

5.6 UTILITIES

This section describes the existing stormwater drainage, solid waste, power supply, and communication systems serving the west slope of El Dorado County. In addition to the setting discussions, this section also summarizes potential impacts related to the adequacy of these utility systems to serve expected population growth under the proposed equal-weight alternatives. Impacts related to new and expanded utility facilities are also discussed. Domestic water systems and wastewater systems are discussed in Section 5.5, Water Resources, of this EIR.

The analysis of impacts is based on consultation with utility service providers and on estimates of new and expanded facilities required to serve the future population under each of the equal-weight alternatives.

5.6.1 STORMWATER SYSTEMS

EXISTING CONDITIONS

Physical Environment

Drainage Basins

The west slope of El Dorado County contains three major watersheds, each of which drains into one of these major rivers: the Middle Fork American River, the South Fork American River, and the Cosumnes River. These watersheds are further divided into smaller drainage basins that feed the tributaries of these three major rivers. Developed drainage infrastructure exists in many of the drainage basins, particularly in the following nine drainage basins (Spiegelberg, pers. comm., 2003):

- < Coloma Canyon between Greenwood and Garden Valley (7.5 square miles);
- < Fannon Reservoir drainage (4 square miles);
- < Weber Creek from the Pollock Pines area to the American River, including the Cold Springs, Dry Creek, and Spring Creek tributaries (40 square miles);
- < Deer Creek from Cameron Park to the Sacramento County line (72 square miles);
- < Big Canyon Creek from El Dorado to the Cosumnes River, including the Slate, Little Indian, and French Creek tributaries (36 square miles);

- < Middle Fork of the Cosumnes River within the Somerset/Fairplay vicinity (23 square miles);
- < Cedar Creek from Omo Ranch to the Cosumnes River (37 square miles);
- < Jenkinson Reservoir drainage (18 square miles);
- < New York Creek (2.6 square miles); and
- < Allegheny Creek (1.9 square miles).

Stormwater Hazards

Flooding is the primary hazard related to stormwater runoff. Urban development generally increases the amount of impervious surfaces. When rainfall or snowmelt exceeds the ground infiltration rate (i.e., the ability of the ground to absorb water), stormwater runs off and collects in drainage facilities, which may be in the form of roadways, storm drains, and natural creeks and rivers. The net effects of additional impervious surfaces are increases in the flow rate and volume of water in the drainage channels during and after a storm event. When the volume of water exceeds the capacity of the drainage channel to convey water, flooding can result. Hazards associated with localized flooding include the overtopping of roadways, inundation of areas near the drainage channels, and structural damage. Stormwater runoff may also contribute to regional flooding. Impacts related to 100-year floods are discussed in Section 5.8, Human Health and Safety, of this EIR.

Other problems connected with increased stormwater runoff include erosion, sedimentation, and degradation of water quality. Stormwater can become polluted by eroded soil, pesticides, paint, fertilizers, animal waste, litter, oil and other automotive fluids, and household chemicals. Increased stormwater runoff can increase erosion and facilitate the movement of pollutants and soils into bodies of water. Increased sedimentation may be a detriment to aquatic wildlife habitats, and the use of downstream water bodies for beneficial uses (e.g., recreation, irrigation, water consumption) may be impaired (EMD 2002a). Water quality impacts associated with stormwater runoff are discussed in Section 5.5, Water Resources, of this EIR.

Regulatory/Planning Environment

Federal Programs

National Flood Insurance Program

El Dorado County participates in the National Flood Insurance Program (NFIP), a federal program administered by the Federal Emergency Management Agency (FEMA). Under the

NFIP, the County is required to regulate for 100-year flood protection. A 100-year flood is considered a severe flood with a reasonable possibility of occurrence for purposes of land use planning, property protection, and human safety. The U.S. Army Corps of Engineers (USACE), under contract to FEMA, prepared a flood insurance study report and a series of Flood Insurance Rate Maps (FIRMs) for numerous county waterways. The study and maps depict the location of calculated 100-year flood zones, flood elevations, floodways, 500-year flood boundaries, and flood insurance rate zones. The County participates in the NFIP by reviewing specific development proposals to ensure that structures that may be in a 100-year floodplain are protected from flood damage and that any changes in the floodplain do not cause unacceptable increases in the elevation of the 100-year water surface (HDR Engineering 1995).

