternative are Policies 2.1.1.5, 2.1.2.4, 2.1.2.7, 2.1.3.2, 2.2.2.5, 2.2.5.13, and 10.2.7.1.

No Project Alternative (2025)—Impact Discussion

This alternative has policies that promote coordination with the policies of other agencies. These policies are identified above and include coordination with local and regional traffic plans (Policies 2.1.1.5, 2.1.2.7, and 2.1.3.2), evaluation for preservation in historic districts (Policy 2.1.2.4), coordination with the incorporated cities of Placerville and South Lake Tahoe and other state and federal agencies (Policy 2.2.2.5), compliance with the four CLUPs that control land uses surrounding airports (Policy 2.2.5.13), and coordination with cities regarding large commercial or industrial projects (Policy 10.2.7.1).

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
SPECIFIC PLANS AND DEVELOPMENT AGREEMENTS	
Carson Creek Specific Plan	
The specific plan designates a mixture of primarily high-density residential, multifamily residential, research and development, and park uses on the east and a combination of primarily high-density residential with multifamily residential, open space, and park uses on the west. A portion of the western border abuts Sacramento County. The beginning (section A1) of the Sacramento-Placerville Transportation Corridor abuts land designated for open space and parks in this specific-plan area. This section would include weekend and holiday rail service.	
Consistent for all alternatives	**No Project/1996 GP:** Land to the east is designated for research and development and a small portion of land to the southeast in El Dorado County is designated as industrial. To the west, land is within Sacramento County jurisdiction and designated for general agriculture. Land along the northwest border, located in El Dorado County, is designated as medium-density residential, as is rural land in the county along the southwest border. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan. **RC/EC:** The only difference from the discussion above is that land in the southwest corner is designated as natural resource. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.
The Promontory Specific Plan	
The specific plan designates medium-density residential to the east; and to the north, a mixture of high-density and medium-density residential.	
Consistent for all alternatives	**No Project/EC/1996 GP:** Land to the east is designated as high-density residential; to the north, high- and medium-density residential. To the west, Sacramento County has a mixture of lands designated for open space and high-density residential. To the west, the Russell Ranch Specific Plan area (in Sacramento County) is a mixture of multifamily, high-density, and medium-density residential. None of the land uses adjoining the specific plan would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan. **RC:** Land to the east is designated for a mixture of open space (a small amount) and high- and medium-density residential; to the north, medium-density residential. Land to the west is in Sacramento County. To the west, the Russell Ranch Specific Plan area (in Sacramento County) is a mixture of multifamily, high-density, and medium-density residential. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
Valley View Specific Plan	
The specific plan designates land uses to the east as low-density residential; to the south as low-density residential; to the west as multifamily residential, open space, and high-density residential; and to the north as low-density residential and multifamily residential.	
Consistent for all alternatives	**No Project/EC/1996 GP:** Land to the east is designated as low-density residential and rural; to the south, rural; to the west, research and development; and to the north, high- and low-density residential and commercial (El Dorado Hills Specific Plan). None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan. **RC:** Land to the east is designated as low-density residential, rural, and natural resource land; to the south, rural; to the west, research and development; and to the north, low-density residential, rural, commercial (El Dorado Hills Specific Plan), and natural resource land. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.
Bass Lake Hills Specific Plan	
The east side of the specific-plan area is designated as high-density residential; the north side is designated as high-density residential. The west side is designated as medium-density residential, and the south side of the specific plan area abuts U.S. 50.	
Consistent for all alternatives	**All Alternatives:** Land to the east is designated as high-density residential; to the north and west, the specific-plan area abuts the El Dorado Hills Specific Plan area, which is an approved specific plan. To the south is U.S. 50, and county land south of U.S. 50 is designated as low-density residential. None of the land uses adjoining the specific plan would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.
El Dorado Hills Specific Plan	
The specific plan designates land to the east as low-density residential; to the south are the Bass Lake Specific Plan area (designated as high- and medium-density residential) and U.S. 50. Land to the west is designated for open space, and land to the north is designated as low-density residential and open space.	
Consistent for all alternatives	**No Project/1996 GP:** Land to the east is designated as low- and high-density residential; to the south are the Bass Lake Specific Plan area and U.S. 50; to the west are multifamily residential, public facilities, and high-density residential; and to the north are high- and low-density residential. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
	RC: Land to the east is designated as rural and low-density residential; to the south are the Bass Lake Specific Plan area and U.S. 50; to the west, multifamily residential, public facilities, and high-density residential; and to the north, low-, medium-, and high-density residential. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan. **EC:** Land to the east is designated as low-density residential; to the south are the Bass Lake Specific Plan area and U.S. 50; and to the west, high-density residential, multifamily residential, and public facilities. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the specific plan.
OTHER PLANS APPLICABLE TO THE COUNTY	
Air Quality Plans	
Refer to discussion in Section 5.11, Air Quality	
Parks and Recreation Plans	
Refer to discussion in the Recreation portion of Section 5.7, Public Services	
Transportation Plans	
Refer to discussion in Section 5.4, Traffic and Circulation	
Comprehensive Land Use Plans	
Cameron Airpark Airport: In all four alternatives, the Cameron Airpark Airport is surrounded by high-density residential, public facilities, and commercial. All are allowable uses except in airport safety zones 1 and 2. The public facilities designation includes schools, but schools are not allowed in any of the safety zones surrounding an airport. Additionally, hospitals are included in public facilities in the NP and 1996 GP alternatives. Hospitals are allowed in the overflight safety zone (zone 3) as long as they do not care for more than six patients.	
Consistent for all alternatives	Because a special-use permit would be required for siting of a school or hospital in areas surrounding an airport, all alternatives are consistent with the CLUP. All alternatives include a policy (Policy 2.2.5.13 for NP/1996 GP, LU-7e for RC/EC) requiring the County to comply with land use restrictions established in an adopted CLUP. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the CLUP.
Georgetown Airport: Georgetown Airport is surrounded by land designated industrial. In the NP, RC, and 1996 GP alternatives there is a small area designated commercial northeast of the airport. Other surrounding designations include rural, natural resources, and low- and medium-density residential, to varying degrees depending on alternative. There is a small area designated as public facilities southwest of the airport in all alternatives. In the NP and 1996 GP alternatives, hospitals	

Table 5.1-5
Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies

are allowed in the public facilities designation. In the Georgetown Airport Comprehensive Land Use Plan, hospitals are only allowed if they care for fewer than six people.	
Consistent for all alternatives	Land uses designated under all four alternatives would be consistent with the limitations of the CLUP because special-use permits would be required for schools and hospitals and because other uses would not be located within the safety zones. All alternatives include a policy (Policy 2.2.5.13 for NP/1996 GP, LU-7e for RC/EC) requiring the County to comply with land use restrictions established in an adopted CLUP. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the CLUP.
Placerville Airport: Placerville Airport is zoned Industrial and surrounded by low-density residential and open space lands.	
Consistent for all alternatives	Land uses designated under all four alternatives would be consistent with the limitations of the CLUP because special-use permits would be required for schools and hospitals and because other uses would not be located within the safety zones. All alternatives include a policy (Policy 2.2.5.13 for NP/1996 GP, LU-7e for RC/EC) requiring the County to comply with land use restrictions established in an adopted CLUP. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the CLUP.
Lake Tahoe Airport: Lake Tahoe Airport is located within the Lake Tahoe Basin and is within the jurisdiction of TRPA. Refer to Section 5.14 for a discussion of the relation between County Policies and TRPA planning processes.	
NONJURISDICTIONAL MANAGEMENT PLANS	
Sierra Nevada Forest Plan Amendment	
The U.S. Forest Service (USFS) has two planning guides for the National Forest, the Eldorado Land and Resource Management Plan and the Sierra Nevada Forest Plan Amendment (SNFPA), which covers the 11 National Forests in the Sierra Nevada. Both plans provide guidance and are relevant except where they overlap, in which case the SNFPA has authority. Both plans manage recreation and timber harvesting, among other issues. The SNFPA addresses the "urban intermix zone", areas developing at a density of generally one unit per five acres or more dense (although parcels smaller than 40 acres are also considered an indicator of "urbanizing land use) adjacent to National Forest land (Pollock Pines, Grizzly Flats, Volcano, Kiburz, etc.). The SNFPA includes plans to reduce vegetative fuel loads on National Forests within 1/4 mile of development in the urban intermix zone and includes other plans and policies for management of the National Forest. The SNFPA is being supplemented because its fuel reduction program and other programs were not implementable. The supplement is in preparation. For this reason, no consistency analysis is provided for this document.	

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
Eldorado National Forest Land and Resource Management Plan	
Areas in the eastern portion of the national forest are designated for wilderness, primitive, and recreational uses. Areas in the western portion of the forest, nearest to lands under county jurisdiction, are designated for timber management and visual resource retention. Scattered throughout the national forest are developed areas designated for transportation utility corridors, private recreation, administrative sites, and research facilities.	
Consistent for all alternatives	All non-jurisdictional land in Eldorado National Forest is also given a General Plan jurisdiction of Natural Resources because land is frequently traded between the County and USFS. This designation ensures that these lands are protected appropriately for the type of anticipated use. **No Project/1996:** El Dorado County side of border with USFS land is primarily designated rural residential with the areas of Pollock Pines/Pleasant Valley, Grizzly Flat, and Mosquito designated medium- and high-density residential. This reflects existing land uses. In these alternatives, Pollock Pines is considered a Community Region and Pleasant Valley, Grizzly Flat, and Mosquito are considered Rural Centers. For a discussion of the need for buffers in these areas, refer to the Agriculture portion of Section 5.2, Agriculture and Forestry. **RC:** El Dorado County side of border with USFS land is primarily designated rural residential with areas of Pollock Pines/Pleasant Valley, and Grizzly Flat designated low- and medium-density residential with some high-density residential, reflecting existing land uses. In this alternative, Pollock Pines is considered a Community Region and Pleasant Valley and Grizzly Flat are considered Rural Centers. The area of intense development is smaller but no buffers are provided. See Section 5.2. **EC:** El Dorado County side of border with USFS land is primarily designated rural land and agricultural land with small areas in Grizzly Flat and Pollock Pines designated low-, medium-, and high-density residential. In this alternative, all three developed areas are considered Rural Centers. A portion of the land designated rural land, located south of Highway 50, has an important biological corridor overlay. Buffers are provided to protect forest lands from development, which is of lower intensity than with the other alternatives.
City of Placerville General Plan	
In the City's General Plan, land to the east is designated as a combination of general commercial, medium- and low-density residential, and open space. To the north, land is primarily designated as high-density residential with areas of medium- and low-density residential, open space, and rural residential with agricultural district and mineral resource overlays. To the west, land is primarily designated as high-density residential with areas of medium- and low-density residential and open space. To the south, land is primarily designated as low-density residential with areas of open space and public facility.	

Table 5.1-5
Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies

Consistent for all alternatives	**NP/1996:** To the east, land is designated as medium- and low-density residential and rural residential, with a portion of planned industrial to the southeast. To the north, land is designated as medium- and high-density residential with a small area designated as rural residential with a mineral resource overlay. To the west, land is primarily designated as medium-density residential with a small area of low-density residential and rural residential with an agricultural district overlay. To the south, land is primarily designated as medium-density residential with a small area designated as rural residential. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan. **RC:** To the east, land is designated as low-density residential and industrial (southeast) with small areas of medium-density residential and commercial. To the north, land is designated as low- and medium-density residential with small areas of rural land with agricultural preserve and mineral resource overlays and open space. To the west, land is designated as low- and medium-density residential with a small area of commercial. To the south, land is designated as low- and medium-density residential with areas of rural land. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan. **EC:** To the east, land is designated as medium-density residential, industrial, rural land, and low-density residential with an important biological corridor overlay. To the north, land is designated as medium-density residential with areas designated as high-density residential, and agricultural land. To the west, land is primarily designated as medium-density residential with an area designated as low-density residential, with an important biological corridor overlay, and a small area designated as agricultural land and rural land. To the south, land is designated as low- and medium-density residential with areas designated as rural land and agricultural land with an important biological corridor overlay. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.
REGIONAL LAND USE PLANNING	
Regional Plan for the Lake Tahoe Basin	
	Refer to Section 5.14 for a discussion of the relation between County policies and TRPA planning processes.
Alpine County General Plan	
Alpine County is designated as open space along its entire border with El Dorado County, with some wilderness areas near the Kirkwood resort. Relatively intensive uses integrally related to ranch- or farm-type agricultural production, such as slaughterhouses, processing plants, and packaging plants, are allowed under the open-space designation in Alpine County.	

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
Consistent for all alternatives	El Dorado County is predominantly designated as natural resources (nonjurisdictional USFS land) with a small area of adopted plan near South Lake Tahoe along its border with Alpine County. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.
Amador County General Plan	
Amador County land use designations along the border with El Dorado County are agriculture (40-acre minimum), residential (1-acre lots, near the town of River Pines), timber preserve zone, and USFS land (nonjurisdictional).	
Consistent for all alternatives	El Dorado County land uses are low-intensity uses such as natural resource, open space, and nonjurisdictional (USFS land). None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.
Douglas County, Nevada, Master Plan	
The portion of Douglas County that abuts El Dorado County is designated as forest and range land.	
Consistent for all alternatives	Both the El Dorado County and Douglas County sides of the boundary are under TRPA jurisdiction. For a discussion of the relation between General Plan policies and TRPA planning processes, refer to Section 5.14. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.
Placer County General Plan	
Placer County land above the Foresthill Community Plan area up to (but not including) the West Shore Community Plan area in the Lake Tahoe Basin is designated as agricultural/timber (80-acre minimum) with a small area designated as agricultural/timber (10-acre minimum). Land between the Auburn/Bowman Community Plan area and the Foresthill Community Plan area is designated as rural residential (1-10 acres). Land in the Auburn/Bowman Community Plan Area is designated for open space.	
Consistent for all alternatives	Land in El Dorado County adjacent to the Foresthill Community Plan area up to (but not including) the West Shore Community Plan area is designated as natural resource with a nonjurisdictional land overlay. Land adjacent to the Placer County area between the Auburn/Bowman Community Plan area and the Foresthill Community Plan area is designated open space (nonjurisdictional) (Auburn State Recreation Area). Land adjacent to the Auburn/Bowman Community Plan Area is designated for open space (nonjurisdictional) and rural residential for the NP and 1996 GP Alternatives, rural residential and natural resources for the RC Alternative, and open space (nonjurisdictional) and natural resources for the EC Alternative. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.

Table 5.1-5 Consistency of the Equal-Weight General Plan Alternatives with Other Plans and Policies	
Sacramento County General Plan	
At the county line, Sacramento County is primarily designated as agricultural, some with a resources conservation area overlay, with a small area south of Folsom Reservoir designated as low-density residential. Approved specific plans occupy both sides of the county line from Folsom Reservoir to several miles south of U.S. 50. South of that area, Sacramento County is designated for agricultural uses.	
Consistent for all alternatives	El Dorado County has adopted specific plans bordering the Sacramento County line. Beyond the specific-plan areas south of U.S. 50, the NP and 1996 GP Alternatives have designated rural residential land; the RC Alternative has designated natural resource land; and the EC Alternative has designated agricultural and natural resource land. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan.
City of Folsom General Plan and Empire Ranch Specific Plan	
The City of Folsom General Plan includes several adopted specific plans bordering El Dorado County.	
Consistent for all alternatives	Bordering the City of Folsom in El Dorado County are several adopted specific plans, including the Empire Ranch (Russell Ranch) Specific Plan. None of the land uses adjoining the specific-plan area would interfere with or otherwise be inconsistent with the uses contemplated by the general plan and specific plan.
Note: CLUP = Comprehensive Land Use Plan EC = Environmentally Constrained Alternative RC = Roadway Constrained 6-Lane "Plus" Alternative 1996 GP = 1996 General Plan Alternative TRPA = Tahoe Regional Planning Agency USFS = U.S. Forest Service	

As discussed in Table 5.1-6, the General Plan land use designations are consistent with the plans and policies of other agencies. The land uses adjacent to the Eldorado National Forest at Pollock Pines, Pleasant Valley, Grizzly Flat, and Mosquito are of higher densities than are considered compatible with the natural resources uses identified for the forest; however, these are existing uses being reflected on the land use map and would not be expanded. (This conflict is also addressed in Section 5.2, Agriculture and Forestry.)

Table 5.1-6
Development Comparison of Alternatives

Alternative	New Residential Units[1] (from 1999)	New Jobs (from 1999)	Community Regions (acreage)	Rural Centers (acreage)	Rural Regions (acreage)
No Project					
2025 Buildout	21,434 29,520	36,188 84,360[2]	70,699	8,469	1,030,935
Roadway Constrained 6-Lane "Plus"					
2025 Buildout	25,839 41,652	34,455 86,688[2]	50,678	8,390	1,051,035
Environmentally Constrained					
2025 Buildout	32,290 55,078	42,711 67,709[2]	49,723	6,124	1,054,256
1996 General Plan					
2025 Buildout	32,491 78,692	42,196 86,688[2]	70,699	8,469	1,030,935

[1] Includes 14,565 existing commitments.
[2] At buildout, the jobs forecast is based on full development of commercial land uses on all land designated commercial. For 2025, the analysis by Economic and Planning Systems, Inc. (EPS) assumed that commercial development tends not to develop until a sufficient number of houses develop to support it. It is unlikely that all of the jobs supporting development shown in the buildout forecast would be provided.

The No Project Alternative has several policies that address consistency of the General Plan with plans of other agencies. Policy 2.2.2.5 describes the County's intent to coordinate with other jurisdictions on consistency of adjacent land uses. Although residential development with this alternative would be largely ministerial, the low intensity of that development is not anticipated to create inconsistencies with other agencies' plans or policies. This impact is considered less than significant.

No Project Alternative (Buildout)—Impact Discussion

The policies identified as consistent at 2025 would continue to apply if this alternative were to reach full buildout. Residential development could be scattered more broadly throughout the county, but no inconsistencies would result. This impact is considered less than significant.

Roadway Constrained 6-Lane "Plus" Alternative (Alternative #2)

Relevant Goals/Policies—Roadway Constrained 6-Lane "Plus" Alternative

The relevant policies that are applicable to the Roadway Constrained 6-Lane "Plus" Alternative are Policies LU-1a, LU-4f, LU-5a through LU-5c, and LU-7e.

Roadway Constrained 6-Lane "Plus" Alternative (2025)—Impact Discussion

The policies and land use designations written for this alternative address the County's General Plan consistency with TRPA goals, policies, and ordinances (Policies LU-5a, LU-5b, and LU-5c); and CLUP guidelines (Policy LU-7e).

This alternative does not include a policy directly promoting coordinated planning with other agencies or jurisdictions. Although it has been the County's general practice to coordinate and the lack of a specific policy does not directly create an inconsistency, a policy requiring coordination is likely to avoid inconsistencies in the future.

The limitations on residential subdivision under the Roadway Constrained 6-Lane "Plus" Alternative would reduce the effectiveness of Policy LU-1a at focusing development in Community Regions and Rural Centers. The higher intensity land uses referred to in the policy would not be permitted to fully develop because residential subdivision would only be permitted at a maximum of four units per parcel; while this would allow densities greater than those permitted under the No Project Alternative, it is unlikely that densities would reach those intended in the Medium-Density, High-Density, and Multifamily Residential designations.

The policies identified for the Roadway Constrained 6-Lane "Plus" Alternative would promote and encourage consistency with plans and policies of other agencies. However, this alternative has no policy that promotes coordination of land use planning with adjacent jurisdictions, which could lead indirectly to inconsistencies between land use decisions of the County and other jurisdictions. This impact is considered significant.

Roadway Constrained 6-Lane "Plus" Alternative (Buildout)—Impact Discussion

If this alternative were to reach buildout, the policies of the Roadway Constrained 6-Lane "Plus" Alternative discussed above are anticipated to remain consistent with policies and plans of other jurisdictions. The increased intensity of development could lead to greater amounts of dispersed residential subdivision in rural areas. Because no policy of this alternative

promotes coordination with other jurisdictions, the increase in density could increase the potential for inconsistencies between County policies and land use policies of other jurisdictions. This impact is considered significant.