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program was established by the Clean Water Act of 1972 to regulate municipal and industrial discharges to surface waters of the United States. The discharge of wastewater to surface waters is prohibited unless an NPDES permit allowing that discharge has been issued. The NPDES permit program is overseen by the U.S. Environmental Protection Agency's (EPA's) stormwater program; the State of California is authorized to administer the NPDES program within California. Starting in 1990, Phase I of EPA's stormwater program required NPDES permits for stormwater runoff from all of the following (EPA 2002):

- < "medium" and "large" municipal separate storm sewer systems (MS4s) generally serving populations of 100,000 or greater and denoted by EPA as MS4s,
- < construction activity disturbing 5 acres of land or greater, and
- < ten categories of industrial activity.

Phase II of the NPDES permit program is the next step in EPA's effort to protect water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring smaller operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff (EPA 2002). The County has submitted an application for the NPDES Phase II permit and expects to obtain a permit sometime in 2003 (see Section 5.5.3 for detailed discussion).

State Regulations

Subdivision Map Act (1907)

One of the powers granted to local jurisdictions by the Subdivision Map Act is the authority to impose drainage improvements or drainage fees and assessments. Specifically, local jurisdictions may require the provision of drainage facilities, proper grading and erosion control, dedication of land for drainage easements, or payment of fees needed for construction of drainage improvements. The types and applicable standards of the improvements may be specified in the local ordinance.

El Dorado County Regulation and Programs

County Grading, Erosion, and Sediment Control Ordinance

The County Grading, Erosion, and Sediment Control Ordinance (Grading Ordinance) (Chapter 15.14 of the County Code) establishes provisions for public safety and environmental protection associated with grading activities on private property. Section 15.14.090 of the Grading Ordinance, which has incorporated the recommended standards for drainage Best Management Practices (BMPs) from the High Sierra Resource Conservation and Development Council BMP guidelines handbook, prohibits grading activities that would cause flooding where it would not otherwise occur or would aggravate existing flooding conditions. The Grading Ordinance also requires all drainage facilities, aside from those in subdivisions that are regulated by the County's Subdivision Ordinance, be approved by the County Department of Transportation. Pursuant to the ordinance, the design of the drainage facilities in the County must comply with the County of El Dorado Drainage Manual, as described below.

El Dorado County Subdivision Ordinance

The County's Subdivision Ordinance (El Dorado County Code Title 16) requires the submission of drainage plans prior to the approval of tentative maps for proposed subdivision projects. The drainage plans must include an analysis of upstream, onsite, and downstream facilities and pertinent details, and details of any necessary offsite drainage facilities. The tentative map must include data on the location and size of proposed drainage structures. In addition, drainage culverts consistent with the drainage plan may be required in all existing drainage courses, including roads.

El Dorado County Department of Transportation Drainage Program

The County Department of Transportation has an ongoing drainage program with a goal of developing a Capital Improvement Program and funding mechanism for the construction of essential drainage infrastructure and to repair and/or replace inadequate drainage facilities throughout the county. The first phase of the drainage program, development of standard procedures for drainage system designs, was completed with the adoption of the *County of El Dorado Drainage Manual* in 1995.

The second phase of the drainage program involves updating FEMA mapping of four specific drainage basins in the county: Deer Creek in Cameron Park, New York Creek in El Dorado Hills, Carson Creek in the El Dorado Hills Business Park, and the El Dorado Townsite. Three of these basin studies have been completed and are discussed below. These basin studies provide area-specific analysis and identify areas where drainage improvements are required.

The third phase of the drainage program is the development of funding mechanisms to address drainage problems in the study areas. With funding mechanisms in place, capital improvement and maintenance programs can be implemented. The capital improvement program may establish methods of prioritizing existing and future drainage deficiencies and requirements with respect to potential damage, risk, and cost.

County of El Dorado Design and Improvement Standards Manual

The County's Design and Improvement Standards Manual was adopted in 1990 and provides required erosion and sediment control measures that are applicable to subdivisions, roadways, and other types of developments.

County of El Dorado Drainage Manual

The *County of El Dorado Drainage Manual* provides standard procedures for future designs of drainage improvements. The Drainage Manual supercedes the stormwater drainage system design standards in the County's *Design Improvements Standards Manual*. The Drainage Manual requires that a hydrologic and hydraulic analysis be submitted for all proposed drainage facilities. The analysis must include an introduction/background, location map/description, catchment description/delineation, hydrologic analysis, hydraulic and structural analysis, risk assessment/impacts discussion, unusual or special conditions, conclusions, and technical appendices. This analysis is usually required on projects undergoing discretionary review. However, under the Building Code and Grading Ordinance, the County also reviews

ministerial development, including required drainage plans, to ensure that appropriate runoff design and controls are in place.

Drainage Basin Studies

Three regional drainage studies have been completed on the west slope, as shown in Exhibit 5.6-1. A study of the El Dorado townsite has not been completed.

Carson Creek Regional Drainage Study

The *Final Report of the Carson Creek Regional Drainage Study* (Bottorff 1996) was completed in 1996 for the 15-square-mile Carson Creek watershed, most of which is located in the southwestern portion of El Dorado County. The purpose of this drainage study is to provide a unified plan for stormwater management in the El Dorado County portion of the watershed. The study recognizes the drainage needs of individual projects, assesses the impacts of the proposed drainage improvements on the entire catchment area, and satisfies the requirements of the *County of El Dorado Drainage Manual*.

The Carson Creek Regional Drainage Study uses results from previous drainage studies within the watershed, as well as land use information and drainage improvements included in the previous studies, to develop a regional drainage model. The drainage study was based on the maximum development allowed by the 1996 General Plan, and development projects that were proposed at that time. The amount of development allowed under the Roadway Constrained 6-Lane “Plus” Alternative, Environmentally Constrained Alternative, and No Project Alternative would be less than under the 1996 General Plan. The study assumes that the portion of the watershed in Sacramento County would remain as open space. The study concluded that runoff for the 100-year storm would result in minor downstream impacts in Sacramento County and that the increase in existing flood inundation areas would be negligible. The study recommended that future drainage improvements be designed and analyzed in context of the regional drainage model. Specific drainage improvements, such as culvert upgrades, channel improvements, and construction of a regional detention storage facility were also recommended. (Bottorff 1996.)

New York Creek Basin Drainage Study

The New York Creek Basin Drainage Study (Ensign & Buckley 1995) analyzes the watershed of New York Creek and its Governor Drive tributary. Assumptions for future land uses within the watershed were based on data from the El Dorado Hills Specific Plan and the El Dorado Hills/Salmon Falls Area Plan. The land use assumptions are similar to the land uses allowed by

Exhibit 5.6-1, Existing Drainage Study Areas (8.5x11)

the 1996 General Plan. The amount of development allowed under the other three equal-weight alternatives would be less than under the 1996 General Plan Alternative. The study concluded that in order to minimize the overtopping of roadways during the 100-year peak flow condition, improvements would be required at eight roadway crossings across New York Creek and the Governor Drive tributary. Even with the construction of these improvements and regular maintenance activities (e.g., channel clearing), flooding and overtopping may occur at roadway crossings. This drainage study also included cost estimates for the recommended improvements.

Cameron Park Drainage Study

The Cameron Park Drainage Study analyzed the flooding potential of a 72-square-mile area in the upper reaches of Deer Creek in order to identify drainage channel improvements. The option of using detention to reduce peak flow was not analyzed. The draft General Plan land use map available during the preparation of the drainage study in 1995 was the source of future land use data in the Cameron Park Drainage Study, the hydrologic and hydraulic analyses of which were based on the full buildout of the watershed consistent with the land use designations. The study concluded that 16 roadway crossings at the buildout of the 1995 draft General Plan may experience overtopping during a 100-year storm event if culvert or detention improvements were not implemented. The study included recommended culvert improvements while also recommending further studies regarding using detention to reduce the peak flow. This drainage study also included cost estimates for the recommended culvert improvements (Psonas and Associates 1995). In practice, the potential for flooding may be less than identified by the study. The drainage study was based on the draft General Plan in 1995, which was similar to the 1996 General Plan. The amount of development allowed under the Roadway Constrained 6-Lane “Plus” Alternative, Environmentally Constrained Alternative, and No Project Alternative would be less than under the 1996 General Plan. Discretionary developments in the study area subsequent to the drainage study have constructed detention improvements as required by the County’s Drainage Manual (Pesses, pers. comm., 2003). Furthermore, some of the projects in the drainage study area have been built at lower densities than the maximum allowed, thereby decreasing the potential for flooding conditions (Spiegelberg, pers. comm., 2003).