Environmentally Constrained Alternative (Alternative #3)

Relevant Goals/Policies—Environmentally Constrained Alternative

The relevant policies that are applicable to the Environmentally Constrained Alternative are Policies LU-1a, LU-5a through LU-5c and LU-7e (please refer to the Roadway Constrained 6-Lane "Plus" Alternative above). In addition, Policy LU-4e for this alternative is identical to Policy LU-4f for the Roadway Constrained 6-Lane "Plus" Alternative, and Policy LU-9d is applicable to this alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

In contrast to the No Project and Roadway Constrained 6-Lane "Plus" Alternatives, under the Environmentally Constrained Alternative the full range of residential subdivision would be permitted and subject to General Plan policies. As described for the Roadway Constrained 6-Lane "Plus" Alternative, General Plan policies and the land use map show no inconsistencies with plans and policies of other agencies. The lack of a policy promoting cooperation with adjacent jurisdictions indirectly creates the potential for inconsistencies to arise in the future. This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

The policies identified for 2025 are anticipated to remain generally consistent with policies and plans of other jurisdictions at buildout. The increased development could lead to greater amounts of scattered residential subdivision in rural areas; however, the General Plan policies in place with this alternative would continue to ensure consistency with these plans and policies. The lack of a policy promoting cooperation with adjacent jurisdictions could lead to such inconsistencies, however. This impact is considered significant.

1996 General Plan Alternative (Alternative #4)

Relevant Goals/Policies—1996 General Plan Alternative

For the relevant policies of the 1996 General Plan Alternative, please refer to the policies listed above under Relevant Goals/Policies—No Project Alternative.

1996 General Plan Alternative (2025)—Impact Discussion

Because much of the residential development in the county is likely to be discretionary, the policies in the 1996 General Plan Alternative that govern land use consistency could be implemented to a much greater extent than for the No Project Alternative. This includes Policy 2.2.2.5, which provides detailed requirements for coordination between the County, TRPA, and the cities of Placerville and South Lake Tahoe. A greater amount of development at higher densities would occur under this alternative. This development would be directed into the urban areas and away from the Rural Regions, but the Rural Regions would be smaller than under the Roadway Constrained 6-Lane "Plus" and Environmentally Constrained Alternatives. This impact is considered less than significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Although residential development would be much more intensive if this alternative were to reach full buildout, the policies and land use map would ensure that development remained consistent with relevant plans and policies of other agencies and adjacent jurisdictions. This impact is considered less than significant.

Mitigation Measure 5.1-1—No Project Alternative

No mitigation is required.

Mitigation Measure 5.1-1—Roadway Constrained 6-Lane "Plus" Alternative

Mitigation Measure 5.1-1: Pursue Land Use Coordination between the County and Adjacent Jurisdictions

The Roadway Constrained 6-Lane "Plus" Alternative does not contain a policy committing the County to land use coordination with adjacent jurisdictions. This could indirectly result in land use inconsistencies. The County shall adopt the following new policy:

> **New Policy:** The County shall maintain and establish Joint Powers Agreements, or similar working relationships, with the incorporated cities within the County, and adjacent jurisdictions, to facilitate a coordinated approach to land use decisions that may affect the County and its neighboring cities and counties.

Implementation of this mitigation measure would reduce the potential for land use inconsistencies between the County and adjacent jurisdictions, thereby reducing this impact to a less-than-significant level.

Mitigation Measure 5.1-1—Environmentally Constrained Alternative

Please refer to the proposed Mitigation Measure 5.1-1 for the Roadway Constrained 6-Lane "Plus" Alternative above. With implementation of this mitigation measure, the impact would be reduced to a less-than-significant level.

Mitigation Measure 5.1-1—1996 General Plan Alternative

No mitigation is required.

Impact 5.1-2

Substantial Alteration or Degradation of Land Use Character in the County or Subareas. The policies and land use map for all four equal-weight alternatives focus high-density development into Community Regions and Rural Centers while allowing the Rural Regions to remain primarily available for natural resource management and low-intensity uses. The land use map and General Plan policies identify no instances where planned roadways, railways, or other infrastructure would physically divide an existing community. Nearly contiguous urban boundaries along the western portion of U.S. 50 (in Rescue, Cameron Park, Shingle Springs, Diamond Springs, and Placerville) would create the potential for development to be dispersed between these areas, leading to a loss of community character for these towns. Development at 2025 would be of sufficiently low intensity to retain community character except under the 1996 General Plan Alternative. At buildout, these communities could experience intensified development that could be sufficiently dispersed to degrade community character under all alternatives. Similar dispersed development could result in the Rural Regions. This impact is considered **less than significant** for the No Project, Roadway Constrained 6-Lane "Plus," and Environmentally Constrained Alternatives at 2025, and **significant** for the 1996 General Plan Alternative at 2025. The impact is **significant** for all four equal-weight alternatives at buildout. Impact significance before and after mitigation is shown in the table below.

Impact	Significance Before Mitigation*							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-2: Substantial Alteration or Degradation of Land Use Character in the County or Subareas	LS	S_3	LS	S_2	LS	S_4	S_1	S_1
Mitigation	**Significance After Mitigation***							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-2 Create Distinct Community Separators	LS	SU_3	LS	SU_2	LS	SU_4	SU_1	SU_1

* Notes: LS = Less than Significant; N/A= Not Applicable; S = Significant; SU = Significant and Unavoidable. Significant impacts are ranked against each other by alternative for the 2025 scenario and the buildout scenario, from 1 (Worst Impact) to 4 (Least Impact). Where the impact under two different alternatives during the same time frame would be roughly equal in severity, the numerical ranking is the same.

Under all four equal-weight alternatives, the land use approach of the General Plan consists of a hierarchy of development densities, based on the concept of Community Regions, Rural Centers, and Rural Regions. This approach is expressed primarily through General Plan policies that encourage clustering of development and concentration of high-intensity uses in Community Regions and Rural Centers to preserve the remaining Rural Regions as open space and natural resource areas (including agriculture and timber). The land use map for each alternative defines the distribution of land use designations throughout the county and the boundaries of each Community Region and Rural Center (Table 5.1-6). Each alternative has a different development pattern (described in detail in Chapter 3, Description of the Project Alternatives) that reflects limitations on certain types of development and varying degrees of emphasis on the land use approach of focusing development in more urban areas. The following analysis uses these three factors—effectiveness of General Plan policies, distribution of development on the land use map, and amount of projected development—to evaluate the impacts of each alternative on various environmental issues relating to land use.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The General Plan Introduction, Statement of Vision, Plan Strategies, Plan Concepts, Plan Objectives, Land Use Element—Principles, and Introduction included in the 1996 General Plan are applicable to the No Project Alternative. Policies 2.1.1.2, 2.1.1.4, 2.1.2.2 through 2.1.2.4, 2.2.2.3 and 2.2.2.4, 2.2.2.6 and 2.2.2.7, 2.2.3.1, 2.2.3.4, 2.2.5.1, 2.2.5.4, 2.2.5.6, 2.2.5.10 through 2.2.5.12, 2.4.1.1 and 2.4.1.2, 2.9.1.4, 7.2.2.2, 7.6.1.1, and 10.1.5.6 are also applicable to this alternative.

No Project Alternative (2025)—Impact Discussion

Under this alternative, no residential subdivisions would be allowed except existing commitments already approved under DAs or tentative maps (14,565 units). Outside of existing commitments, one residential dwelling would be allowed on any legal parcel with a ministerial building permit. Multifamily residential parcels would be allowed up to four units, and second units would be allowed in accordance with the Zoning Ordinance. Commercial development would continue in accordance with the land use map designations and applicable discretionary processes (e.g., CEQA) and based on demand. Ministerial actions such as residential building permits are not typically subject to General Plan policy review.[1]

The land use map for the No Project Alternative identifies the boundaries for Community Regions and Rural Centers. The 13 Community Regions identified in this alternative (see Chapter 3, Description of the Project Alternatives) would encompass 70,699 acres, and the 25 Rural Centers would cover 8,469 acres, leaving 1,030,935 acres in Rural Regions. Under the Writ, residential development would be limited to one unit per existing parcel, as discussed above; no matter how high the designated density, parcels could not be subdivided. As a result, available parcels in the more urban areas are likely to be developed on relatively quickly, and the remaining demand for residential development would likely be met by housing units dispersed broadly throughout the Rural Regions. By 2025, the county would have an estimated 6,869 new housing units in addition to the 14,565 units of existing commitments, most of it in El Dorado Hills (Market Area 1), Cameron Park/Shingle Springs/Rescue (Market Area 2), and Placerville (Market Area 4).

[1] This is because the prior actions that resulted in creation of the parcel would have had to have been determined to be consistent with the General Plan at that time. However, General Plan policy changes since that time would not now be picked up; hence, a ministerial action could be inconsistent with current policy scheme at any given time.

The No Project Alternative contains numerous statements and policies relating to community character. The introduction to the General Plan describes "appreciating and conserving ... resources, using them wisely, and upholding a strong ethic of stewardship over these assets" as the "rural character" of the county. The Statement of Vision identifies a goal to "maintain the rural character and lifestyle while ensuring the economic viability critical to promoting and sustaining community identity." The Plan Strategies have a goal to "provide that Plan goals, objectives, and policies reflect the significant differences in characteristics between the principal land use planning areas of Community Regions, Rural Centers, and Rural Regions" (Exhibit 5.1-2). This summarizes the intent of the General Plan with regard to community character.

An important feature of community character is distinctness of place, or the ability to allow growth in a selected area while maintaining an individual identity distinct from the surrounding development. Policies are proposed to protect the sense of community character for the Community Regions and Rural Centers, set limits on development densities and the land use designations and zoning districts permitted in these areas, and encourage new employment centers for existing residents of Rural Centers while trying to avoid bringing in new residents based solely on job possibilities. Policies and land use designations refer to the Planned Community overlay designation, the Planned Development Combining Zone District, and the desirability of clustered development. For the most part, these policies could not be implemented under the No Project Alternative because development is restricted to one residential unit per existing parcel. The inability to subdivide prevents development of higher density growth in urban areas, and instead encourages lower density growth that is more dispersed throughout the county.

The land use map identifies a series of urban areas along U.S. 50 from Placerville westward to El Dorado Hills. The Community Regions of Cameron Park, Shingle Springs, Diamond Springs, and Placerville and the Rural Center of Rescue are closely spaced urbanized areas that could merge, if growth is not carefully controlled. Such contiguous development would eventually result in a loss of community character. With the development densities anticipated for the No Project Alternative, however, these communities would be expected to remain distinct at 2025. The land use map and General Plan policies identify no instances where planned roadways, railways, or other infrastructure would physically divide an existing community.

The policies and land use map cannot focus high-density development in the county into Community Regions and Rural Centers under the No Project Alternative because no new subdivisions are allowed. More intensive development would still take place in Community Regions and Rural Centers because of the availability of infrastructure and services and

Exhibit 5.1-2, Community Character Reflected by Varied Development Densities in El Dorado County (8.5x11, 3pgs)

Pages 5.1-39 through 5.1-41

concentrations of smaller parcels in these areas, but many of the estimated 6,869 new housing units would be constructed in Rural Regions. This would lead to scattered development throughout these rural areas. However, because of the small number of housing units that would be permitted under this alternative, the degree to which development is dispersed is likely to be relatively small. Existing communities would continue to experience the most intensive development because the existing parcel sizes in those areas are smaller than those in rural areas. The densities of development anticipated at 2025 would not lead to a loss of community character for communities along the western portion of U.S. 50 or in the rural areas of the county. This impact is considered less than significant.

No Project Alternative (Buildout)—Impact Discussion

If this alternative were to fully build out, the impact on community character could be substantial. Although development under the No Project Alternative is anticipated to be the lowest of the four equal-weight alternatives, the buildout scenario assumes all legal parcels in the county will be developed. This would remove the separation between communities and contribute to a deterioration of community and rural character in these areas. Continued development along U.S. 50 could eventually result in a blurring of the boundaries of the communities in that area. This impact is considered significant.

Roadway Constrained 6-Lane "Plus" Alternative (Alternative #2)

Relevant Goals/Policies—Roadway Constrained 6-Lane "Plus" Alternative

The relevant policies that are applicable to the Roadway Constrained 6-Lane "Plus" Alternative are Policies LU-1a through LU-1d, LU-2a through LU-2d, LU-3a and LU-3b, LU-3d, LU-3j, LU-3l, LU-4a through LU-4d, LU-4f, LU-4h, LU-6e, LU-7b, and LU-7f.

Roadway Constrained 6-Lane "Plus" Alternative (2025)—Impact Discussion

The development pattern of this alternative is focused on a central policy objective of keeping U.S. 50 at six lanes and thereby minimizing other roadway development. To accomplish this, given the need to accommodate existing commitments (14,565 units) and to allow small subdivision as would be allowed under Measure Y, the Roadway Constrained 6-Lane "Plus" Alternative permits a one-time division of existing legal parcels to a maximum of four new parcels even if further division would be consistent with the property's land use designation. The parcel map is a discretionary action and is therefore subject to General Plan policies. However, not all parcels have land use designations that support a parcel split. New commercial development would not be permitted in Rural Regions (Policy LU-4f).

The 12 Community Regions identified for this alternative would cover 50,678 acres and the 24 Rural Centers would encompass 8,390 acres (Table 5.1-5). The remaining area in Rural Regions would be 1,051,035 acres. This alternative would permit a maximum of four units for each existing eligible parcel; as a result, many more parcels could be available for residential development than allowed under the No Project Alternative. Parcels in the Community Regions and Rural Centers are still likely to develop relatively quickly because services would be available and the boundaries of these more urban areas would be smaller than those under the No Project Alternative. This would result in denser but smaller urban/suburban areas than under the No Project Alternative. The remaining demand for residential development would be met by housing units dispersed throughout the Rural Regions, which could also be developed by up to four units per parcel as land use designations permit. By 2025, the county would have an estimated 25,839 new housing units (11,274 units in addition to existing commitments) and 34,455 new jobs. Market Areas 1, 2, and 4 would still have the highest percentages of developed uses.

This alternative includes policies that limit commercial land uses in Rural Regions to existing uses and reserves Rural Regions for resource-based development. Limits are placed on the expansion of Community Region and Rural Center boundaries based on the availability of infill parcels rather than solely on infrastructure availability. Community character is preserved through policies that require new development to resemble the characteristics of existing, nearby development and development in historic townsites (which includes many Rural Centers) to be compatible with the architectural and historic nature of those towns. Policies LU-4a through LU-4d place constraints on residential development in Rural Regions based on resource constraints and limitations. These policies would ensure that subdivisions in Rural Regions would be controlled in accordance with the overall development plan.

The urban areas along U.S. 50 from Placerville westward to El Dorado Hills are better defined under this alternative than under the No Project Alternative. Whereas Rescue, Cameron Park, and Shingle Springs would be separated from El Dorado and Diamond Springs under this alternative by open space with an Ecological Preserve overlay designation, the Community Regions of Diamond Springs and Placerville would be buffered from one another by a band of medium-density residential and rural land. The boundaries established for these areas under this alternative would ensure that they retain their individual character. The land use map and General Plan policies identify no instances where planned roadways, railways, or other infrastructure would physically divide an existing community.

The policies and land use map focus high-density development in the county into Community Regions and Rural Centers, but development limitations under this alternative would cause development to spread throughout the rural areas of the county as available parcels are

developed in the more urbanized areas. The relatively low level of growth (compared with other alternatives) anticipated under this alternative would not cause this residential development to change the character of the rural areas, however, or expand development beyond the Community Region boundaries along the western portion of U.S. 50 to such a degree that they lose their community character. Although the restrictions on subdivision in this alternative would provide an incentive for a portion of residential development to disperse into the Rural Regions, the amount of growth anticipated at 2025 would not be sufficient to degrade or change the character of the region. This impact is considered less than significant.

Roadway Constrained 6-Lane "Plus" Alternative (Buildout)—Impact Discussion

If buildout were reached under this alternative, the impact on community character could be greater than described for 2025. Although much development is likely to be focused in urban/suburban areas, development on all legal parcels, with four-unit parcel splits where permissible, could allow a substantial amount of low-intensity growth to disperse through the Rural Regions, changing the character of these areas. Existing communities would not be physically divided. Residential subdivision in the urbanized areas along U.S. 50 could increase the intensity of development within and outside the boundaries of these areas, resulting in a loss of community character for the distinct communities within them. This impact is considered significant.

Environmentally Constrained Alternative (Alternative #3)

Relevant Goals/Policies—Environmentally Constrained Alternative

The relevant policies that are applicable to the Environmentally Constrained Alternative are Policies LU-1a and LU-1b, LU-2a through LU-2d, LU-3a and LU-3b, LU-3d, LU-3k, LU-3m, LU-4a and LU-4b, LU-6e, and LU-7b. Policies LU-4b, LU-4e, and LU-4g for this alternative are identical to LU-4c, LU-4f, and LU-4h, respectively, for the Roadway Constrained 6-Lane "Plus" Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

The General Plan policies and land use map for this alternative direct growth on the basis of land use constraints, physical constraints, and natural resource/biological constraints. New residential subdivision would be permitted to the extent allowed by land use designations.

Less total acreage would be devoted to Community Regions and Rural Centers under this alternative. The seven Community Regions would occupy 49,723 acres and the 20 Rural

Centers would occupy 6,124 acres, leaving 1,054,256 acres in Rural Regions (Table 5.1-5). Subdivision would be allowed as determined by the land use designations, and housing units are estimated to increase by 32,290 from 1999 levels (17,725 units more than existing commitments). The reduced size of Community Regions and Rural Centers would balance with the increased density of permitted subdivision to fully implement the intent of the General Plan to focus development in urban areas and protect rural areas from high levels of development. Development density would be greater in the urban areas, and the protections provided by General Plan policies would ensure concentration of high-intensity development in Community Regions and Rural Centers.

Similar to the Roadway Constrained 6-Lane "Plus" Alternative, this alternative provides many policies that strongly protect the Rural Regions from the impacts of scattered residential development. The ability to subdivide allows policies relating to planned or clustered development to take effect. The land use map and General Plan policies identify no instances where planned roadways, railways, or other infrastructure would physically divide an existing community. Although the level of growth anticipated with this alternative is higher than under the alternatives mentioned previously, the policies and land use map provide a higher degree of protection for rural uses. This impact is considered less than significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

If buildout were reached under this alternative, all legal parcels would be developed. In addition, continued residential development in rural areas could change the character of these areas. At the level of growth anticipated for this alternative at buildout, even with the greater urban densities, this impact is considered significant.

1996 General Plan Alternative (Alternative #4)

Relevant Goals/Policies—1996 General Plan Alternative

For the relevant goals and policies of the 1996 General Plan Alternative, please refer to the policies listed above under Relevant Goals/Policies—No Project Alternative.

1996 General Plan Alternative (2025)—Impact Discussion

This alternative uses the same policies, designations, and land use map used for the No Project Alternative. The development restrictions imposed by the Writ would not apply for this alternative, allowing full implementation of planned developments and policies concerning clustered development.

The land use map for the 1996 General Plan Alternative shows 13 Community Regions encompassing 70,699 acres and 25 Rural Centers encompassing 8,469 acres, leaving approximately 1,030,935 acres in Rural Regions. This is the largest acreage of urban area under any equal-weight alternative. Growth would be the greatest of the four alternatives, with an overall increase of 32,491 housing units (17,926 more than existing commitments) and 42,196 jobs. Because subdivisions are allowed under this alternative and urban boundaries are large, development patterns would be able to focus high-intensity development in urban areas, but the potential exists for large amounts of subdivision in rural areas as well.

The policies and land use map for the 1996 General Plan Alternative would focus high-density development in the county into Community Regions and Rural Centers while allowing the Rural Regions to remain available primarily for natural resource management and low-intensity uses. Policies are proposed to protect the sense of community character for the Community Regions and Rural Centers, primarily by focusing density in these developed areas and establishing design control districts (Policy 2.4.1.1) and community design guidelines (Policy 2.4.1.2) to ensure that a common theme and appearance persists in each of these areas as they develop.

To protect these areas from expanding to the point of losing community coherence, policies set limits on development densities and the land use designations and zoning districts permitted in these areas (Policy 10.1.5.6), as well as encouraging new employment centers for existing residents of Rural Centers while trying to avoid bringing in new residents based solely on job possibilities. These policies are aimed at encouraging growth in Community Regions and Rural Centers without causing uncontrolled expansion into rural areas or an influx of new commercial or residential uses that would overwhelm the existing character of a community.

The Land Use Element identifies the Planned Community overlay designation and the Planned Development Combining Zone District (part of the Zoning Ordinance) as two means of encouraging compact, high-intensity development in Community Regions and Rural Centers. Policy 2.2.3.4 requires that planned developments be linked physically through common design elements even if all parcels involved in the development are not contiguous. The land use map and General Plan policies identify no instances where planned roadways, railways, or other infrastructure would physically divide an existing community.