El Dorado County Special Districts

California Government Code §25210 allows for the formation of county service areas in unincorporated areas, providing an alternative method of furnishing extended governmental services and the levy of taxes to pay for the extended services. The County has established Drainage Zones of Benefit, as well as Road and Drainage Zones of Benefit, that are managed

by the County’s General Services Department for the purpose of generating funding for the construction of community drainage facilities.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

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

- < create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems, or
- < result in a substantial alteration of existing drainage patterns or a substantial increase in the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite.



Localized Flooding Hazards Caused by Increased Runoff from New Development. Higher-density development would have the greatest potential for increasing runoff and causing localized flooding. Existing County regulation, policies, and programs provide adequate protections to ensure sufficient runoff control and infrastructure for discretionary and ministerial projects include all higher-density projects. 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
5.6-1: Localized Flooding Hazards Caused by Increased Runoff from New Development	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.								

Future development in El Dorado County would create additional impervious surfaces that would increase stormwater runoff to offsite locations. Depending on the soil type, hydrologic cover, land forms and topography, and storm distribution, development at densities less than one-half dwelling unit per acre (du/ac) (i.e., 0.5 du/ac or 1 du/2 ac) would have infiltration rates that are effectively the same as those for undeveloped land. As such, individual developments at or below such densities would not be expected to result in increased runoff. Densities exceeding this rate would be expected to increase runoff (Spiegelberg, pers. comm., 2003).

Projects that have already been approved by the County are referred to as “existing commitments” in this EIR. Existing commitments represent previously approved discretionary subdivision projects that have been reviewed for compliance with County regulation, policies, and programs; as such, they would be required to avoid creating or exacerbating localized flooding conditions. Accordingly, this analysis focuses on areas of the County that are not subject to existing commitments. Approximately two-thirds of all parcels outside of the area with existing commitments are smaller than 2 acres and one-third are larger than 2 acres. As described above, this size is important because it suggests that single-family development on those parcels greater than 2 acres in size would not affect runoff rates from the site.

Where increased runoff to offsite locations would occur, it may result in changes in flow characteristics, such as increases in total runoff volume and the peak flow rate. As developments are constructed within a drainage area, incremental amounts of runoff can be added to existing runoff volumes, unless appropriate controls are in place. Over time, the cumulative runoff could exceed the capacity of existing drainage facilities during peak-flow conditions, resulting in localized flooding hazards. Increases in runoff, which may carry additional sediments and snags, may also affect the capacity of natural drainage channels through blockage, sedimentation, or other changes in the channel, thereby exacerbating the flooding problem. Regulatory requirements pertaining to changes in drainage channel are also discussed in Section 5.12, Biological Resources, of this EIR.

The risk of flood hazards is greater in developed areas than in rural areas because of the greater development density and greater coverage by impervious surfaces. On sites with impervious surfaces, which reduces stormwater infiltration into the ground, some of the stormwater stays above ground surface and either creates onsite ponding or drains to offsite locations in the form of runoff. In particular, areas with existing high-density development that were constructed prior to the adoption of County regulations, policies, and programs may contain localized flooding conditions that could be exacerbated by new development. In rural areas where development density is lower than in the more urbanized areas, the greater ratio of pervious surfaces to impervious surfaces allows more infiltration of stormwater into the ground. As such, potential flooding in rural areas would generally be restricted to small, localized areas.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies 5.1.1.1 and 5.1.1.2, 5.1.2.1 through 5.1.2.4, 5.1.3.1 and 5.1.3.2, 5.4.1.1 through 5.4.1.3, 6.4.1.2, and 7.1.2.5.

No Project Alternative (2025)—Impact Discussion

Development of existing commitments would concentrate the highest density of development in Market Areas 1 and 2 (El Dorado Hills and Cameron Park/Shingle Springs/Rescue). Other residential development would be spread out at lower densities throughout the county because of the Writ prohibition on new subdivisions. Commercial/industrial development is expected to follow a similar pattern. As discussed in the New York Creek Basin Drainage Study (El Dorado Hills), Carson Creek Regional Drainage Study (El Dorado Hills), and Cameron Park Drainage Study, flooding conditions exist and may be exacerbated by additional development within the watersheds if mitigation, such as that required by the *County of El Dorado Drainage Manual* and the Grading Ordinance, is not implemented. The majority of residential development that would occur under the No Project Alternative at 2025 within these drainage basins would be within subdivisions that have already been approved (14,565 dwelling units of the 21,434 projected total), but subject to the policies in the 1996 General Plan and the existing ordinances/manual.

Discretionary development projects, including both residential and nonresidential development (which would add 36,188 jobs) are required to comply with Policies 5.4.1.2, 5.4.1.1, 5.1.2.1, 5.1.2.2, and 6.4.1.2. All development, including ministerial, is reviewed for compliance with the *County of El Dorado Drainage Manual* and for proper drainage facility

design and control. Compliance with the policies and/or with the Drainage Manual would minimize the contribution of the development to any downgradient flooding conditions. Policy 5.1.2.3 would require subdivisions and other discretionary development projects to contribute their fair-share cost of drainage infrastructure development, thus ensuring that it would be financially feasible to develop the drainage infrastructure necessary to minimize the risk of flooding hazard. Policies 5.4.1.2 and 7.1.2.5 would require the County to maintain and manage existing drainage systems. Implementation of the General Plan policies and compliance with the County's standards and ordinance would ensure that new developments would not create new localized flooding hazards in the county or expose its residents to existing onsite flooding conditions. As such, this impact is considered less than significant.

No Project Alternative (Buildout)—Impact Discussion

Buildout of the county would further increase development and potential contribution to localized flooding. Please refer to No Project Alternative (2025)—Impact Discussion above. Given existing regulation, policies, and programs, 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-7a, PS-1a through PS-1e, and PS-1g.

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

Development of existing commitments would occur as described in the No Project (2025) discussion. Additional development in the more developed areas of the county, including El Dorado Hills, Cameron Park/Shingle Springs/Rescue, Placerville, and Diamond Springs, would be more limited under the Roadway Constrained 6-Lane “Plus” Alternative, because of its subdivision limitations, than under the Environmentally Constrained and 1996 General Plan alternatives. However, some development would occur within these drainage study areas. As discussed in the New York Creek Basin Drainage Study (El Dorado Hills), Carson Creek Regional Drainage Study (El Dorado Hills), and Cameron Park Drainage Study, flooding conditions exist and may be exacerbated by additional development within the watersheds if mitigation, such as that required by the *County of El Dorado Drainage Manual*, is not implemented.

Future development projects (discretionary and ministerial), including development to support 34,455 jobs and additional housing, would have to comply with the Drainage Manual and drainage plan review. Discretionary projects would also be required to comply with Policies PS-1d and PS-1e. These policies would require development projects to contribute their fair-share cost of drainage infrastructure development, which may be required by the manual depending on the site conditions and proposed development densities of future projects. Compliance with the manual and the policies would minimize the contribution of development to any downgradient flooding conditions, and would ensure that new developments would not create or exacerbate localized flooding hazards in the county. Given the implementation of the County’s regulation, policies, and programs, this impact is considered less than significant.