This alternative would not be subject to the subdivision limits imposed by the Writ under the No Project Alternative. The large amount of development anticipated with this alternative would allow residential subdivision to be focused in Community Regions and Rural Centers but could also result in subdivisions of residential land in Rural Regions, as permitted by the land use map. Existing communities would not be physically divided.

Development could become relatively dense between El Dorado Hills and Cameron Park, and around the El Dorado/Diamond Springs area. Policies relating to the Planned Development district and clustered development contain requirements for visual separation of subdivisions, and these policies would provide a sense of separation between the communities; however, physically, the communities are likely to continue to merge. Because the land use maps and policies do not provide for separation between these urban/suburban areas, a loss of community character for these towns is likely. This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

If buildout were reached, this alternative would result in substantially more development than the other alternatives. All parcels would be developed. Much of this development would be focused in the designated urban areas, with a loss of character for those communities for the reasons described above. In addition, Rural Regions could experience widely scattered and potentially higher intensity residential development than any of the other equal-weight alternatives, also changing the character of these areas. Policies intended to protect important resource areas, limit development in rural areas, promote clustered development, and enhance visual separation would continue to be implemented but, at the development intensities anticipated for this alternative, would be unable to prevent densely developed urban areas from losing their community character and separation. This impact is considered significant.

Mitigation Measure 5.1-2—No Project Alternative

The County shall implement the following mitigation measure:

- Mitigation Measure 5.1-2: Create Distinct Community Separators

This measure is described below. Many parcels surrounding the developed areas (Community Regions and Rural Centers) are 5 acres or less. At this smaller size, long term use of individual parcels for agriculture and other open space uses may not be sustainable, especially as development encroaches. With implementation of this measure the impact would be reduced but not to a less-than-significant level for the reasons described below.

Mitigation Measure 5.1-2: Create Distinct Community Separators

For the 1996 General Plan Alternative at 2025 and for all four equal-weight alternatives at buildout, the Community Regions, Cameron Park, Shingle Springs, Diamond Springs, and El

Dorado, could grow together into a relatively undifferentiated expanse of urban/suburban development and the character of rural areas would be substantially altered.

> **New Policy:** The County shall develop a program that allows the maintenance of distinct separators between developed areas (Community Regions and Rural Centers). This program shall include the following elements:
>
> Parcel Analysis: Areas between developed areas (Community Regions and Rural Centers) shall be analyzed to determine if they create inefficiencies for ongoing rural land uses. For instance, parcels that may be too small to support long-term agricultural shall be identified for potential consolidation. Areas within Community Regions and Rural Centers shall also be analyzed to identify opportunity sites where clustering of development may be appropriate, including increases in the allowable floor-to-area building ratio (FAR) in Community Centers.
>
> Parcel Consolidation/Transfer of Development Rights (TDR): A program to allow consolidation of parcels where appropriate shall be established. This shall include a TDR program that encourages transfer of development rights from the parcels to be consolidated to opportunity sites in Community Centers and Rural Regions. The TDR program shall also allow for consideration of increasing the FARs at specific sites in Community Centers, as deemed appropriate.

The effectiveness of this program would depend on landowner participation, the extent of which can not be predicted. Consequently, it can not be determined if this policy would be effective in substantially changing the development pattern in areas between Community Centers and Rural Regions. Therefore, this impact is significant and unavoidable. Further, if this policy is effective, it would the location and extent of environmental impacts, including such impacts as traffic, noise, and biology.

Mitigation Measure 5.1-2—Roadway Constrained 6-Lane "Plus" Alternative

Please refer to the proposed Mitigation Measure 5.1-2 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Mitigation Measure 5.1-2—Environmentally Constrained Alternative

Please refer to the proposed Mitigation Measure 5.1-2 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Mitigation Measure 5.1-2—1996 General Plan Alternative

Please refer to the proposed Mitigation Measure 5.1-2 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Impact 5.1-3

Creation of Substantial Land Use Incompatibility. Under all four equal-weight alternatives, General Plan policies and the land use map would provide a framework for development and land use in the county through identification of Community Regions, Rural Centers, and Rural Regions. Potential incompatibility would result from several sources: the potential for delayed implementation of standards and policies to result in interim or short-term incompatibilities; the definition of the Low-Density Residential designation as compatible with agricultural activities; the lack of a compatibility review in the County's approval process for land use on all projects; the potential for government buildings in incompatible areas of Rural Regions; and the range of uses permitted in Rural Regions that could conflict with each other or with adjacent uses (e.g., ranch marketing, agriculture, residential, timber production, mining). This impact is considered **significant** for all four alternatives. Impact significance before and after mitigation is shown in the table below.

Impact	Significance Before Mitigation*							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-3: Creation of Substantial Land Use Incompatibility	S_3	S_3	S_2	S_2	S_4	S_4	S_1	S_1
Mitigation	**Significance After Mitigation***							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-3(a), Establish a General Plan Conformity Review Process for All Development Projects; 5.1-3(b), Require Development Projects to Be Located and Designed in a Manner That Avoids Adjacent Incompatible Land Uses; 5.1-3(c), Establish an	LS	LS	LS	LS	LS	LS	LS	LS

Mitigation	Significance After Mitigation*							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
Interim Conformity Review Process to Be Applied Until Such Time as All General Plan Implementation programs Are in Place; and 5.1-3(d), Establish Compatibility Criteria for Siting of Public Facilities								
* Notes: LS = Less than Significant; N/A= Not Applicable; S = Significant; SU = Significant and Unavoidable. Significant impacts are ranked against each other by alternative for the 2025 scenario and the buildout scenario, from 1 (Worst Impact) to 4 (Least Impact). Where the impact under two different alternatives during the same time frame would be roughly equal in severity, the numerical ranking is the same.								

The primary factor affecting land use compatibility in each of the alternatives is the low residential densities planned for the county. Overall, land use designations provide a hierarchy of decreasing housing densities that allows suburban areas to be developed in Community Regions and Rural Centers while buffering the surrounding Rural Regions from incompatibilities related to rural, low-intensity activities such as agriculture, timber production, and natural resource protection.

The El Dorado County Zoning Ordinance also affects land use compatibility. The development approval process laid out in the Zoning Ordinance distinguishes between uses that are allowed by right (and therefore are developable with only ministerial review by the County) and uses for which a permit is required (and over which the County has discretionary authority to approve or deny a project). The range of uses allowed by right is broad and, in some cases, creates the potential for incompatibility. Uses can develop by right under all alternatives. The General Plan provides little policy guidance in this regard and in many cases provides that a given policy will apply only to projects requiring discretionary review. This creates the potential for incompatibilities arising from ministerial projects.

Finally, interim or short-term land use incompatibilities may arise under the Roadway Constrained Six lane "Plus" and Environmentally Constrained alternatives because of the time required to establish standards or otherwise carry out implementation programs. Each of the alternatives contains policies aimed at avoiding incompatible land uses. While the 1996 General Plan alternative (and hence the No Project alternative which relies on those policies) includes a number of specific requirements, the Roadway Constrained 6-Lane "Plus" and Environmentally Constrained alternatives take the approach of setting general goals and

overall policies. These alternatives each establish implementation programs requiring the County to take actions such as amending the zoning ordinance, developing performance standards, or conducting further studies. Development projects approved by the County before these implementation tasks are completed could lead to short-term land use incompatibilities. Similarly, because this is a program EIR, many of the policies proposed as mitigation measures for all of the alternatives will require subsequent implementation programs in order to effectively mitigate impacts and avoid future land use incompatibilities.

Under all four equal-weight alternatives, the Low-Density Residential designation is intended as a transitional land use between urban/suburban and rural (i.e., agricultural, timber) areas. The primary use of these 5- to 10-acre parcels is single-family residential development in a rural setting, although various other uses are permitted by right, including small-scale agricultural operations. General Plan policies for all four equal-weight alternatives identify Low-Density Residential as being compatible with active agricultural uses, with 200-foot setbacks (or setbacks to be established) being required on the residential parcel in areas adjacent to such uses.

In evaluating the compatibility of the Low-Density Residential designation with adjacent designations primarily intended for active agricultural and timber management activities (i.e., Natural Resource, Rural Residential, Rural Lands, Agricultural Lands, and the Agricultural District overlay designation), several sources of potential conflict emerge.

The 5-acre minimum parcel size provides minimal buffering between residential and agricultural or timber uses. A 5-acre parcel is 217,801 square feet (sf), or approximately 330 feet by 660 feet for a typical parcel. A single-family residence adjacent to agricultural uses on the 660-foot side would require a 200-foot buffer, leaving 130 feet on the 330-foot side from the edge of the buffer area to the far edge of the parcel. This illustration demonstrates the potential difficulty of adequately buffering a 5-acre residential parcel from activities that could disturb the occupants.

Agricultural and timber management operations involve activities that, by their nature, are not well suited to sharing a neighborhood with residential uses. Ordinary agricultural activities involve use of heavy equipment, noise, dust, odors, and application of pesticides and herbicides and, may, during harvesting seasons, require nighttime operations with bright lighting and extensive traffic. Landowners who purchase a parcel designated Low-Density Residential may expect to occupy a primarily residential neighborhood, whereas agricultural activities tend to be disruptive of the typical residential environment. Although the Right to Farm Ordinance protects the rights of farmers to engage in normal agricultural activities, an

increase in adjacent residential development could lead to complaints from neighbors to the County that would interfere with or detract from farmers' ability to pursue their livelihood.

Experience of the County planning staff has shown that, in general, a 10-acre parcel provides adequate space and buffering to allow adjacent residential and agricultural activities to coexist compatibly. Because the Low-Density Residential designation permits parcel sizes as small as 5 acres, however, the potential exists for land use incompatibility in instances where this designation is located adjacent to areas designated for agricultural use.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The Introduction to the Land Use Element of the 1996 General Plan is applicable to the No Project Alternative. The following policies are also applicable: 2.1.1.1 through 2.1.1.5; 2.1.2.1 through 2.1.2.3; 2.1.2.5; 2.1.2.7; 2.1.3.1 and 2.1.3.2; 2.2.1.1 through 2.2.1.3; 2.2.2.2; 2.2.5.2, and 2.2.5.3; 2.2.5.5 through 2.2.5.11; 2.2.5.14; 2.2.5.17 and 2.2.5.18; 2.5.2.1 through 2.5.2.3; 2.9.1.1 and 2.9.1.2; 7.2.2.1 and 7.2.2.2; 7.2.3.1 through 7.2.3.13; 7.5.4.1; 10.1.6.3; and 10.1.7.4.

No Project Alternative (2025)—Impact Discussion

Under this alternative, no residential subdivision would be allowed except those already approved under DAs or tentative maps (14,565 units). One residential dwelling would be allowed on any legal parcel with a ministerial building permit. Multifamily residential parcels would be allowed up to four units, and second units would be allowed in accordance with the Zoning Ordinance. Commercial development would continue in accordance with the land use map designations and applicable discretionary processes (e.g., CEQA) and based on demand. Ministerial actions such as residential building permits are not typically subject to General Plan policy review.

The land use map identifies 13 Community Regions and 25 Rural Centers for this alternative, leaving 1,030,935 acres in Rural Regions. However, because of the restrictions on residential subdivision under the Writ, parcels could not be subdivided, no matter how high their designated density. While available parcels in the more urban areas are likely to develop relatively quickly, because of the availability of infrastructure, the remaining demand for residential development would likely be met by housing units dispersed throughout the Rural Regions. By 2025, the county would have an estimated 6,869 new housing units dispersed throughout the county, in addition to the 14,565 units of existing commitments, most of it in

El Dorado Hills (Market Area 1), Cameron Park/Shingle Springs/Rescue (Market Area 2), and Placerville (Market Area 4).

A goal of the Land Use Element is that "compatible infill development and clustered communities are mechanisms to reduce development pressures in rural areas, thus preserving the County's rural character and maintaining a sense of place within communities" (Introduction to the Land Use Element). The policies provided in the General Plan identify the development patterns for the county; describe the appropriate parcel sizes and development densities of the various land use and overlay designations; and establish rules and standards (including setbacks and buffers, exceptions, and rezoning criteria) for implementing the land use policies.

Together, the policies and the land use map establish and define land use designations that would guide development and influence the varied lifestyle options for residents and workers of El Dorado County. Policies 2.1.1.2 and 2.1.2.1 identify Community Regions and Rural Centers—those areas of the County that have been designated as appropriate for high-intensity, suburban development. However, as noted above, the residential density designations for Community Regions and Rural Centers do not apply to this alternative because new subdivisions outside of lands subject to DAs are not permitted.

Notwithstanding this intended development pattern, the policies and development process for the No Project Alternative would create or fail to prevent land use inconsistencies on several levels. In many cases, the range of uses allowed by right in the Zoning Ordinance creates the potential for inconsistencies, and General Plan policies reinforce this potential.[2] For example, uses allowed by right in the One-Acre Residential zoning district include single-family residences; public parks, playgrounds, and golf courses; stables; and real estate sales offices.

General Plan policies for the No Project Alternative may be ineffective in achieving the desired control over land use patterns. Subdivision approval is the only opportunity for full discretionary review of many proposed residential land uses in the county. Any ministerial development proposed on existing parcels is not typically subject to General Plan policy review. For these parcels, the Zoning Ordinance provides limited opportunity, through setbacks and buffers, for the County to improve the compatibility of a development project with adjacent land uses or General Plan policies. By allowing the Zoning Ordinance to identify a broad range of uses as being allowed by right in the various zoning districts, the General Plan reduces the discretionary authority of the County to enforce policies and ensure land use

[2] It is noted that the Zoning Ordinance is subordinate to and implements the General Plan and that it would be amended to reflect consistency with the adopted General Plan.

compatibility. This is of particular concern for the No Project Alternative because the Writ precludes further subdivision outside of lands subject to DAs. Under the General Plan policies to be applied in administering the Writ, there is no requirement for discretionary review of many types of development.

General Plan policies also provide exclusions, exceptions, and contingencies that erode or remove the land use protections provided by the overall designations and policy framework. Policy 2.2.5.5 exempts public facilities (such as schools and government buildings) from the minimum parcel size restrictions identified in the General Plan for all land use designations. The Zoning Ordinance directs government buildings over which the County has permit authority into appropriate zoning districts for the type of use. However, many such facilities belong to state, federal, or other agencies that do not require county approval of projects, and many of these facilities could be constructed in rural areas where they could conflict with adjacent uses if the government facility generated traffic, noise, and other impacts.

In addition, several policies (2.2.5.7, 2.2.5.14, and 2.2.5.18) imply the need for a determination regarding land use compatibility. No policy or other process establish an overall mechanism for determining the compatibility of land uses, aside from specific policies relating to Agricultural Commission review of activities in agricultural and timber areas (see discussion of these policies in Section 5.2, Agriculture and Forestry).

Similar potential for incompatibility is evident in General Plan policies relating to land uses allowed in Rural Regions. These areas are intended to remain in low-intensity, resource-based uses. The Low-Density Residential designation is defined as allowing some agricultural uses. As described above, the General Plan description of this designation has the potential to create confusion, and possibly conflict or incompatibility, concerning the appropriate types of land use in these areas. Although the restrictions on new subdivisions under the No Project Alternative would reduce the likelihood that residential densities incompatible with agricultural use would be realized, such densities could occur where existing parcel sizes are small enough to give rise to those densities. Because agricultural uses would be allowed in these areas, the potential for such conflict does exist. (This issue is discussed further in Section 5.2, Agriculture and Forestry.) Although in several Rural Centers the Medium-Density Residential designation is adjacent to Natural Resource areas, this is a reflection of longtime existing conditions rather than a decision about future land use in these areas.

Policy 2.2.5.10 allows various agricultural support uses with a special-use permit, including feed stores, veterinary services, animal boarding, fishing and hunting clubs, mineral extraction, and cemeteries. Allowed by right on land in agricultural production are all ranch marketing uses, including gift display and sales areas up to 500 sf, marketing promotional

events, sale of alcoholic beverages made from agricultural products produced onsite, and agricultural homestays of unspecified duration. These activities have the potential to attract large numbers of visitors to rural properties that are often relatively isolated, resulting in traffic congestion, noise, dust, and possibly nuisance concerns such as trespass and littering for neighboring landowners. The lack of compatibility review for many ranch marketing activities presents high potential for land use conflicts in Rural Regions. This issue is also addressed in Section 5.2, Agriculture and Forestry.

Similar conflicts may arise as a result of General Plan policies and overlay designations that allow residential, agricultural, timber production, and mining activities to take place within the Natural Resource designation with little or no compatibility review. Policies support and protect all of these uses. The No Project Alternative allows one residential unit per parcel throughout the county. Although the resulting amount of residential development in rural areas is estimated to be low, the prospect of placing a dwelling unit on a 5-acre Low-Density Residential parcel adjacent to an active timber production raises concerns regarding the assumed compatibility of these uses implicit in allowing them by right. This issue is also addressed in Section 5.2, Agriculture and Forestry.

In summary, the policies and land use map provide the potential for land use incompatibilities between existing and future land uses as a result of several gaps in the policy framework. These gaps are the lack of an adequate mechanism in the County's development approval process to ensure that all land uses, including those allowed by right, are compatible with adjacent uses and General Plan policies; the potential for conflicts between urban and rural expectations with the Low-Density Residential designation; and the various exceptions and overlapping or conflicting protections provided in the policies. The development intensity anticipated for this alternative at 2025 is the smallest of the four equal-weight alternatives; because of the incompatibilities described above, however, this impact is considered significant.

No Project Alternative (Buildout)—Impact Discussion

Development of all legal parcels would occur at buildout, although parcels could not be subdivided to reach their maximum designated densities. Incompatibilities that could be encountered throughout the county in 2025 would be more widespread at buildout. Because this alternative could substantially limit the creation of new parcels, the potential for incompatibilities at buildout, while still significant, is less than that associated with the other equal-weight alternatives.

Although the land use map and policies proposed for the No Project Alternative would provide a framework for development in El Dorado County, the potential for land use

incompatibility identified for the No Project Alternative could continue under this alternative at buildout. As a result of the lack of compatibility review in the County's development approval process and the overlapping and conflicting protections for various uses, this impact is considered significant.

Roadway Constrained 6-Lane "Plus" Alternative (Alternative #2)

Relevant Goals/Policies—Roadway Constrained 6-Lane "Plus" Alternative

The discussion of Community Regions, Rural Centers, and Rural Regions and the base land use designations are applicable to the Roadway Constrained 6-Lane "Plus" Alternative. Policies LU-1a, LU-3d through LU-3g, LU-3i, LU-3m, LU-3n, LU-4e through LU-4h, LU-6a through LU-6d, LU-7a, LU-7c and LU-7d, LU-7f, LU-7h, LU-9a through LU-9d. Implementation Measures LU-A, LU-B, LU-F, LU-I through LU-K, Policies HS-11c, and HS-12a are also applicable to this alternative.

Roadway Constrained 6-Lane "Plus" Alternative (2025)—Impact Discussion

The Roadway Constrained 6-Lane "Plus" Alternative limits new subdivision to a one-time division of existing legal parcels to a maximum of four new parcels, even if further division would be consistent with the property's land use designation. Additional commercially designated lands would not be permitted in Rural Regions (Policy LU-4f).

The land use map identifies 12 Community Regions and 24 Rural Centers, leaving the remaining area in Rural Regions (1,051,035 acres). Because this alternative would permit limited parcel splits, more parcels would be available for residential development than under the No Project Alternative. Parcels in the Community Regions and Rural Centers are still likely to develop relatively quickly because services would be available and the boundaries of these more urban areas would be smaller than under the No Project Alternative, creating denser but smaller urban/suburban areas. The remaining residential development would be dispersed throughout the Rural Regions, which could also be developed by up to four units per parcel as land use designations permit. By 2025, the county would have an estimated 25,839 new housing units (11,274 units in addition to existing commitments) and 34,455 new jobs. Market Areas 1, 2, and 4 would still have the greatest amount of developed uses.

The policies and land use map proposed for the Roadway Constrained 6-Lane "Plus" Alternative are intended to guide the distribution of development based on Community Regions, Rural Centers, and Rural Regions. Exhibit 3-6 in Chapter 3, Description of the Project Alternatives, shows the boundaries of Community Regions and Rural Centers

designated for this alternative. As under the No Project Alternative, the broad range of uses permitted by General Plan policies and the Zoning Ordinance would circumvent the stated intent of the General Plan to focus development in urban areas. The intensity of development would be greater than that under the No Project Alternative but would be similarly restricted, with similar distribution but possibly denser residential development in the Rural Regions.