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

More impervious surfaces could be developed under this alternative at buildout than under the 2025 scenario because of continued extensive development in outlying areas, such as the Pollock Pines, Pleasant Valley, Cool/Pilot Hill, Georgetown/Garden Valley, and American River areas. As discussed above, development would be required to construct stormwater drainage improvements that minimize runoff to offsite locations. This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

Discretionary development, including most higher-density development, would be required to comply with policies (see discussion under the Roadway Constrained 6-Lane “Plus” Alternative) that require consideration and mitigation of runoff impacts. All development (including ministerial) would be subject to compliance with the Drainage Manual and drainage design review. As such, this impact is considered less than significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

As discussed above, implementation of the County's policies, regulation, and programs would minimize runoff from projects, including most higher-density development. This impact is considered 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

As described under the No Project Alternative, implementation of County policies and programs, particularly the Drainage Manual, would ensure that drainage infrastructure necessary to avoid localized flooding is constructed. Thus, this impact is considered less than significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Please refer to 1996 General Plan Alternative (2025)—Impact Discussion above. This impact is considered less than significant.

5.6.2 SOLID WASTE AND HAZARDOUS WASTE DISPOSAL

EXISTING CONDITIONS

Physical Environment

Solid Waste

Solid waste includes household garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded materials, including household hazardous waste. The California Integrated Waste Management Board (CIWMB) defines household hazardous waste as:

wastes resulting from products purchased by the general public for household use that, because of their quantity, concentration, or characteristics (e.g., physical, chemical, or infectious), may pose a substantial known or potential hazard to human health or the environment when treated, disposed of, or otherwise managed.

Examples of household hazardous waste include household cleaners, automotive products, home maintenance and improvement products, and lawn and garden products (HDR Engineering 1995). Hazardous waste treatment, storage, and disposal is discussed in Section 5.8.1, Hazardous Materials, as it applies to exposure of humans to hazardous materials. The impact of the development of new facilities for storage and disposal of hazardous wastes is discussed below.

Solid waste is generated by industrial, commercial, institutional, residential, and other types of land uses. In the unincorporated portion of El Dorado County, most of the solid waste is generated by residential land uses. In 2000, the residential waste stream accounted for 61.5% of the total waste stream in the unincorporated portion of the county, with the remaining 38.5% generated by nonresidential sources. Based on a total waste stream of 81,575 tons in 2000, the unincorporated portion of El Dorado County generates 2.2 pounds of waste per resident per day and 4.2 pounds per day per employee per day (CIWMB 2002).

Regulatory/Planning Environment

State Regulation

The California Integrated Waste Management Act (Assembly Bill 939) became law on January 1, 1990. This law mandated that every county and city divert 25% of its waste from landfills by 1995 and 50% by 2000 or face fines of \$10,000 per day (EMD 2002a). The California Integrated Waste Management Act, administered by the CIWMB, requires each city and county to prepare an Integrated Waste Management Plan (IWMP). The IWMP must include a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE).

To accomplish these requirements, the County Waste Management Task Force has developed the County's IWMP in a cooperative effort overseen by the respective city councils and the Board of Supervisors. In compliance with its SRRE, the County has implemented an integrated program for source reduction, composting, and recycling. To accomplish the waste diversion goals, the County solid waste collection and processing franchise operations have built regional Material Recovery Facilities (MRFs). These facilities process solid wastes through a sorting line and recyclables are diverted to market (EMD 2002a).

The County's HHWE includes a periodic collection program, a permanent collection facility, a waste acceptance control program, a recycling/waste exchange program, and a public education and information program (HDR Engineering 1995). Currently there are three permanent household hazardous waste collection facilities constructed and in operation. The MRFs are implementing waste acceptance control programs, and recycling exchange programs. The County Environmental Management Department (EMD) is also implementing numerous public education and information programs.

County Regulation

The County's Solid Waste Management Ordinance (No. 4525) governs the accumulation, storage, collection, and disposal of solid waste generated on residential, commercial, and industrial properties within El Dorado County. The ordinance includes prohibitions and permit requirements for specific activities (EMD 2002a).

County Waste Collection, Recycling, and Disposal Program

The Solid Waste and Hazardous Materials Division (SW/HM) of EMD, through exclusive contracts with private solid waste collection and disposal companies, is responsible for the comprehensive planning of solid waste reduction, recycling, and resource recovery in the county. The County's waste management programs are partially funded by fees collected on the tax roll, landfill disposal fees, and developer's fees (HDR Engineering 1995).