The Roadway Constrained 6-Lane "Plus" Alternative has fewer policies that provide exceptions to the overall intent of the development pattern, and the limited permitted use of subdivision would provide the County with opportunity to review more residential development projects than the No Project Alternative and apply General Plan policies. Policy LU-3m, LU-7d, and Implementation Measure LU-A provide for a review of discretionary projects to ensure compatibility with adjacent uses through setbacks and buffering. However, this alternative lacks a mechanism for extending this compatibility review to the many types of development that could take place by right. As under the No Project Alternative, public facilities are allowed to be located in a wide range of zoning districts without considering compatibility with surrounding uses. Policies LU-7a and LU-7d identify the need for a compatibility review for discretionary development projects in making decisions about rezoning and siting. This alternative also seeks to protect some land uses from incompatible adjacent land uses by policies such as LU-7a, LU-7d, and the airport safety and noise standards of Policies HS-11c and HS-12a. Although these policies would fill a gap identified for the No Project Alternative with regard to land use compatibility, the review process applies only to discretionary projects and, as with Policy LU-3m, would not affect the large amount of development occurring by right in Rural Regions.

General Plan policies for the Roadway Constrained 6-Lane "Plus" Alternative treat the Low-Density Residential designation in much the same way as under the No Project Alternative, with similar results. The slightly greater development densities anticipated in rural areas under this alternative would pose a greater potential for incompatibility in this regard.

Many of the policies identified for this alternative involve establishment or revision of standards, ordinances, or processes that would require extended periods to implement. Implementation measures included in the General Plan identify the timeline for completing these tasks, and in some cases the time required would be substantial. The following are examples of these policies:

- Policy LU-3a, to consider revising a Planned Development combining zone district—within 1 year (Implementation Measure LU-A);
- Policies LU-3d through LU-3g, to establish design review requirements for new development—establish a Community Design Review advisory board within 2 years,

establish standards within 5 years (Implementation Measure LU-B), and revise the Design and Improvements Standards Manual within 3 years (Implementation Measure LU-H);

- Policies LU-6a through LU-6d, to identify Scenic Corridors along rivers and roadways—begin work on a Scenic Corridors Ordinance within 1 year, complete a draft version within 2 years, adopt an ordinance within 5 years (Implementation Measure LU-F);
- Policy LU-7f, to consider methods to permit transfers of development rights—adopt an ordinance within 6 years (Implementation Measure LU-I);
- Policy LU-7g, to develop and adopt siting requirements—begin and adopt revised zoning ordinance within 1 year (Implementation Measure LU-A);
- Policies LU-9a through LU-9c, to monitor the progress and implementation of General Plan policies and adjust or modify them as needed—first review within 5 years, regular review every 2-5 years (Implementation Measures LU-J and LU-K);
- Policy LU-9d, to revise the zoning, subdivision, and other ordinances to conform with the General Plan—begin and adopt revised Zoning Ordinance within 1 year (Implementation Measure LU-A).

As described above, the delay in implementing these and other policies of the General Plan could result in interim or short-term significant impacts.

The Roadway Constrained 6-Lane "Plus" Alternative has policies and overlay designations that allow ranch marketing activities by right in agricultural areas and permit residential, agricultural, timber, and mining uses in Rural Regions, in some places concurrently. (Please refer to Section 5.2, Agriculture and Forestry for further discussion of this issue.) The greater potential for residential development in these regions increases the risk of conflicts involving these potentially incompatible uses.

In summary, as under the No Project Alternative, gaps in the policy framework present the potential for land use incompatibilities and conflicts. The primary issues are the lack of a compatibility review that encompasses all development projects, the potential for conflicts between urban and rural expectations with the Medium- and Low-Density Residential designations, and the overlapping or conflicting protections provided by the General Plan policies for various uses in Rural Regions. The development intensity of this alternative at 2025 is anticipated to be focused primarily in high-intensity development areas and relatively sparse in Rural Regions; because of the incompatibilities described above, however, this impact is considered significant.

Roadway Constrained 6-Lane "Plus" Alternative (Buildout)—Impact Discussion

If buildout were reached under this alternative, development would be more widespread throughout the county than at 2025. This effect could be most noticeable in the Rural Regions if four-unit parcel splits take place with increasing frequency once the land in Community Regions and Rural Centers is built out. The policies provided in this alternative would continue to provide a mechanism for compatibility review for some projects, but not for many residential uses. The potential for land use conflicts relating to these uses and the potential for land use incompatibilities in the Rural Regions could be exacerbated by the increased density of housing anticipated in these rural areas at buildout. This impact is considered significant.

Environmentally Constrained Alternative (Alternative #3)

Relevant Goals/Policies—Environmentally Constrained Alternative

The relevant policies that are applicable to the Environmentally Constrained Alternative are Policies LU-1a, LU-3i, LU-3m through LU-3o, LU-4d through LU-4g, LU-6a through LU-6d, LU-7a, LU-7c and LU-7d, LU-7f through LU-7h, LU-9a through LU-9d; Implementation Measure LU-A, LU-B, LU-F, LU-I through LU-K; Policies HS-11c, and HS-12a.

Environmentally Constrained Alternative (2025)—Impact Discussion

The Community Regions and Rural Centers of this alternative encompass less total acreage than any of the other equal-weight alternatives. The land use map designates seven Community Regions and 19 Rural Centers that total 55,847 acres, leaving 1,054,256 acres in Rural Regions. Housing units are estimated to increase by 32,290 from 1999 levels (17,725 units more than existing commitments). The reduced size of Community Regions and Rural Centers and the lower densities in general in the Rural Regions would balance with the increased density of permitted subdivision (which would be determined by land use designation) to implement the intent of the General Plan to focus development in urban areas and protect rural areas from high levels of development.

As described for the Roadway Constrained 6-Lane "Plus" Alternative, many of the policies identified for this alternative involve establishment or revision of standards, ordinances, or processes that would require extended periods to implement. The delay in implementing these and other policies of the General Plan could result in interim or short-term significant impacts.

The primary difference between this alternative and the Roadway Constrained 6-Lane "Plus" Alternative with regard to land use incompatibility relate to the addition of the Agricultural Lands designation (and elimination of the Agricultural District overlay) for the Environmentally Constrained Alternative. The policies and compatibility review would provide more opportunity for the County to review projects for compatibility and to apply General Plan policies (Policy LU-3n, Implementation Measure LU-A). The Environmentally Constrained Alterative also differs from the Roadway Constrained 6-Lane "Plus" Alternative in that the industrial designation is not applied outside of Community Regions and Rural Centers.

The potential for conflict and incompatibility with the Low-Density Residential designations would remain under this alternative. Likewise, public facilities would continue to create the potential for conflicts because of the potential for siting in inappropriate zoning districts. Ranch marketing, timber harvesting, agriculture, and mining activities would be permitted by right in overlapping portions of the Rural Regions, as under the alternatives mentioned above.

Overall, many of the same potential conflicts would result, but the degree of conflict or incompatibility would be reduced. More development would take place in Community Regions and Rural Centers as a result of the ability to subdivide. More projects would receive compatibility review, but the potential would remain for conflicts between uses permitted by right. This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

The impact of this alternative at buildout on land use compatibility would be similar to the impact in 2025 except that development would be more widespread. The policies and standards provided in this alternative would continue to provide a mechanism for compatibility review and consistency with General Plan policies for many projects, although uses allowed by right would continue and the greater amount of development would increase the potential for incompatibility in Rural Regions. This impact is considered significant.

1996 General Plan Alternative (Alternative #4)

Relevant Goals/Policies—1996 General Plan Alternative

As under the No Project Alternative, the Introduction to the Land Use Element of the 1996 General Plan is applicable to the 1996 General Plan Alternative. The following policies are also applicable: 2.1.1.1 through 2.1.1.5; 2.1.2.1 through 2.1.2.3; 2.1.2.5; 2.1.2.7; 2.1.3.1 and 2.1.3.2; 2.2.1.1 through 2.2.1.3; 2.2.2.2; 2.2.5.2 and 2.2.5.3; 2.2.5.5 through 2.2.5.11; 2.2.5.14; 2.2.5.17

and 2.2.5.18; 2.5.2.1 through 2.5.2.3; 2.9.1.1 and 2.9.1.2; 4.1.2.1 through 4.1.2.3; 7.2.2.1 and 7.2.2.2; 7.2.3.1 through 7.2.3.13; 7.5.4.1; 10.1.6.3; and 10.1.7.4 (please refer to the No Project Alternative above). In addition, Policy 2.2.5.4 applies to the 1996 General Plan Alternative.

1996 General Plan Alternative (2025)—Impact Discussion

The land use map shows 13 Community Regions encompassing 70,699 acres and 25 Rural Centers encompassing 8,469 acres, leaving approximately 1,030,935 acres in Rural Regions. This is the largest acreage of urban area under any equal-weight alternative except the No Project Alternative. Growth would be the greatest of the four alternatives, with an overall increase of 32,491 housing units (6,869 more than existing commitments) and 42,196 jobs. Because subdivisions are allowed under this alternative and urban boundaries are large, development patterns would be able to focus high-intensity development in urban areas, but the potential exists for large amounts of subdivision in rural areas as well.

Under the 1996 General Plan Alternative, much of the anticipated development would be discretionary, allowing opportunity for the County to review compatibility and apply General Plan policies. At the same time, the potential incompatibilities that could be encountered throughout the county with the No Project Alternative would be much more likely to occur at the substantially greater development intensities permitted under the 1996 General Plan Alternative.

The land use map and policies proposed for the 1996 General Plan Alternative would provide some framework for development in El Dorado County. The development densities allowed under this alternative and the applicability of General Plan policies to most development, along with the ability to subdivide, would focus development in the urban areas and protect Rural Regions to some degree, although development in these areas with the 1996 General Plan Alternative would be allowed at higher densities than with the Roadway Constrained 6-Lane "Plus" or Environmentally Constrained alternatives. However, the potential for land use incompatibility would continue, primarily as a result of the range of uses allowed by right. As described for the other alternatives, incompatibilities could be created by the Low-Density Residential designations; siting of government buildings in inappropriate zoning districts; lack of compatibility review for the wide variety of uses allowed by right; and conflicting uses permitted in Rural Regions (e.g., ranch marketing, timber harvesting, mining, agriculture, residential). This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Development intensity and density could be more widespread at buildout because all available developable land could be in use. The potential for incompatibilities that could be encountered throughout the county in 2025, through all the mechanisms described above, could be fully realized at buildout. Although the land use map and policies proposed for the 1996 General Plan Alternative would provide a framework for development in El Dorado County, the potential for land use incompatibility identified for this alternative could increase. This impact is considered significant.

Mitigation Measure 5.1-3—No Project Alternative

The County shall implement all of the following measures:

- Mitigation Measure 5.1-3(a): Establish a General Plan Conformity Review Process for All Development Projects
- Mitigation Measure 5.1-3(b): Require Development Projects to Be Located and Designed in a Manner That Avoids Adjacent Incompatible Land Uses

These potential mitigation measures are described below. With implementation of both of these mitigation measures, land use compatibility impacts would be reduced to a less-than-significant level, as described below.

Mitigation Measure 5.1-3(a): Establish a General Plan Conformity Review Process for All Development Projects

Many of the significant impacts on land use and to other resources discussed in this General Plan arise from the fact that many types of development projects with the potential to create significant adverse environmental effects may be developed with no or limited review by the County. The following policy would provide the County with an opportunity to review projects to ascertain their potential for creating such impacts and to impose conditions to mitigate those impacts where appropriate. To the extent that environmental impacts are mitigated by ensuring a specific project's compliance with the General Plan and other County policies, this measure would reduce those impacts to a less-than-significant level. For impacts that are not or cannot be addressed by General Plan or other policies, this measure could help reduce, but not eliminate the impacts. However, in combination with Mitigation Measure 5.1-3(b), it would be expected to reduce land use compatibility impacts to a less-than-significant level.

The County shall revise the Land Use Element of the General Plan to include the following new policy and implementation measure:

> **New Policy:** Development involving any structure greater than 120 square feet in size or requiring a grading permit shall be permitted only upon a finding that the development is consistent with this General Plan and the requirements of all applicable County ordinances, policies, and regulations. For projects that do not require approval of the Planning Commission or Board of Supervisors, this finding shall be made by the Planning Director subject to review by the Planning Commission on appeal.
>
> **New Implementation Measure:** Establish a program for the prompt independent review by the County of development applications for General Plan consistency and compliance with applicable County ordinances, policies, and regulations. The review shall include, but not be limited to: (1) the effects of the proposed project on biological resources, cultural resources, geology and soils, agriculture, visual, noise, and air quality; (2) the project's compliance with the concurrency requirements of the General Plan pertaining to traffic infrastructure and the availability of water and other services; (3) risks of exposure to hazardous materials and conditions as a result of site development; and (4) a determination as to whether the project is exempt from review under the California Environmental Quality Act. In lieu of requiring detailed resource assessments as part of initial applications, the County shall establish a program for preliminary site inspections by qualified professionals employed or retained by the County to determine the need (if any) for specific resource evaluations required to complete this review.

As an alternative to the foregoing policy and implementation measure, the County could limit the need for discretionary review of development projects by establishing performance standards that would allow applicants to obtain approval for ministerial projects by demonstrating compliance with applicable performance standards. Developing performance standards would require considerable study and a comprehensive environmental review but would streamline the process for applicants following development of those standards. The following policy and implementation measure use this approach:

> **Alternative New Policy:** Development involving any structure greater than 120 square feet in size or requiring a grading permit shall be permitted only upon a finding that the development is consistent with this General Plan and the requirements of all applicable County ordinances, policies, and regulations. For projects that do not require the approval of the Planning Commission or Board of Supervisors this

requirement shall be satisfied by information supplied by the applicant demonstrating compliance.

Alternative New Implementation Measure: Establish performance standards to be included in the Zoning Ordinance to allow applicants for ministerial projects to demonstrate compliance with General Plan policies and with other applicable County ordinances, policies, and regulations. Until such time as these standards are developed, the Planning Director shall review information submitted by the applicant to ascertain compliance. The review shall include, but not be limited to: (1) the effects of the proposed project on biological resources, cultural resources, geology and soils, agriculture, visual, noise, and air quality; (2) the project's compliance with the concurrency requirements of the General Plan pertaining to traffic infrastructure and the availability of water and other services; (3) risks of exposure to hazardous materials and conditions as a result of site development; and (4) a determination as to whether the project is exempt from review under the California Environmental Quality Act. In lieu of requiring detailed resource assessments as part of initial applications, the Planning Director may establish a program for preliminary site inspections by qualified professionals employed or retained by the County to determine the need (if any) for specific resource evaluations required to complete this review.

This mitigation measure would provide a mechanism to review most projects for compliance with applicable General Plan and other County policies. However, because the General Plan and other policies are not sufficient to reduce all potential environmental impacts of development to acceptable (less than significant), some significant impacts would remain. These impacts are addressed in several sections of Chapter 5. However, with respect to the compatibility between different land uses, this mitigation measure in combination with Mitigation Measure 5.3-1(b) would reduce impacts to a less-than-significant level.

Mitigation Measure 5.1-3(b): Require Development Projects to Be Located and Designed in a Manner That Avoids Adjacent Incompatible Land Uses

The land use designations on the General Plan map and the policies affecting development allowed by those designations in some cases do not limit the development of adjacent incompatible uses such as industrial operations and schools. Moreover, the General Plan and County Zoning Ordinance allow a range of potentially incompatible land uses by right within single zone districts with no limitation on the location or design of such uses. The following new policy and implementation measure would help mitigate this impact.

New Policy: Development projects shall be located and designed in a manner that avoids incompatibility with adjoining land uses that are permitted by the policies in effect at the time the development project is proposed. Development projects that are potentially incompatible with existing adjoining uses shall be designed in a manner that avoids any incompatibility or shall be located on a different site.

New Implementation Measure: Revise the Zoning Ordinance to ensure that all uses permitted by right in any zoning district are compatible. Allow potentially incompatible uses subject to a discretionary review process with performance standards designed to ensure appropriate separation of incompatible uses. Include in the Zoning Ordinance a requirement that any project located adjacent to an existing sensitive land use shall be required to avoid impacts on the existing use.

This measure would continue to allow the range of uses permitted under the proposed land use designations, but would require the County to implement those designations in a manner that addresses location of incompatible uses on adjacent parcels. The discretionary review process would allow the County to develop necessary setbacks and other design requirements on a case-by-case basis depending on the nature of the proposed use and potentially incompatible adjoining land uses. This mitigation measure in combination with Mitigation Measure 5.1-3(a) would reduce land use compatibility impacts to a less-than-significant level because they would ensure all development that could result in land use incompatibility is subject to policy review, environmental review, and a revised zoning ordinance designed to include sufficient performance standards.

Mitigation Measure—Roadway Constrained 6-Lane "Plus" Alternative

The County shall implement all of the following measures:

- Mitigation Measure 5.1-3(a): Implement Mitigation Measure 5.1-3(a) for the No Project Alternative
- Mitigation Measure 5.1-3(b): Implement Mitigation Measure 5.1-3(b) for the No Project Alternative
- Mitigation Measure 5.1-3(c): Establish an Interim Conformity Review Process to Be Applied Until Such Time as All General Plan Implementation Programs Are in Place
- Mitigation Measure 5.1-3(d): Establish Compatibility Criteria for Siting of Public Facilities

These potential mitigation measures are described below. With implementation of these mitigation measures, impacts would be reduced to a less-than-significant level for the reasons described under the No Project Alternative.

Mitigation Measure 5.1-3(a): Implement Mitigation Measure 5.1-3(a) for the No Project Alternative

Please refer to the proposed Mitigation Measure 5.1-3(a) for the No Project Alternative above.

Mitigation Measure 5.1-3(b): Implement Mitigation Measure 5.1-3(b) for the No Project Alternative

Please refer to the proposed Mitigation Measure 5.1-3(b) for the No Project Alternative above.

Mitigation Measure 5.1-3(c): Establish an Interim Conformity Review Process to Be Applied Until Such Time as All General Plan Implementation Programs Are in Place

Under the Roadway Constrained 6-Lane "Plus" Alternative, significant impacts creating land use incompatibilities could arise because projects may be approved before programs to implement proposed General Plan policies or mitigation measures are in place. The following policy would ensure that, from the time the General Plan takes effect, all projects that are reviewed for General Plan conformity will, at a minimum, conform to the specific standards established in the zoning ordinance or the 1996 General Plan. While these standards may not be as effective in avoiding significant impacts leading to land use incompatibilities as the programs to be developed pursuant to the Implementation Programs proposed or recommended as mitigation for this alternative, application of the standards will serve to somewhat lessen those potential effects. This measure will apply to ministerial projects only if the General Plan also includes one of the policies recommended in Mitigation Measure 5.1-3(a).

Revise the Land Use Element of the General Plan to include the following policy and implementation measure:

> **New Policy:** In evaluating the consistency of any proposed development project with the policies of this General Plan, the reviewing authority shall consider the specific standards established herein. Where such standards are to be developed pursuant to an implementation program established by the General Plan, the reviewing authority shall, until such time as those standards have been established, apply the standards

established by Zoning Ordinance or, in the absence of Zoning Ordinance standards, the standards in the 1996 General Plan.

Mitigation Measure 5.1-3(d): Establish Compatibility Criteria for Siting of Public Facilities

Under the Roadway Constrained 6-Lane "Plus" Alternative, the Public Facilities designation allows facilities such as government buildings to be located in various zoning districts, some of which are not appropriate sites for such buildings and would result in conflicts with adjacent uses. The Zoning Ordinance directs local government buildings over which the County has permit authority into appropriate zoning districts, but facilities of other government agencies could continue to pose conflicts.

Revise the Land Use Element of the General Plan as follows:

Revised Policy LU-3n [Policy LU-3o for the Environmentally Constrained Alternative]: To promote land use compatibility, ~~the County shall consider schools and other public facilities used regularly by local residents appropriate on parcels having any land use designation except Natural Resource, Industrial, Research and Development, and Open Space~~ schools and other public buildings and facilities shall be directed to Community Regions or Rural Centers . The following shall be considered when reviewing capital improvement plans and proposals for new facilities by other agencies:

A. Schools shall be considered incompatible on land designated Industrial, Research and Development, Agriculture, Natural Resources and Open Space;

B. Active parkland (i.e., playgrounds and ball fields) shall be considered incompatible on land designated Natural Resources and Open Space;

C. Fire stations, public service buildings, and other similar public facilities shall be considered appropriate in all land use designations except Natural Resources and Open Space.

In Implementation Measure LU-A, include the following in the list of items to be included in the Zoning Ordinance update:

- Identify the zoning districts in which government facilities are appropriate.

The combination of Mitigation Measures 5.1-3(a), 5.1-3(b), 5.1-3(c), and 5.1-3(d) would reduce land use compatibility impacts to a less-than-significant level for the reasons described under the No Project Alternative.

Mitigation Measure—Environmentally Constrained Alternative

Please refer to the proposed mitigation measures for the Roadway Constrained 6-Lane "Plus" Alternative above. With implementation of this mitigation measure alone, impacts would be reduced to a less-than-significant level for the reasons described under the No Project Alternative.

Mitigation Measure—1996 General Plan Alternative

Please refer to the proposed mitigation measures for the No Project Alternative above. With implementation of these mitigation measures, impacts would be reduced to a less-than-significant level for the reasons described under the No Project Alternative

5.1.2 HOUSING

EXISTING CONDITIONS

Physical Environment

Housing Stock

The housing stock in El Dorado County is diverse. Residential use in most rural areas is low-density residential use, with structures ranging in age from over a century to newly constructed homes. Common types of rural residential development include "ranchettes," typically found in areas with relatively mild topography, and cabins or second residences located at higher elevations that provide seasonal access to remote areas; this latter category of housing includes many of the vacation homes that are prevalent throughout the county. The housing stock in the county's two incorporated cities, Placerville and South Lake Tahoe, consists of relatively older homes because of the built-out nature of these areas, and in the case of the Lake Tahoe Basin, to the substantial growth restrictions imposed by TRPA.

In contrast, the western reaches of the county are developing rapidly with several master-planned communities and other large-scale, higher-density, residential developments. These developments typically offer newer, upscale production homes that attract new residents who commute to Sacramento and the Bay Area. Western El Dorado County home prices tend to be higher than other communities within the Sacramento region. Market research indicates

that the average price per square foot for residences in western El Dorado County is $137.34, compared to $115.28 in Sacramento County (EPS 2002).

For a complete description of existing and projected housing levels for El Dorado County, please refer to Chapter 4, Land Use Forecasts and Development Estimates.

Housing Conditions

Table 5.1-7 shows the results of a survey on housing conditions in El Dorado County conducted by Connerly & Associates, Inc., in November 1995. The purpose of this survey was to rate the condition of El Dorado County's housing stock in more established areas. The survey was conducted using "windshield" and walk-by survey techniques, keeping within the public rights-of-way, to assess the exterior physical condition of each housing structure. The survey included most single-family, multifamily, and duplex homes in the unincorporated areas of the county.

The survey results indicated that, at the time of the survey, 30% of housing stock in the portion of El Dorado County surveyed was substandard and in need of structural repair work in order for the dwelling to remain habitable. A small amount of the housing stock (less than 1%) was deemed not suitable for repairs. These results are similar to Placer County (Placer County Planning Department 2002). However, these results are higher than statewide averages, where only 13% of the housing stock needs replacement or rehabilitation (California Housing Law Project 2002).

Since the time the survey was completed, land and home values have increased significantly and interest rates have dropped. Accordingly, many individuals have made improvements to their homes, as a result of additional equity and as a way to increase the resale value of their properties. However, while the conditions may have changed some, because of the increased home values, the overall results remain valid (Schulze, pers. comm., 2002). There are greater rehabilitation needs in Survey Area 2, the east slope of the Sierra Nevada; Survey Area 4, the U.S. 50 corridor east of Placerville; and Survey Area 5, along SR 49 and south of U.S. 50. According to County code enforcement staff, there are also some rehabilitation needs in the older residential neighborhoods of the Cameron Park area, an area not included in the Connerly & Associates survey (Schulze, pers. comm., 2002).

Table 5.1-7
Summary of Housing Conditions in El Dorado County

Survey Area	Communities in Survey Area	Units Surveyed	Standard	% of Total	Substandard Suitable for Repairs	% of Total	Not Suitable for Repairs	% of Total
1 North of US 50	Arroyo Vista, Auburn Lake Trails, Coloma, Cool, Garden Park, Garden Valley, Georgetown, Greenwood, Kelsey, Mosquito, Pilot Hill, Rescue	1,585	1,405	89%	176	11%	4	<1%
2 Eastern Slope of Sierra Nevada	Meyers	706	452	64%	254	36%	0	0%
3 East of SR 49 and south of US 50	Grizzly Flat, Mt. Aukum, Newtown, Pleasant Valley	358	296	83%	60	17%	2	<1%
4 US 50 corridor east of Placerville	Camino, Camino Heights, Cedar Grove, Pollock Pines, Smith Flat	2,200	1,359	62%	828	38%	13	<1%
5 Along SR 49 and south of US 50	Deer Park, Diamond Springs, El Dorado, Frenchtown, Latrobe, Shingle Springs	843	499	59%	340	40%	4	<1%
	Total	**5,692**	**4,011**	**70%**	**1,658**	**30%**	**23**	**<1%**

Source: Connerly & Associates 1995

Regulatory/Planning Environment

The regulatory environment related to housing deals primarily with the issue of housing supply. A full discussion of the regulatory environment is included in the Housing Element, which is included as part of each alternative. The attainment of state-mandated housing goals and also the issue of balancing the county's housing supply and employment opportunities ("jobs-housing balance") are discussed in the Housing Element. However, understanding the regulatory context within which residential development occurs may be useful to understanding the housing issues that are addressed in this EIR.

Housing Supply

There are regulatory and planning aspects to providing an adequate supply of all housing types to meet the needs of the region. The key entities involved are the California Housing and Community Development Department (HCD), the Sacramento Area Council of Governments (SACOG), and the County Housing Authority.

HCD serves as California's principal housing agency and is responsible for updating the Statewide Housing Plan (SHP). The SHP was recently updated in the context of *The State of California's Housing Markets 1990-1997, Statewide Housing Plan Update,* which describes housing conditions in California since the 1990 census.

SACOG serves as the primary regional planning organization for the Sacramento region, which consists of six counties, including El Dorado County, and 18 cities. In its capacity of assisting regional planning efforts, SACOG is responsible for developing the Regional Housing Needs Plan (RHNP) for the SACOG region. The RHNP is part of a statewide mandate to address housing issues that are related to future growth in the SACOG region and is required by state law (Government Code §65584). The RHNP allocates to local jurisdictions their "fair share" of the region's projected housing needs by household income group over the 5-year planning period of each jurisdiction's housing element. The most recent RHNP, for the period 2001-2007, was adopted in September 2001. SACOG amended the RHNP to include allocations for the year 2002. SACOG's current allocation of fair-share housing obligations for the unincorporated county for the period 2001–2008 are (includes the Lake Tahoe Basin):

- 2,829 units very low income
- 1,890 units low income
- 2,100 units moderate income
- 3,175 units above moderate income

Housing-Related Programs

There are a variety of local, state, federal, and private funding sources available for affordable housing projects and programs. The following section describes the most significant sources of housing funds in El Dorado County. All of these programs are administered by the County Department of Community Services, which functions as the Housing Authority Agent for the Board of Supervisors.

Section 8 Program

The Section 8 Housing Choice Voucher Program is a federal program that provides rental assistance to low and very low income persons in need of affordable housing. The Section 8 Program provides a housing voucher to a tenant; this voucher generally covers the difference between the fair market rent payment standards established by the U.S. Department of Housing and Urban Development (HUD) and what HUD states a tenant can afford to pay (e.g., 30% of his or her income). Many of the people receiving Section 8 vouchers are elderly or disabled.

As of October 2002, the County had 374 vouchers available, only of which 346 were being used to pay for housing (i.e., 346 lower and very low income households in El Dorado County were receiving Section 8 rental assistance). Eligible voucher holders have had difficulty locating properties to rent because of the gap between the payment standard set by HUD (Fair Market Rent) and the actual rents being paid for rental housing in El Dorado County. A trend is developing wherein the majority of housing available that qualifies within the HUD payment standards is found in the subsidized rental market; this market is very limited.

The county had a Section 8 waiting list of about 1,000 applicants as of November 2002.

Community Development Block Grant Housing Rehabilitation Program

Through the Community Development Block Grant (CDBG) Program, HUD provides grants and loans to local governments for funding a wide range of community development activities. However, El Dorado County does not qualify as an entitlement jurisdiction to receive CDBG funding directly from HUD. Therefore, the County applies to the state for CDBG program funds for specific programs under a competitive funding process.

The purpose of the CDBG Program is to provide adequate housing, a suitable living environment, and expanded economic opportunities for persons of low and moderate income. CDBG funds can be used for acquisition or rehabilitation of housing, homebuyer assistance,

economic development, homeless assistance, public services, and neighborhood revitalization. A minimum of 51% of CDBG funds provided must be used for the support of activities that benefit low and moderate income persons. The County uses CDBG funding for housing rehabilitation programs and public works projects.

CDBG funds are used to preserve the existing stock of affordable housing through the County Housing Rehabilitation Loan Program. This program provides housing rehabilitation and weatherization loans and services to low-income households throughout the county. The maximum loan amount is $40,000. However, the recently passed Senate Bill 975 requires the payment of prevailing wages on CDBG financed owner-occupied rehabilitation for low-income households.

Mortgage Credit Certificate Program

The Mortgage Credit Certificate (MCC) Program is designed to assist first-time homebuyers. The MCCs are allocated on an annual basis to each county in the state on a population-based formula. The County, in conjunction with mortgage institutions, administers the program. The applicant for an MCC applies to the County, which screens the applicants. Home purchasers who receive MCCs are entitled to income tax credits against the interest paid on their mortgages. The value of the tax credit received effectively reduces the monthly mortgage payment and is taken into consideration by the mortgage lender when qualifying the borrower.

Every year, a percentage of the MCC assistance must go to households earning 80% or less of the median family income (the percentage changes from year to year). The program also has limitations on home sales price. Because home prices in El Dorado County are relatively high, it is difficult to find homes which qualify for the MCC Program; therefore, many people who would benefit from MCC assistance are unable to use the program.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

The General Plan would result in a significant impact if development would displace substantial numbers of existing dwellings and/or people, necessitating the construction of replacement housing elsewhere, which could potentially result in adverse environmental effects.

Impact 5.1-4

Need for Replacement Housing. The proposed General Plan plans for a wide range of residential opportunities, which varies among the four equal-weight project alternatives. It would not directly affect the existing housing stock. However, alternatives that result in lower absolute housing quantities would tend to increase regional housing prices, which could (1) drive up prices of existing units rendering them unaffordable to low and very low income households, and (2) cause existing units to be demolished and replaced with more expensive dwellings. Policies included in the Housing Element, which is applicable to all four equal-weight alternatives, address the issues of provision of affordable housing and retention of existing affordable housing. If replacement housing were to be needed, potential environmental effects would be addressed through General Plan policies and future environmental review. This impact is considered **less than significant**. Impact significance before and after mitigation is shown in the table below.

Impact	Significance Before Mitigation*							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
5.1-4: Need for Replacement Housing	LS	LS	LS	LS	LS	LS	LS	LS
Mitigation	**Significance After Mitigation***							
	Alt. #1 (No Project)		Alt. #2 (Roadway Constrained 6-Lane "Plus")		Alt. #3 (Environmentally Constrained)		Alt. #4 (1996 General Plan)	
	2025	Buildout	2025	Buildout	2025	Buildout	2025	Buildout
N/A	LS	LS	LS	LS	LS	LS	LS	LS

* Notes: LS = Less than Significant; N/A= Not Applicable; S = Significant; SU = Significant and Unavoidable. Significant impacts are ranked against each other by alternative for the 2025 scenario and the buildout scenario, from 1 (Worst Impact) to 4 (Least Impact). Where the impact under two different alternatives during the same time frame would be roughly equal in severity, the numerical ranking is the same.

The General Plan is intended to guide the location and intensity of land uses in El Dorado County. The four equal-weight alternatives differ with respect to their land use maps; however, they all consider existing land use patterns, specifically, areas that have already been developed with residential uses. The land use maps primarily apply to undeveloped land within the county; none of the equal-weight alternatives redesignate lands designated for residential development to other land uses, such as Commercial or Industrial, thus the alternatives are not expected to directly displace existing housing and/or people such that it would lead to the need for the development of replacement housing elsewhere.

All of the equal-weight alternatives implement the same Housing Element, which will be in effect for at least the next five years. It includes policies that address the factors that could lead to the need for replacement housing. Policies HO-3a through HO-3l promote the conservation of the county's current stock of affordable housing. By limiting the conversion of affordable housing to other uses, these policies reduce the potential for displacement of people and housing. Policies HO-1a through HO-1w promote the development of all types of housing, including affordable housing, to meet regional housing needs. The development of affordable housing throughout the county would help ensure that replacement housing would not be necessary if very low and low-income populations increase over time. In addition, Policies HO-4a through HO-4h address the housing needs of special needs groups in the county, which help prevent the need for replacement housing if these groups were to be displaced in the future.

However, there are other factors indirectly attributable to the proposed General Plan, which could potentially result in the need for replacement housing in the county, such as increases in housing costs and the conversion of housing types (e.g., multifamily housing to condominiums) that may price residents out of their existing housing or create an incentive to replace existing housing with new housing. In circumstances where there are limited opportunities for residential development, the housing supply would become constricted and housing prices would tend to increase. This could potentially result in the conversion of existing affordable and other relatively less expensive housing to more upscale housing types, thereby potentially necessitating the need for replacement housing. The lack of affordable housing is a policy/legal issue, not an environmental effect under CEQA. However, the development of replacement housing could potentially result in significant adverse effects on the environment. It is indeterminable as to where potential future replacement housing would be located, except for that they would be located in areas designated for residential uses under the General Plan, if developed within the county. Further, it is speculative to predict the types of potential environmental effects associated with these projects. The development of designated residential areas is addressed throughout this EIR, through existing policies and proposed mitigation measures. In addition, future housing projects could be subject to future environmental review under CEQA. This impact is considered less than significant for all of the four equal-weight project alternatives. Distinctions among the four equal-weight alternatives are provided below.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies applicable to Project Alternative are Policies HO-1a through HO-1w, HO-3a through HO-3l, and HO-4a through HO-4h of the Housing Element.

No Project Alternative (2025)—Impact Discussion

Because the No Project Alternative is projected to result in the lowest level of residential development through 2025 among the four equal-weight alternatives (21,434 units), and the fact that Writ-related restrictions prevent maximum development of MFR land, which is the most suitable land use designation for affordable housing, this alternative has the greatest potential to affect housing market conditions as described above. However, for the reasons described above, this impact is less-than-significant.

No Project Alternative (Buildout)—Impact Discussion

Only a limited amount of additional residential development could be accommodated under the No Project Alternative between 2025 and buildout, based on a housing unit capacity of 29,520 units. The imbalance between housing supply and demand would be exacerbated. Therefore, this impact would be more severe relative to 2025 conditions. However, if policies associated with the No Project Alternative are assumed to remain in effect through buildout, impacts would be similar to 2025 conditions; please refer to the No Project Alternative (2025)–Impact Discussion above. As a result, this impact would remain less than significant.

Roadway Constrained 6-Lane "Plus" Alternative (Alternative #2)

Relevant Goals/Policies—Roadway Constrained 6-Lane "Plus" Alternative

For the relevant policies of the Roadway Constrained 6-Lane "Plus" Alternative, please refer to the policies listed above under Relevant Goals/Policies—No Project Alternative.

Roadway Constrained 6-Lane "Plus" Alternative (2025) —Impact Discussion

Similar to the No Project Alternative, this alternative would be faced with a restricted housing supply based on the limitation of residential subdivision to a maximum of 4 units per parcel. A total of 25,839 housing units are expected to develop through 2025; this is less than the regional demand for 32,000 units in the county. As a result, this alternative is expected to lead

to the same type of housing market forces described in the introduction to the analysis. This impact is less than significant.

Roadway Constrained 6-Lane "Plus" Alternative (Buildout)—Impact Discussion

At buildout, the Roadway Constrained 6-Lane "Plus" Alternative could result in potentially more severe housing supply restrictions relative to 2025 conditions. Based on the subdivision restrictions on residential property (up to four units per parcel), a total of 41,652 new dwelling units could be accommodated under this alternative. However, if housing policies are assumed to remain in effect through buildout, impacts would be similar to 2025 conditions; please refer to the Roadway Constrained 6-Lane "Plus" Alternative (2025)–Impact Discussion above. This impact would remain less than significant.

Environmentally Constrained Alternative (Alternative #3)

Relevant Goals/Policies—Environmentally Constrained Alternative

For the relevant policies of the Environmentally Constrained Alternative, please refer to the policies listed above under Relevant Goals/Policies—No Project Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

The Environmentally Constrained Alternative is projected to result in the development of an estimated 32,290 housing units through 2025, which would meet the regional demand for housing in the county. The housing supply would not be restricted based on the fact that there are no restrictions on residential subdivision. As a result, housing prices would not substantially affect the market in a manner that would make it economically beneficial to convert affordable housing units to more upscale development or price residents out of existing affordable housing units, thus resulting in the need for replacement housing. Therefore, this impact is less than significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

At buildout, the Environmentally Constrained Alternative would result in similar impacts as 2025 conditions. Additional housing units could be developed under this alternative through buildout for a total of 55,078 dwelling units. Housing policies would continue to minimize the potential need for replacement housing. Please refer to the Environmentally Constrained Alternative (2025)–Impact Discussion above. This impact would remain less than significant.

1996 General Plan Alternative (Alternative #4)

Relevant Goals/Policies—1996 General Plan Alternative

For the relevant policies of the 1996 General Plan Alternative, please refer to the policies listed above under Relevant Goals/Policies—No Project Alternative.

1996 General Plan Alternative (2025)—Impact Discussion

The 1996 General Plan Alternative is expected to result in the development of 32,491 dwelling units through 2025. Because the need for replacement housing is based primarily on the supply of housing, this alternative is expect to result in comparable impacts to Environmentally Constrained Alternative (32,290 units); please refer to the Environmentally Constrained Alternative (2025)–Impact Discussion above. This impact is less than significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

The 1996 General Plan Alternative would result in the same level of impact at buildout, relative to 2025 conditions, because housing policies would continue to minimize the potential need for replacement housing. This impact would remain less than significant.

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Ground Water and the Rural Homeowner

Cover photograph: Rural dug well.

Ground Water and the Rural Homeowner

by Roger M. Waller

Preface

As the salesmen sang in the musical *The Music Man*, "You gotta know the territory." This saying is also true when planning to buy or build a house. Learn as much as possible about the land, the water supply, and the septic system of the house before buying or building. Do not just look at the construction aspects or the beauty of the home and surroundings. Be sure to consider the environmental conditions around and beneath the site as well. Try to visit the site under adverse conditions, such as during heavy rain or meltwater runoff, to observe the drainage characteristics, particularly the condition of the basement.

Many of the conditions discussed in this book, such as lowered well-water levels, flooded basements, and contamination from septic systems, are so common that rural families often have to deal with one or more of them. The purpose of this book is to awaken an interest in ground water and an awareness of where it is available, how it moves, how people can adjust to its patterns to avoid problems, and how it can be protected and used wisely.

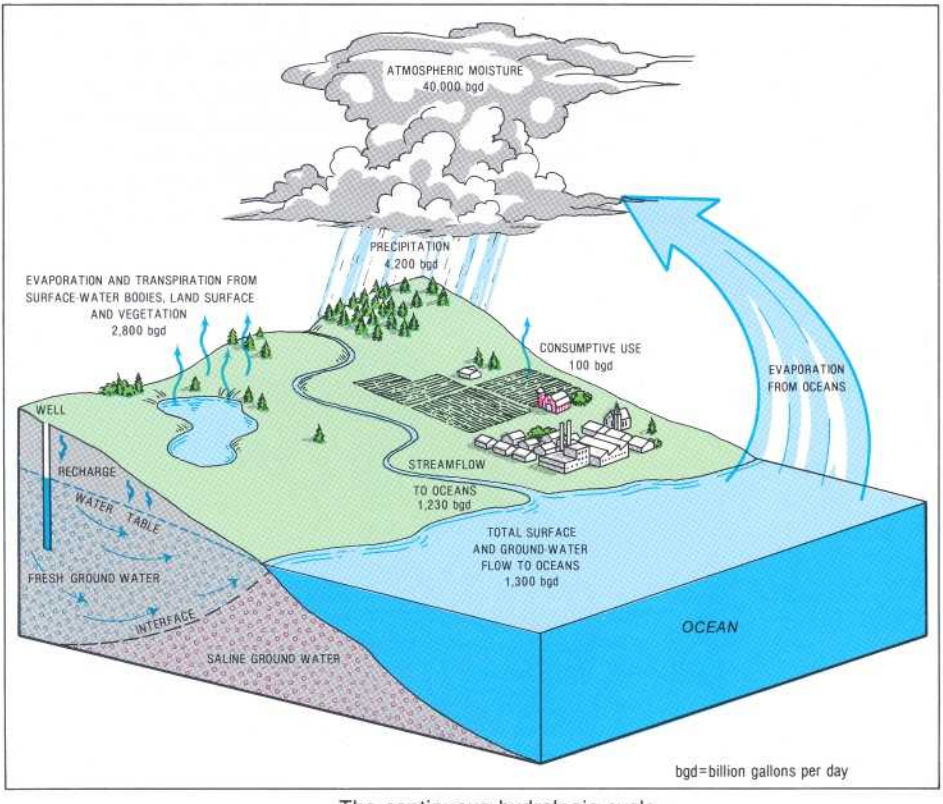
This booklet provides both present and prospective rural homeowners, particularly those in the glaciated northern parts of the United States, with a basic but comprehensive description of ground water. It also presents problems one may expect to encounter with ground water and some solutions or suggestions for help with these problems.

Introduction

When buying a home in the country, people need to consider certain factors that usually do not confront the urban homebuyer, such as whether or not the water supply is adequate and if the means of disposing of wastewater is safe. Disappointed rural homeowners have sometimes found out too late that the well drilled on their new land does not yield enough water or that the water is of poor chemical quality. Also, foundations can become unstable from excess surface runoff or from high ground-water levels. Septic systems, if not located properly or if soil conditions are not properly considered, can fail. Wells can be contaminated by septic systems or barnyard wastes. Shallow or dug wells on farms or near older homes that served adequately in earlier years are often inadequate for modern uses.

Preventing water problems or coping with them when buying or building a rural home can be either complex or relatively simple. Prospective homeowners need to know about the terrain, the proximity of the house to other structures, and the condition of the existing well and septic system. If building in an unpopulated area, drill a well first—or if buying an old house, find out if the water supply is adequate. This booklet describes the most common well problems encountered by rural homeowners, how to recognize them, solve them, or get help. But first, the characteristics and behavior of ground water and the relationship between ground water and the surrounding land are discussed briefly.

The Hydrologic Cycle

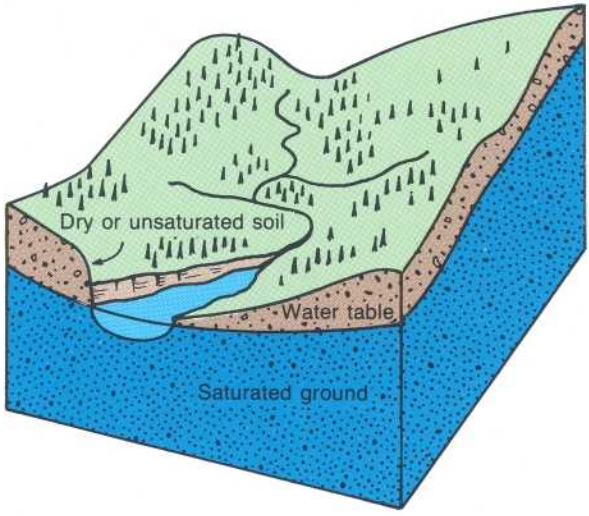


The continuous hydrologic cycle.

The hydrologic cycle is the continuous circulation of water from land and sea to the atmosphere and back again: water evaporates from oceans, lakes, and rivers into the atmosphere. This water later precipitates as rain or snow onto the land where it evaporates or runs off into streams and rivers; or it infiltrates (seeps) into the soil and rock from which some is transpired back into the atmosphere by plants. The remainder becomes ground water, which eventually seeps into streams or lakes from which it evaporates or flows to the oceans.

Ground Water

Ground water is that part of precipitation that infiltrates through the soil to the *water table*. The unsaturated material above the water table contains air and water in the spaces between the rock particles and supports vegetation. In the saturated zone below the water table, ground water fills in the spaces between rock particles and within bedrock fractures.



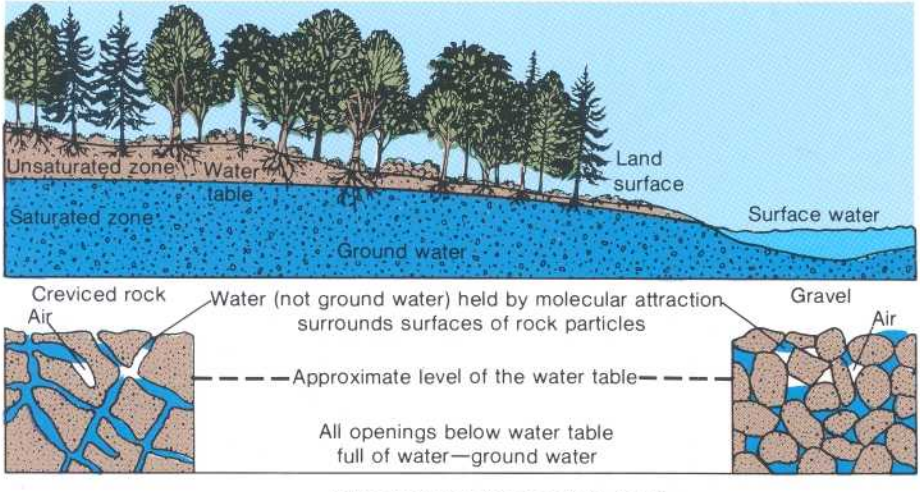
Occurrence of ground water.

Where ground water occurs

Rock materials may be classified as consolidated rock (often called bedrock) and may consist of sandstone, limestone, granite, and other rock, and as unconsolidated rock that consists of granular material such as sand, gravel, and clay. Two characteristics of all rocks that affect the presence and movement of ground water are *porosity* (size and amount of void spaces) and *permeability* (the relative ease with which water can move through spaces in the rock).

Consolidated rock may contain fractures, small cracks, pore spaces, spaces between layers, and solution openings, all of which are usually connected and can hold water. Bedded sedimentary rock contains spaces between layers that can transmit water great distances. Most bedrock contains vertical fractures that may intersect other fractures, enabling water to move from one layer to another. Water can dissolve carbonate rocks, such as limestone and dolomite, forming solution channels through which water can move both vertically and horizontally. Limestone caves are a good example of solution channels. Consolidated rock may be buried below many hundred feet of unconsolidated rock or may crop out at the land surface. Depending upon the size and number of connected openings, this bedrock may yield plentiful water to individual wells or be a poor water-bearing system.

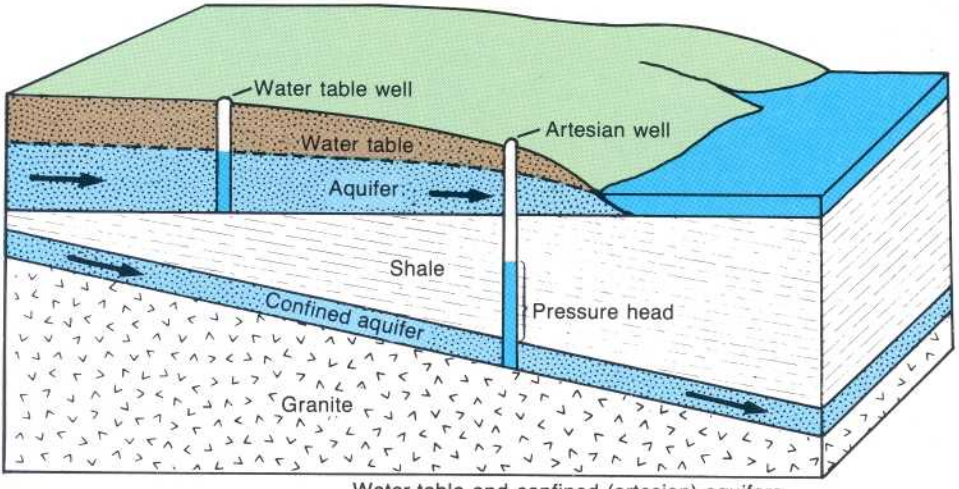
Unconsolidated material overlies bedrock and may consist of rock debris transported by glaciers or deposited by streams or deposited in lakes. It also may consist of weathered bedrock particles that form a loose granular or clay soil. Well-sorted unconsolidated material can store large quantites of ground water; the coarser materials—sand and gravel—readily yield water to wells.



How ground water occurs in rocks.

A close look at the rocks exposed in road cuts and along streams will show the types of openings in which ground water can occur. Especially noticeable in bedrock exposures are spaces between layers that can extend for miles—the void spaces between rock particles contain water that percolates into these spaces between the layers. In most sand and gravel deposits, water occupies and moves freely within granular material.

Road cuts reveal fractures, joints, and bedding planes.



Water-table and confined (artesian) aquifers.

Aquifers

Most of the void spaces in the rocks below the water table are filled with water. Wherever these water-bearing rocks readily transmit water to wells or springs, they are called *aquifers*.

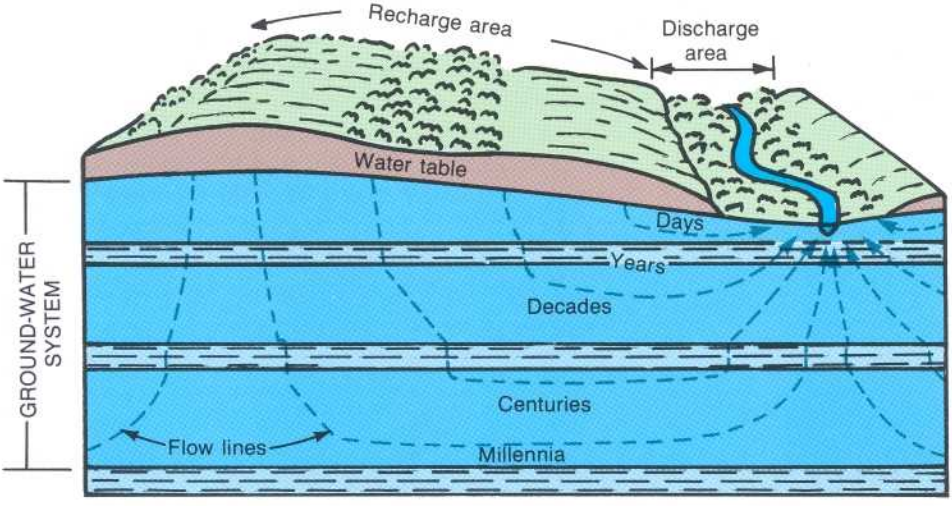
Although ground water can move from one aquifer into another, it generally follows the more permeable pathways within the individual aquifers from the point of recharge (areas where materials above the aquifer are permeable enough to permit infiltration of precipitation to the aquifer) to the point of discharge (areas at which the water table intersects the land surface and water leaves an aquifer by way of springs, streams, or lakes and wetlands). Where water moves beneath a layer of clay or other dense, low-permeability material, it is effectively confined, often under pressure. The pressure in most confined aquifers causes the water level in a well tapping the aquifer to rise above the top of the aquifer. Where the pressure is sufficient, the water may flow from a well.

Ground water is constantly moving

Ground water is always moving by the force of gravity from recharge areas to discharge areas. Ground-water movement in most areas is slow—a few feet per year. But, in more permeable zones, such as solution channels in limestone, movement can be as much as several feet per day. Evidence of the movement of ground water through rock and soil can be seen in road cuts, especially in winter, when the water freezes upon emerging from the rock. In some bedrock exposures, the water emerges along partings between rock layers; in others, along vertical fractures.

Seasonal patterns of ground-water recharge and storage

In latitudes where freezing is common, there is less recharge from rain or snowmelt during winter, which causes the water table to fall. Sporadic or differential freezing of the soil in the fall and winter inhibits recharge to the saturated zone, and the complete freezing of the soil in winter prevents all recharge until the soil thaws in the spring.



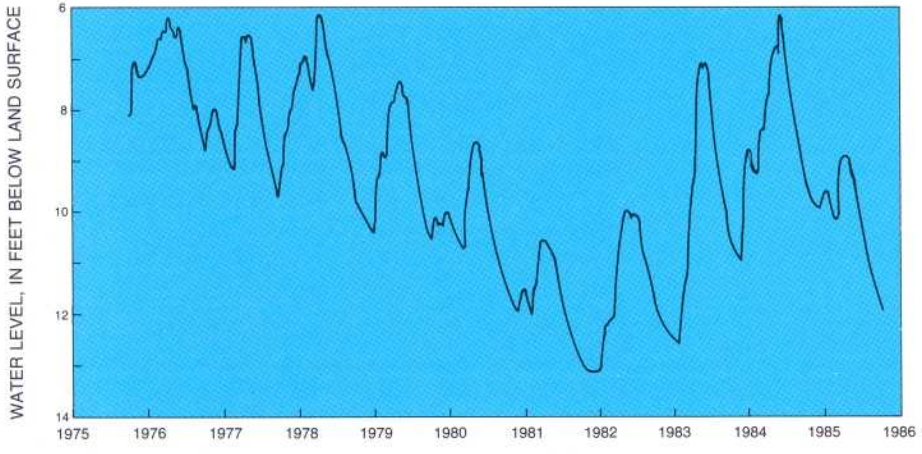
Direction and rate of ground-water movement.

Ground water, emerging from bedding planes, has created spectacular frozen waterfalls along a road cut.

The saturated zone beneath the water table is recharged by the excess water that is not discharged to streams. The resulting rise in the water table increases ground-water *storage* (the volume of ground water stored within an aquifer system). In late spring, summer, and early fall, evaporation and transpiration by plants capture most of the water that would otherwise recharge the aquifer, while discharge to streams continues. A seasonal decrease in ground-water storage results, as indicated by declining water levels in wells. In winter, freezing of the soil prevents recharge, which again causes a decline in storage. In early spring, frequent precipitation coupled with water from snowmelt causes a rapid increase in storage and a rise in the water table.

Effects of long-term climatic trends on ground-water storage

In addition to seasonal fluctuations in ground-water storage, long-term trends result from the variations in precipitation. Several years of below-normal precipitation causes a progressive decline in ground-water levels, and several years of above-normal precipitation causes a corresponding rise. These long-term climatic trends cause changes in ground-water storage. During periods of long-term, above-average precipitation, the water table may rise close to the land surface and interfere with home construction and waste disposal. For example, if a home had been built with a basement 8 feet below land surface during 1980-82 at the site of the well whose hydrograph is shown below, the basement would have been flooded in 1983 and 1984.

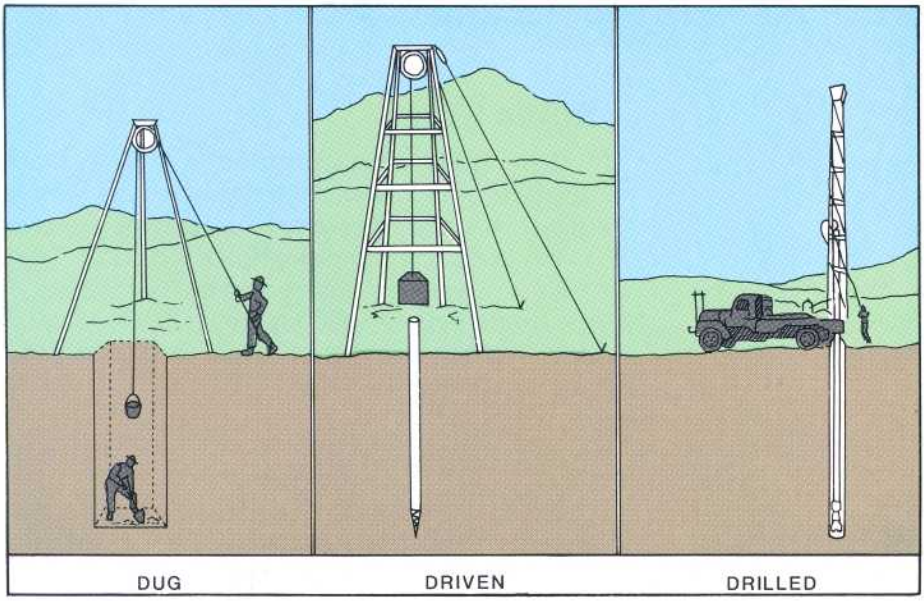


A 10-year well hydrograph showing climatic effects on ground-water level.

Types of Wells

Most modern wells are drilled by truck-mounted percussion (cable-tool) or rotary (air or hydraulic) drill rigs. Dug wells are still constructed in some areas, either by power equipment or by hand, but most hand-dug wells are the"relics" of older homes and were dug before drilling equipment was readily available or because drilling was considered too expensive. Driven wells, installed by hand or with power equipment, are still common and widely used where geologic conditions permit. Jetted and bored (augered) wells are less common types.

Types of wells.



Dug wells

Historically, dug wells were excavated by hand shovel to below the water table until incoming water exceeded the digger's bailing rate. The well was lined with stones, brick, tile, or other material to prevent collapse, and was covered with a cap of wood, stone, or concrete. Modern large-diameter dug wells are dug or bored by power equipment and typically are lined with concrete tile. Because of the type of construction, bored wells can go deeper beneath the water table than can hand-dug wells.

Dug and bored wells have a large diameter and expose a large area to the aquifer. These wells are able to obtain water from less-permeable materials such as very fine sand, silt, or clay. Some disadvantages of this type of well are that they are shallow and lack continuous casing, making them subject to contamination from nearby surface sources, and they go dry during periods of drought if the water table drops below the well bottom.

Driven wells

Driven wells are constructed by driving small-diameter pipe into shallow water-bearing sand or gravel. Usually a screened well point is attached to the bottom of the casing before driving. These wells are relatively simple and economical to construct, but they can tap only shallow water and, like dug wells, are easily contaminated from nearby surface sources.

Modern truck-mounted drill rig.

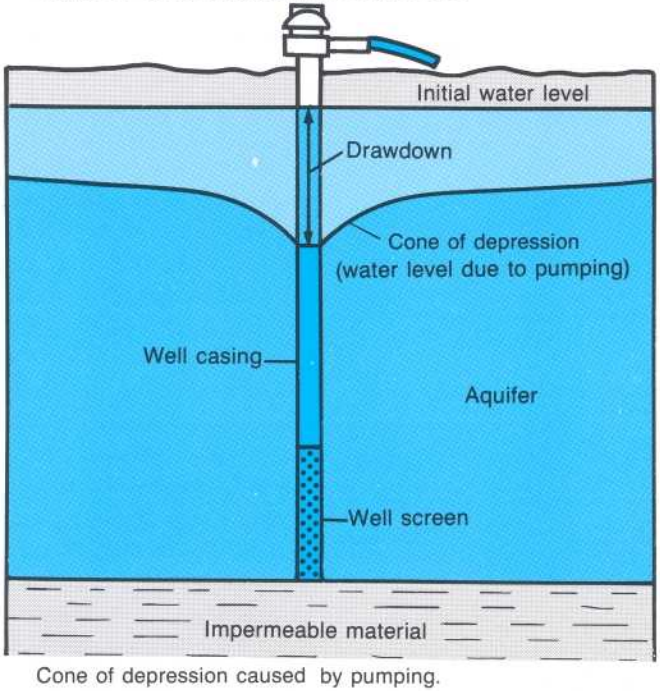
Drilled wells

Drilled wells are constructed by either percussion or rotary-drilling machines. Drilled wells that penetrate unconsolidated material require installation of casing and a screen to prevent inflow of sediment and collapse. They can be drilled more than 1,000 feet deep. To prevent contamination by water draining from the surface downward around the outside of the casing, the space around the casing must be sealed.

Wells and Pumpage

Even though water is present at some depth at almost any location, the success of obtaining an adequate domestic supply (usually 5 gallons per minute) of water from a well depends upon the permeability of the rock. Where permeable materials are near land surface, a shallow well may be adequate. Elsewhere, such as where clayey material directly overlies bedrock, a deep well extending into bedrock may be needed.

Pumping a well lowers the water level around the well to form a cone of depression in the water table. If the cone of depression extends to other nearby wells, the water level in those wells will be lowered. The cone develops in both shallow water-table and deeper confined-aquifer systems. In the deeper confined-aquifer system, the cone of depression is indicated by a decline in the pressure and the cone spreads over a much larger area than in a water-table system. For a given rate of withdrawal, the cone of depression extends deeper in low-yielding aquifers than in high-yielding ones.



Cone of depression caused by pumping.

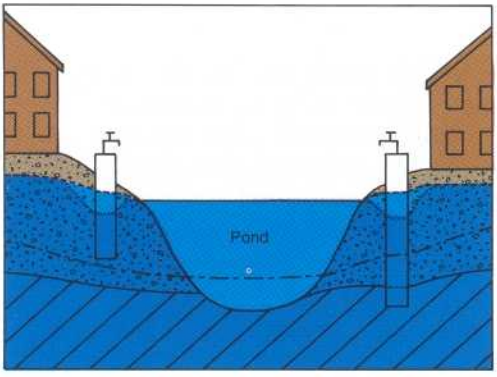
Water-Level Declines

The old saying that you "never miss the water until the well runs dry" remains true; however, *few drilled wells ever actually go dry*. Rather, what occurs most often is that the water table has dropped to near or below the pump intake because the pump intake is not set deep enough to allow for a potential decline in water levels. Alternatively, the small strainer that covers the end of the pump intake could be partly clogged so that it takes longer to pump the same amount of water. In either case, when the pumping rate exceeds inflow to the well, air is pumped and no more water is produced until the pump is shut off and the well recovers.

Shallow wells

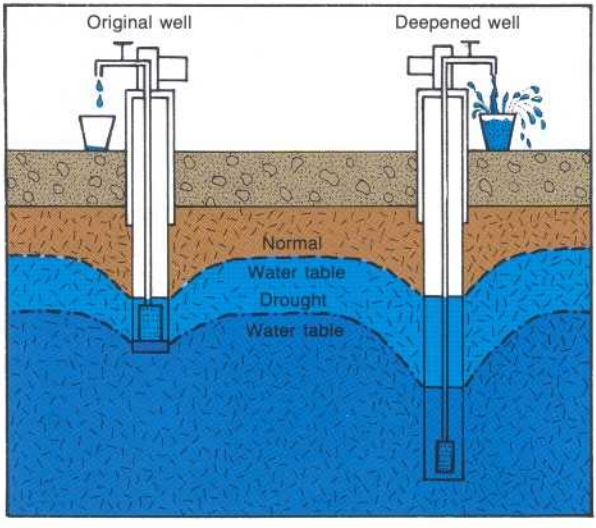
The most common "dry well" problem has been with dug wells. Most dug wells are shallow and excavated in poorly permeable material; consequently they are readily affected by drought or by seasonal declines in the water table. The following figure shows the effect of declining water levels on two adjacent wells that are drilled to different depths on either side of a water-table pond. If the depth to water in the well on the left were, say, 10 feet during spring, it might decline to 15 feet during late summer or during a severe drought. If the pump normally causes the water level in the well to decline 5 feet or more during a pumping cycle, pumping during the drought would cause the water to decline to or below the pump intake. Excavating this well deeper to match the well on the right would solve this problem. Dug wells should be constructed during seasonal or climatically low-water-level periods.

Many dug wells extend only to the bedrock surface and tap the perched water (unconfined ground water separated from an underlying main body of ground water (aquifer) by an unsaturated (impermeable) zone) on top of the bedrock. These wells cannot be easily deepened. In such cases a new drilled well is the only long-term solution.



How does a well go dry?

EXPLANATION
- High water table
- Low water table
- Pumping level
- Pond level

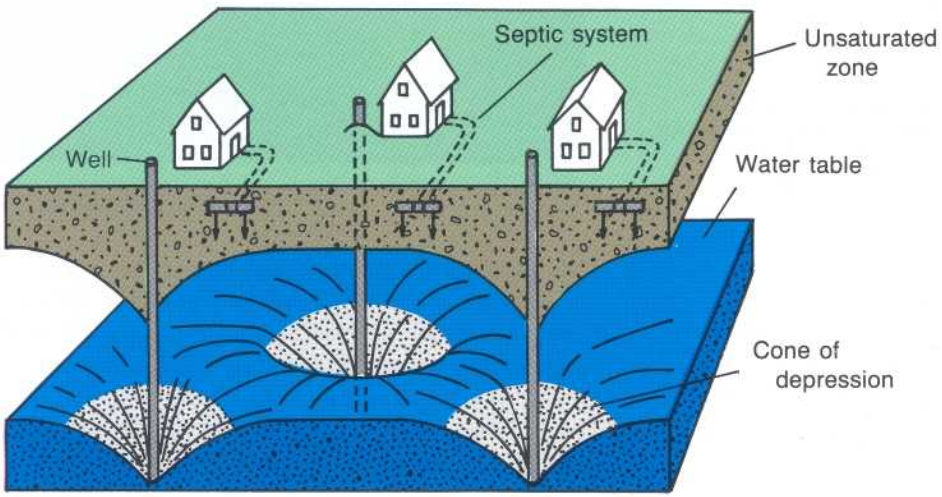


Solving a drought-related water shortage by deepening the well.

Some drilled wells that tap shallow bedrock will yield only 1 or 2 gallons of water per minute. These wells are not deep enough to provide adequate storage of water for short-term pumping cycles. Such a well may contain only 50 feet of water above the pump intake. As an example, when the water table declines 10 feet because of drought conditions, only 40 feet of water is available in the well for one pumping cycle, and the well seems to "go dry." In that situation, deepening the well may solve the problem as long as the deeper water is of good quality. If usable water is not available at a greater depth, the pumping rate must be reduced so that less water is pumped during each cycle.

Increased pumping in the immediate area

Another reason that wells "go dry" is the lowering of the water table by increased pumpage in the immediate area. Housing developments with small lots and individual wells have been built in many rural areas. If the aquifer is low yielding so that pumping causes a large drawdown, a cone of depression will develop around each well. Thus, several domestic wells close together can create a steady lowering of the water table if pumpage exceeds the natural recharge to the system (unless the withdrawn water is returned to the aquifer through septic systems). A third major reason that rural wells "go dry" is the installation of larger capacity wells for municipal, industrial, or agricultural purposes adjacent to residental areas. The increased withdrawals may cause large widespread cones of depression that intersect one another and cause general water-level declines that affect nearby domestic wells.



Effect of concentrated housing on ground-water level.

Water-Level Rises

The opposite problem, namely a rising water table, has developed in some parts of the country. Rising water tables occur in areas where pumpage has been curtailed after years of large ground-water withdrawals, such as for mine dewatering or municipal water supply, which kept the water table below its natural levels. The curtailment of pumping allows the water table to rise to the previous natural level, which may flood underground structures that were built when the water table was lowered.

In many parts of the country, water levels in shallow aquifers have been lowered artificially over large areas. If houses are constructed in dewatered areas and if the water table then recovers to its natural (higher) level, basement flooding or foundation failures may occur, especially where the natural water level is within 10 feet of the land surface. Many basements that were built in a dry unconsolidated material and that had remained dry for decades have now become permanently wet. The public's first reaction may be that unusually heavy precipitation in the past few months has raised the water table or created a temporary perched-water system, when in fact the situation is much more serious and will remain a problem unless pumping is resumed to maintain a lower water table.

Where water levels are closely monitored, water-level records can indicate whether such high water levels are related solely to climatic events or whether water levels are recovering after nearby pumping has ceased. An increasing number of local areas are being dewatered for mining or industrial uses, which could cause serious problems in the future when such pumpage is decreased or ended.

Similar situations have occurred where housing developments were built during a period of extended drought when the water table was low. Even if basements were the "daylight" or raised type because the natural water table was shallow, the eventual return of a wet period caused the water table to rise a few feet and flood basements.

Quality of Water

Some common ground-water quality concerns are excessive hardness (high dissolved magnesium and calcium content), a high concentration of salt or iron, or the presence of hydrogen sulfide (sulfur), methane gas, petroleum or organic compounds, or bacteria. Some are naturally occurring; others are introduced by human activities. In many areas, the homeowner has little recourse other than to use chemical treatment to remove or reduce the level of these constituents or to abandon the water supply. Hardness, iron, and sulfur are common constituents that can be treated.

Salt contamination

Salt contamination is difficult and expensive to remedy unless the well drawing saline water from a deep aquifer also penetrates one or more freshwater aquifers at lesser depth. In such cases, the deep saline aquifer can be sealed off and the well can be drilled in the freshwater aquifer instead. In many parts of the country, however, when a well is drilled deeper into bedrock to obtain larger supplies, saline water is more likely encountered than additional freshwater is.

Road-salt contamination of ground water has increased in the last 30 years and is of major concern in northern areas. Highway departments mix salt with sand to spread on roads for deicing. Salt is readily soluble in water and runs off highways into lakes and streams and percolates to the water table.

Probably more serious than the spreading is the stockpiling of uncovered salt and sand mixtures. This practice produces concentrated saltwater runoff that percolates to underlying aquifers and nearby wells. Many stockpiles are within small villages or near housing areas where nearby domestic wells can become contaminated.

Leachate from sand and salt stockpiles is a potential source of contamination to shallow ground water.

Oil spills

Another chronic problem in many rural homes is leaking or spilled fuel oil which eventually contaminates the owner's own well. Many homes have a fuel tank, either buried or above ground, adjacent to the house and within a few feet of the well. Spills or accumulated leakage eventually can migrate to the aquifer and can be drawn into the well, making it unusable for years. Usually the only solution is to obtain a new water source. In some instances, however, reducing the pumping rate to reduce drawdown allows the oil to float on the water surface safely above the well's intake area.

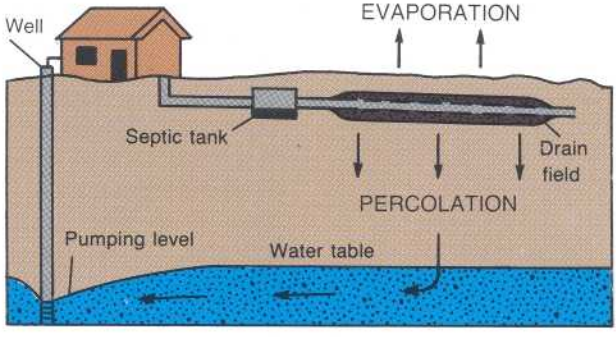
Methane gas

Perhaps the problem that poses the greatest hazard to a well owner is flammable gas in the well. Small volumes of natural gas, usually methane, can be carried along with the water into wells tapping carbonate or shale rock. In some areas, the gas dissipates soon after installation of the well, but, in other areas, a large continual source of natural gas remains. Because methane is flammable and cannot be detected by smell, precautions are needed to prevent explosions and fire. Venting of the well

head to the open air is the simplest precaution but, because gas can also accumulate in pump enclosures, pressure tanks, and basements, other venting may be needed. For this reason, a home should never be built over a well.

Bacteria

The most common water-quality problem in rural water supplies is bacterial contamination from septic-tank effluent. A recent nationwide survey by the U.S. Environmental Protection Agency and Cornell University found that contamination of drinking water by septic effluent may be one of the foremost water-quality problems in the Nation.



How septic effluent percolates to the water table.

Barnyard runoff

Probably the second most serious water-contamination problem in rural farm homes is from barnyard waste. If the barnyard is upslope from the well, barnyard waste that infiltrates to the aquifer may reach the well. Pumping, too, can cause migration of contaminants to the well. On many farmsteads built more than 100 years ago, the builders were careful to place the supply well upslope from the barnyard. Unfortunately, many present-day owners have not remembered this basic principle and have constructed a new house and well downslope of the barnyard.

Barnyard upslope from farmhouse well may cause bacterial contamination of water supply. *(Photograph courtesy Cornell University.)*

Pesticides and fertilizers

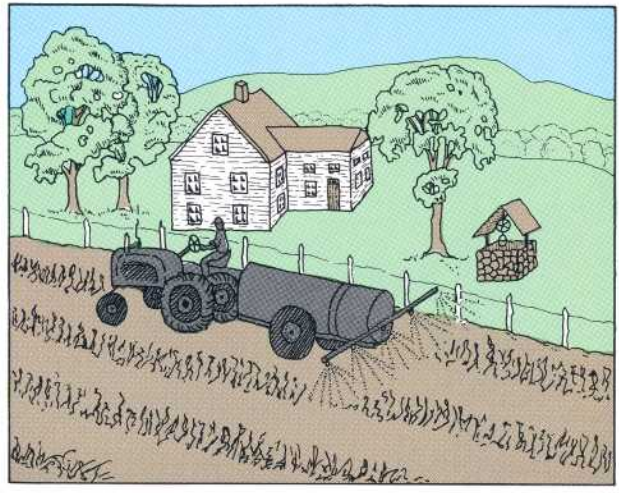
The last 3 decades have seen a significant increase in small part-time farms and rural dwellings as large farms have been sold and divided into smaller units. Many modern rural homes are constructed on former cropland on which heavy applications of herbicides and fertilizers may have been made. How these chemicals move

New home on land recently used for crops.

through the soil and ground water and how quickly they decompose or how their harmful effects are neutralized is not well understood.

Also common is the farming practice of applying fertilizers and pesticides to croplands immediately adjacent to the barnyard or farmyard. Residue from these applications can infiltrate to the aquifer and can be drawn into a supply well for the barn or the house. Decreasing the use of fertilizers and pesticides in the vicinity of wells can help minimize this problem.

Homeowners also should be careful to properly dispose of wastewater from used containers of toxic chemicals. Many farms have their own disposal sites, commonly pits or a wooded area, for garbage and the boxes, sacks, bottles, cans, and drums that contained chemicals. Unfortunately, these owner disposal sites can contaminate farm water supplies.



Pesticide spraying near well.

Septic Systems and Ground Water

The liquid effluent from a septic system follows the same path as the rain or snowmelt that percolates into the unsaturated zone. Like the rain, once the effluent reaches the water table, it flows down the hydraulic gradient, which may be roughly parallel to the slope of the land, to lower points. Thus, again, the location of one's house in relation to neighboring houses, both upslope and downslope, is important.

Septic-tank effluent that enters the aquifer supplying the homeowner's well introduces not only bacteria but also other contaminants. Many rural homeowners also discharge other waste products, including toxic material, into their septic systems, and these products gradually accumulate in the aquifer. What happens to these contaminants in the ground is not well known. Some adhere to rock material, others travel with the water. In some types of rock material, the leach field or dry-well part of the septic system can gradually become clogged by contaminants.

Rural homes in small, older communities and in more recent roadside housing developments are commonly situated on small or narrow lots along an access highway. Most do not have a

Rural roadside housing development.

community water supply, and almost all have their own individual septic systems. In clusters such as this, effluent recycling can occur if the wells are shallow or the septic systems are improperly placed. Deep wells are less likely to draw in septic waste.

This type of effluent problem becomes acute in an area underlain by a shallow water-table aquifer where the septic effluent discharges into water that is used by many homeowners. This dilemma has been posed in many rural housing developments throughout the Nation. One either "fouls his own nest" with effluent or connects to a central sewer system. Although a sewer system protects the aquifer from further contamination, it reduces recharge of water to the aquifer. This engineering, economic, and social dilemma must be resolved soon in many areas. An increasing number of counties and townships are planning and zoning rural areas to limit the density of houses according to soil conditions. Other approaches being considered are a community water supply with individual septic systems or individual water supplies with a community sewer system.

Some banks and lenders require that the prospective buyer or the seller furnish proof of a bacteria-free water supply before they will issue a mortgage. When a seller faces such a requirement, a common procedure is to chlorinate the water to destroy the bacteria in the well. This treatment affects only the well and perhaps a volume of the aquifer immediately adjacent to the well, but for only a brief time. If the contamination is in the aquifer, the source will not be attacked nor the problem solved; thus a water analysis showing bacteria-free water immediately after the well has been disinfected is not necessarily an assurance of a safe water supply. The homeowner should periodically have the water analyzed for bacteria. If a high bacteria count occurs repeatedly, the problem is probably in the water source, and chemical treatment of the well alone cannot solve it.

In a bacteria-contaminated water system, chlorination of the water pumped from the well is commonly recommended as a solution. Other-

wise, one must obtain a water supply from a new well that either is upgradient from the contaminating source or that taps a deeper aquifer. Moving the septic system to a more distant spot is a long-term solution, but the underlying contaminated zone may take years to stop releasing contaminants to the aquifer.

Cluster-housing contamination

In a row-housing setting, the house at the highest location will generally have the safer water supply. Because the effluent migrates down beneath the development, it could be pumped, used, and again discharged by each house along its course. The house furthest downslope would receive the combined effluent from the other houses.

Another contamination problem from closely spaced septic systems can occur where a row of houses on the uphill side of a road faces a row of houses on the downhill side of the road. Here, the safer water supply would be on the uphill side. The downhill side would receive effluent from the uphill side plus any contamination generated along the road, such as road salt or metal compounds. In flat areas underlain by a shallow water table, especially where cluster developments are two or more decades old, almost perpetual recycling of septic waste may occur.

Another source of contamination that is common in villages or hamlets lacking a central water or sewage system is small waste-generating businesses such as laundries, auto-repair shops, and industries that discharge wastes to their own septic systems. Many of the bacterial problems, cited in a recent U.S. Environmental Protection Agency rural water study, were in hamlets, villages, or crossroads communities. Once indoor plumbing became common and outdoor privies were removed, all waste went into septic systems from which increased amounts of liquid effluent eventually entered the aquifer and became subject to pumping by wells.

Unknown Hazards Beneath the Land

Previous land uses, some of which may be unknown to the present landowner, can have long-lasting effects on the land and on underlying aquifers.

Hidden dump site may contain chemical-waste containers.

Former chemical dump sites

Many sites where commercial and industrial wastes are buried have been abandoned and have been covered with soil or have become revegetated. In many such areas, individual homes or entire housing developments have been built without proper consideration of the buried waste. (The tragedy of Love Canal, near Niagara Falls, N.Y., is an unfortunate example of construction over concealed waste.) A prospective land buyer, home builder, or buyer of a recently built rural home should inquire of local agencies about the former use of the land.

Abandoned wells

Although still relatively rare, waste sites can be abandoned wells that are now used for disposal of wastes, commonly oil or laundry wastes. Many garages and repair shops have used abandoned drilled wells for disposal of waste oil, and laundries have used abandoned dug wells for disposal of laundry wastes to prevent clogging of their septic systems. These practices point to an area where concern for ground-water protection should be considered more carefully. Abandoned wells should be filled and sealed properly to eliminate the danger of someone falling into the well or having the shaft collapse, as well as to remove the temptation to use them for disposal of hazardous wastes.

Former orchards or vegetable lands

Individual homes and developments alike have been built on former orchards or vegetable farms. Although these lands can be picturesque where fruit trees remain, one must remember that pesticides and chemical fertilizers probably were applied heavily in the past. The fate of many of these chemicals in the soil is unknown, and long-term contamination may remain, especially in the shallow ground water. The soil through which recharge from precipitation moves is the repository for much of the chemicals that are deposited on the land. Decades may pass before these chemicals are dissipated or flushed away. Therefore, anyone planning to buy or build a house on a former orchard or truck farm should consult farm or zoning agencies to obtain information on the potential for pesticide and fertilizer residue.

Crop dusting and orchard spraying. *(Photographs courtesy Cornell University.)*

Oil and gas fields

Oil and gas development has occurred and is occurring in many parts of the country. Oil and gas development almost always includes the production of brine or saline water, which then must be disposed of. Most states regulate the disposal of brine to prevent contamination of surface and ground water, but, in old oil and gas fields that were abandoned before extensive regulation, saline water is still escaping from improperly sealed or cased wells into freshwater aquifers.

One method of producing more oil or gas from old fields is to inject water or brine into the producing formation to increase the pressure and move the oil or gas to wells. Some oil or gas fields are "leaking," however, and once the pressure is increased, the injected fluid or oil finds avenues of escape to other formations, such as through abandoned boreholes or corroded well casings. Some shallow producing areas that contain many abandoned wells spaced a few hundred feet apart have created an unmanageable leakage problem. Every old abandoned oil or gas well that is not cemented-in may provide an avenue for saline water, oil, or gas to escape into the nearest aquifer and contaminate the system. It would be wise to verify that the home being purchased is not near an old oil or gas field.

Subsidence and sinkholes

Land subsidence occurs where large amounts of ground water have been withdrawn from a thick layer of saturated fine-grained sediment that is susceptible to compaction. General subsidence is not noticeable in some large areas, but in others, concentric cracks develop over smaller areas where compaction is occurring.

Sinkholes are common where the land is underlain by limestone or other carbonate rocks that are naturally dissolved through ground-water circulation. A sinkhole can also develop where salt beds occur beneath the land surface. As the limestone or salt is dissolved naturally by ground water or by industrial solution-mining of the salt, the overlying material can collapse into the resulting cavern. In worst cases, such collapses create a large sinkhole that will topple or swallow any structure above it. Housing development should be avoided in sinkhole-prone areas. Although it is difficult for an individual to discern the exact locations of potential sinkholes, areas prone to sinkhole development are generally well known by State geological surveys.

Sinking land ruins croplands.

Sinkholes develop suddenly.

Consider Past and Future Land Use

The preceding section highlighted some of the contamination hazards that may be attributed to previous land uses. One way to obtain information on previous land use is to contact local county or town planning or zoning boards. Their records may show that land was formerly used for agriculture, landfill, or industrial/mining purposes. Land owners can then better evalute what past land-use practices should be considered in planning future land use.

Similarly, land-use or zoning maps can show where planners have designated uses that may be considered detrimental to home ownership. Many planning agencies have evaluated and classified the land for preferred and alternate uses. Consult these local agencies before building or buying in specific areas.

Country Living Calls for Knowledge

Before purchasing a home in a rural area, the buyer should determine the amount and quality of water and should locate the waste-disposal system.

A well log and a water analysis may be as important as a deed

As ground water receives increasing attention nationwide, particularly because of toxic-chemical contamination, a written legal document verifying an adequate water supply from new or old wells is becoming important. Some mortgage lenders require a negative bacterial analysis of the water and a yield test of the well to verify an adequate supply. As mentioned earlier, a single analysis for bacteria may not reflect true conditions, but it is worthwhile to have it done nevertheless.

A well record (driller's log) describes the well characteristics, including yield and the type of material that the driller encountered. The well log is not always available from the owner, and sometimes the driller who installed the well cannot be located. If the well log is available, however, it can be helpful. If water quantity becomes insufficient, a record of a yield test is helpful in determining what happened. Most dug wells, of course, have no description other than depth. In any case, it is wise to obtain information on well depth, water level, type of pump, pump-intake setting, and yield before buying a house.

Determine the location of the septic system and water source

The buyer of rural property must know the location of the water source and the waste-disposal system to evaluate the potential for certain problems. Even a cursory glance at their location, distance from each other, and the land slope often provides an initial estimate as to their adequacy. For example, evidence of two or more wells or septic systems warrants a detailed inquiry. An odor of sewage, a wet area, or lush grass over a leach field, especially during dry periods, indicates a potential problem.

Some Practical Considerations

As stated earlier, learn as much as you can about the land, the water supply, and the septic system of the house before you buy. Be sure to consider the environmental conditions, and try also to visit the site during bad weather. Don't be rushed—take time to be informed.

Most rural water problems are related to old dug wells, septic systems, and too-dense housing developments. Drilled or deep wells are generally less susceptible to sewage or surface-contamination sources than shallow wells are, but water from bedrock wells is more likely to contain gas or minerals than is water from shallow deposits. Most well drillers are aware of common local problems and generally locate wells properly.

Although potential water problems for the rural homeowner can sometimes be expensive, pose a health hazard, or possibly affect real estate values, these problems can be avoided by the observant, informed buyer or owner.

Table 1. Water factors to consider in buying or building a new home

Problem	Probable cause	Remedy or source of help
Inadequate water yield	Poor aquifer	Install larger, deeper well
	Well screen or pump intake encrusted	Have cleaned by well driller
	Lower water level	Deepen well Contact water resources agency
Wet basement	Seasonally high water table	Add sump pump or drains
	Recovered water level	Add sump pump or drains
	Drainage from roof or slope	Add roof gutter, reslope land Contact Soil Conservation Service
Gas in water	Methane from bedrock	Install vent on well head Aerate the water Install water treatment Drill new well away from house Contact State geological survey
Salty water	Road salting	Install new well farther upslope Provide better road drainage
	Road-salt stockpile	Install new well away from drainage Request correction by highway department Contact health department
Fuel-oil contamination	Leaky or spilled storage tank	Install new well upslope Adjust to low pumping rate
Oil or gasoline contamination	Nearby service station	Obtain new source of water Contact health department
Bacteria contamination	Septic effluent	Chlorinate as first step; contact health department Install new well upslope Install new leach field farther away Deepen well in some cases Seek control on neighboring system
	Barnyard waste	Redirect waste flow Install new well upslope Seek control on neighbor's activity Contact agricultural agency
Organic chemical contamination	Former land use	Install new well farther away Deepen well in some cases Contact health department
	Current land application	Create buffer zone around recharge area Dispose of wash water properly Seek control on neighbor's activity Contact health department
Land Subsidence	Excessive ground-water withdrawal	Contact State regulatory agency
	Rock solution	Relocate house Contact State geological survey
Sinkhole development	Rock solution	Relocate house Contact State geological survey
Source of ground water unknown	No knowledge	Contact water resource agency
	No well data available	Contact water resource agency

Table 2. Sources of information

Geologic conditions and mining areas
State geological surveys
State bureaus of mines
State natural resources agencies
U.S. Geological Survey
Soils, drainage, and agricultural uses
U.S. Department of Agriculture
State land-grant colleges
County extension agents
Topography
U.S. Geological Survey
Ground-water resources and water testing
State natural resources or environmental departments
State water resources departments
County health departments
U.S. Geological Survey
National Water Well Association
Water-supply and septic-system construction
State health departments
State environmental or conservation departments
County extension agents
U.S. Environmental Protection Agency
U.S. Department of Agriculture
Land-use and zoning
State planning agencies
County planning and zoning agencies

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Suggested Reading

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U.S. National Science Foundation, 1983, Groundwater resources and contamination in the United States: U.S. Department of Commerce PB 84-126 358, Workshop Papers and Summary, 231 p.

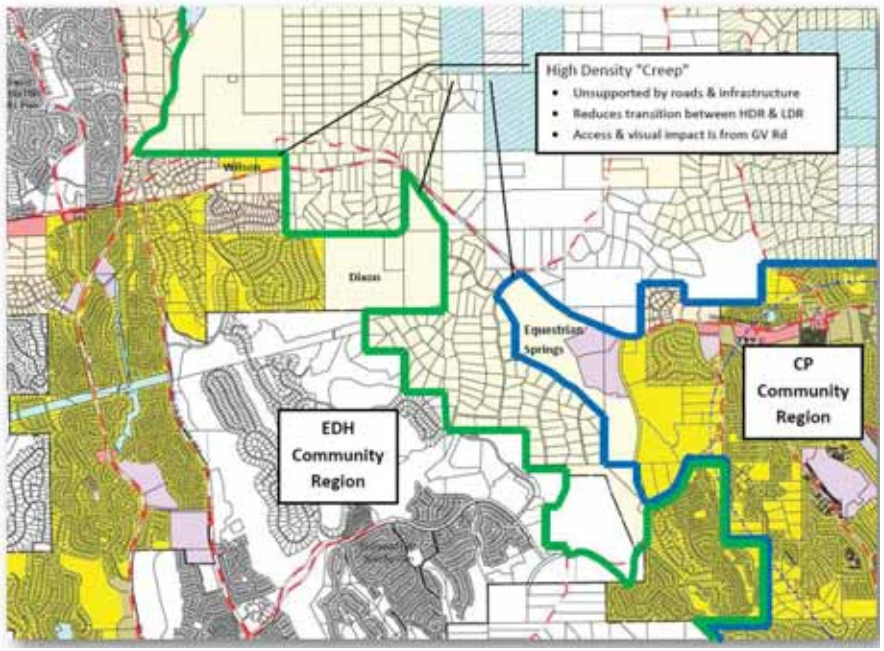
Public Comment on ROI to contract Community Regions

Board of Supervisors meeting - February 24, 2015

Community Regions
Public Comment -BOS-2/24/15

GVA supported the **December 9, 2014** vote by the Board of Supervisors directing staff to prepare a Resolution of Intention (ROI) to contract the Community Regions & return to the Board with funding options.

Existing CR boundaries



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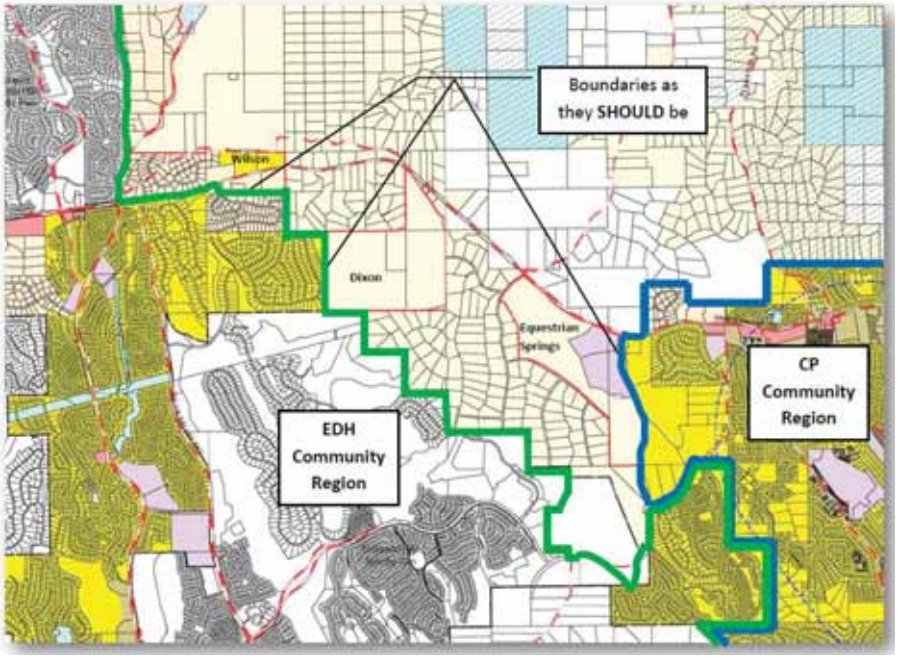

Community Regions
Public Comment -BOS-2/24/15

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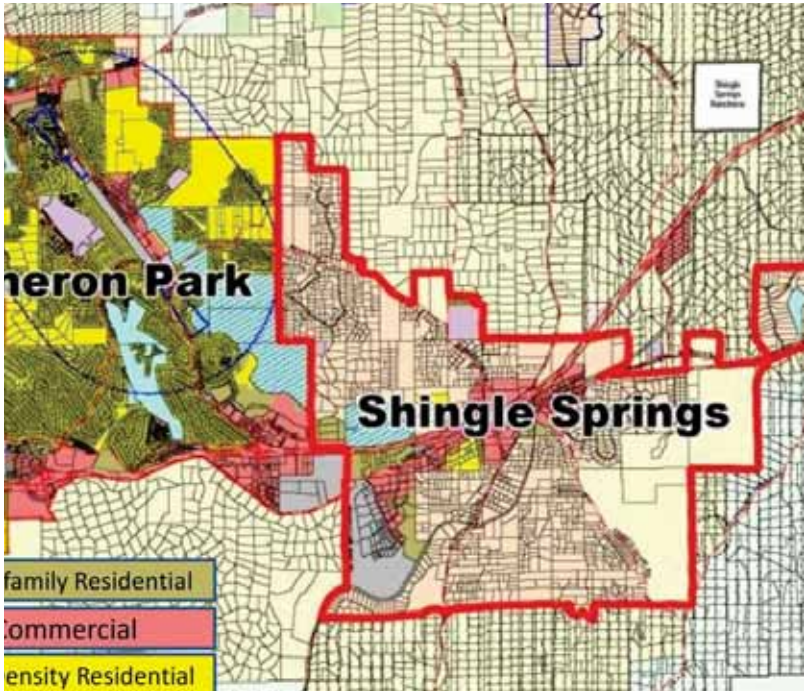

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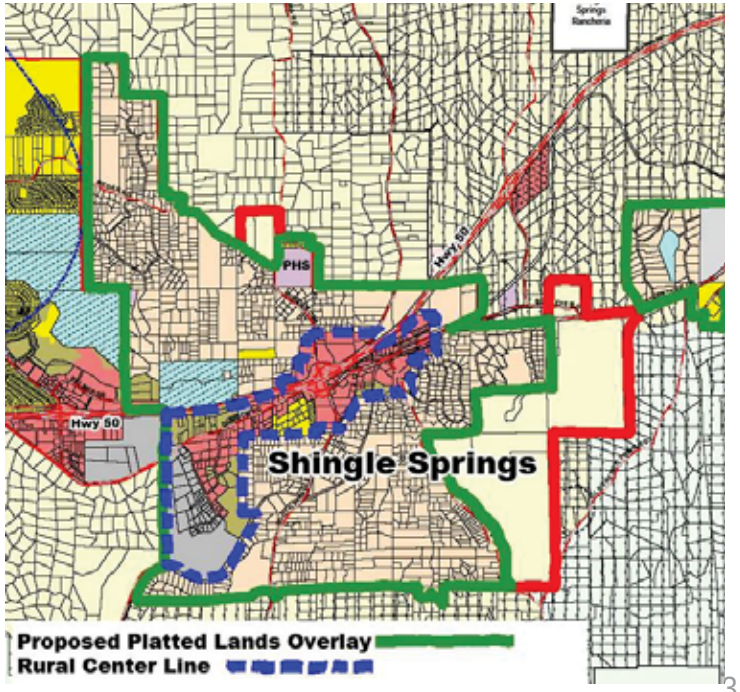


Community Regions
Public Comment -BOS-2/24/15

However … a new ROI is redundant - Reason 1:

Amending the Community Regions is already included in the not-yet-completed General Plan update. From the Purvines Staff memo to the BOS, 9/23/2013:

2. *Comment:* The first 5-year General Plan review in April 2011 did not look at or subsequently dropped Community Regional Line Amendments from the Targeted General Plan Amendment (TGPA) process.

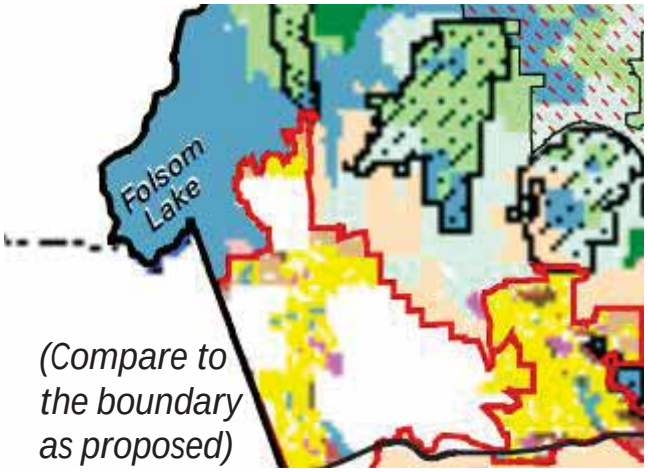
   Response: CRBs were reviewed in the first 5-year General Plan review, and are currently included in the TGPA. A fundamental component of the TGPA's environmental review was to provide a "Range of Options" to ensure the Board has flexibility to select the best option to meet the objectives of the project. Following the completion of the Targeted General Plan Amendment-Zoning Ordinance Update (TGPA-ZOU) environmental review, the Board may consider amendments to the CRBs.

Community Regions
Public Comment -BOS-2/24/15

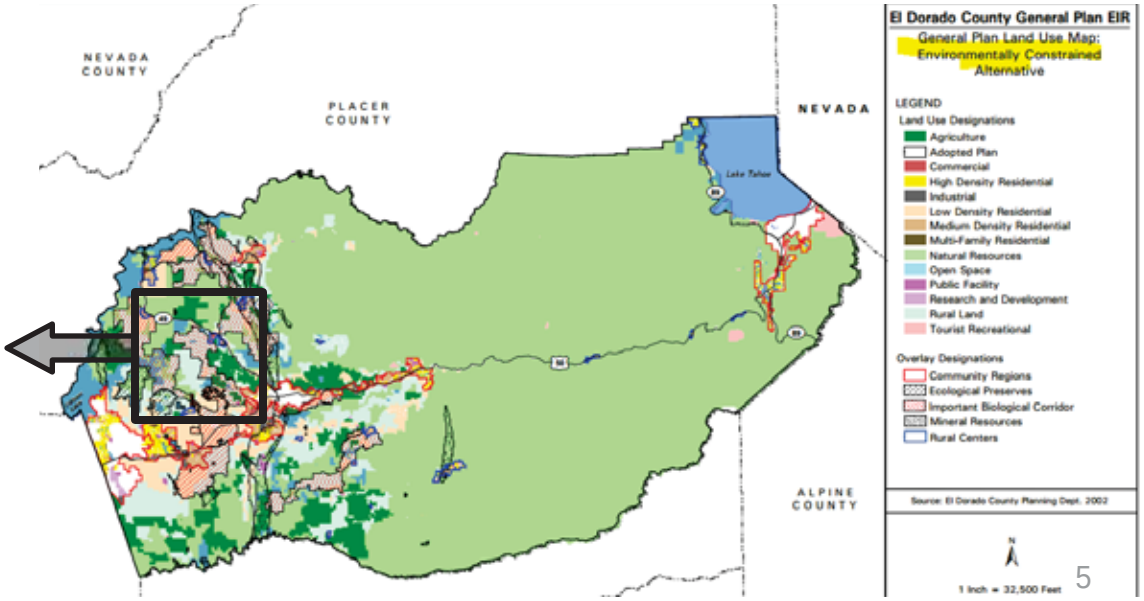
A new ROI is redundant - Reason 2 :

The ‘reduced’ CRB’s proposed were *already* analyzed in the 2004 General Plan EIR, so ***the Board is free to act on amending the boundaries***.

“ The reduced size of Community Regions and Rural Centers would balance with the increased density of permitted subdivision to fully implement the intent of the General Plan to focus development in urban areas and protect rural areas from high levels of development ” (excerpt from pg 5.1-45 of the 2004 General Plan EIR, Alternative #3, impacts discussion)



(Compare to the boundary as proposed)



Community Regions
Public Comment - BOS-2/24/15

A New Resolution today vs. reprioritizing the '2011' Resolution

• The inclusion of Community Regions in the EIR for the General Plan update means the boundaries can be amended (slide 4), *but the Board must direct staff to complete the process of analysis with the release of the Final EIR.* *No new resolution is necessary, and NO additional EIR is necessary*.

o Because Rural Communities United challenged the draft EIR on this analysis, not directing it to be completed in the Final EIR would leave the County vulnerable to litigation on the Gen Plan update.

• The Major CIP update should be based on an accurate model of growth. The extent of the Community Region has significant influence on growth projections, and *CRB review should have top priority rather than the least priority currently indicated*.

• A new resolution is an option, but it must be on a parallel path or the General Plan update will be completed first and expose the county to legal action on analysis that should have been done and was not. *A new resolution on a parallel path is redundant.*

• Why delay when *incorporating the Community Region boundary review in this update (the TGPA) will save time & money*, and will assist in accurate growth projections for the CIP update, *particularly* when review is inevitable? Community groups do not understand the resistance.

Community Regions
Public Comment - BOS-2/24/15

Citizen Groups have been participating in the planning process in an effort to get the Community Region boundaries revised.

Timeline follows.

Community Regions
Public Comment - BOS-2/24/15

Timeline

April 2011 – BOS hearing. Staff recommends including Community Region review in the next General Plan update.

Nov 2011 – ROI's are adopted by the Board for the General Plan update, which include Community Region Boundary (CRB) review. [*From adopted ROI 182-2011: **Policy 2.1.1.1 and 2.1.2.1** Consider analyzing the possibility of adding new, amending or deleting existing Community Regions or Rural Center planning areas.]*

July 6, 2012 –Notice of Preparation (NOP) released for the General Plan update EIR, based on those adopted ROI's

December 18, 2012 - NOP's for Dixon Ranch and San Stino Environmental Impact Reports (EIR) are released, and County Staff denies the inclusion of CRB's in the current General Plan update (TGPA).

January - September 2013 – Residents pushed back trying to show CRB's must be included in the EIR for the TGPA.

September 30, 2013 – Staff agrees the CRB's are indeed supposed to be included, but requests to exclude them.

February 2014 – Staff again requests to put the CRB's outside the EIR update, and the Board agrees it would cause delay of the TGPA. Citizen groups hit the street with ballot initiatives.

December 2014 – After the November initiatives fail under the load of developer dollars, BOS votes for a new ROI.

February 24, 2015 – Today the proposed new ROI comes before the BOS, and the redundancy is apparent:

The 2011 ROI is already included in the Environmental Impact Report for the currently ongoing update of the General Plan (the TGPA), which is not yet complete.

Community Regions
Public Comment - BOS-2/24/15

Suggested Options to proceed:

1. Withdraw the request to adopt a *new* Resolution, and contract the Community Regions as proposed during the *current* General Plan update.

2. Utilize the analysis of the 'reduced' Community Regions from the adopted 2004 General Plan EIR, and contract the boundaries *now,* without delay.

3. Acknowledge that a new EIR is not necessary, and support citizen groups who have been working within the Planning process.

Do NOT defer yet again - return the subject parcels to the Rural Region