El Dorado County is divided into two waste management regions: the Tahoe Basin and the west slope. El Dorado County has franchise agreements with solid waste companies to provide solid waste collection services, as well as recycling and disposal services, for the unincorporated portion of the county, as well as the cities of South Lake Tahoe and Placerville. Most west slope residents and businesses are served by Waste Management, Inc. (also known as El Dorado Disposal/Western El Dorado Recovery Systems). The franchise areas are shown in Exhibit 5.6-2. Within the city of Placerville, El Dorado Hills Community Services District, and Cameron Park Community Services District franchise areas, residential pickup is mandatory. These areas account for approximately 40% of the county's population. Residential pickup, as well as commercial garbage collection, is not mandatory for the remaining areas of the county (Johnston, pers. comm., 2003).

There are no solid waste disposal sites in El Dorado County. Once collected, solid waste generated on the west slope (including recyclable materials) is taken to the MRF/transfer station at Diamond Springs, as shown in Exhibit 5.6-2. Recyclable materials are separated

Exhibit 5.6-2,
Material Recovery Facilities and Solid Waste
Collection Franchise Areas

(11x17)

Exhibit 5.6-2,
Material Recovery Facilities and Solid Waste
Collection Franchise Areas

(11x17)

from the waste stream at the MRF. From the MRF, unrecyclable solid waste is taken to Lockwood Landfill in Nevada for disposal (EMD 2002a).

The County has implemented a number of SRRE programs, including the establishment of two MRFs, backyard composting education, tire amnesty days, curbside recycling, commercial waste reduction and recycling, Christmas tree recycling, household hazardous waste collection, and composting and recycling by government agencies. With these programs, El Dorado County is diverting 41% of solid waste from the landfills (Opalenik, pers. comm., 2002). This is less than the 50% diversion rate mandated by the California Integrated Waste Management Act. The CIWMB has approved an extension of the 50% diversion rate deadline to 2005 for the County (CIWMB 2002). The County is required to take further steps to achieve the mandated 50% recycling rate. Additional infrastructure, such as a potential Georgetown transfer station, enhanced public education, and more aggressive recycling are expected to be implemented to meet the mandate (EMD 2002a).

While there are no hazardous waste treatment, storage, and disposal (TSD) facilities within El Dorado County, the County has implemented a series of programs to collect and transport household hazardous wastes to TSD facilities outside the county for disposal. The County Hazardous Waste Management Plan contains detailed siting and approval procedures if a TSD facility were to be proposed in the county in the future. Additional discussions regarding household hazardous wastes are contained in Section 5.8, Human Health and Safety, of this EIR.

Material Recovery Facilities

El Dorado County contains two MRFs. The El Dorado Disposal MRF serves the west slope of El Dorado County from its location in Diamond Springs, as shown in Exhibit 5.6-2. The existing permitted volume of waste material that may be processed at the El Dorado Disposal MRF is 400 tons per day (CIWMB 2003a). In 2001, this MRF diverted 16,545 tons of recyclable materials from the solid waste stream (CIWMB 2003b). This MRF is currently operating near or above its capacity. In the last quarter of 2002, there were three incidences of received tonnage exceeding the permitted daily tonnage (Williett, pers. comm., 2003). In 2002, Waste Management Inc., the owner of this MRF, began transferring solid wastes from the county to a MRF located in the City of Lodi in San Joaquin County (CIWMB 2003b).

The South Lake Tahoe Refuse/Transfer Station MRF serves the Tahoe Basin. This MRF is currently allowed to process up to 370 tons per day (CIWMB 2003a). In 2001, this MRF diverted 31,908 tons of recyclable materials (CIWMB 2003b).

Sierra Disposal Service is proposing to build a small-volume rural transfer facility within the Georgetown Divide area. Such a facility would provide additional opportunities for disposal and the recycling of materials. However, an application for this facility has not been filed with the County and its timing is not currently known (Maurer, pers. comm., 2003). Similar small-scale facilities may also be proposed in other portions of the county (EMD 2002a). Additional discussions regarding recycling and illegal dumping of household hazardous wastes are contained in Section 5.8, Human Health and Safety, of this EIR.

Landfills

The solid waste generated in El Dorado County is currently disposed of in the Lockwood Landfill, which is located outside the county. The County has also historically used Potrero Hills Landfill, located in Solano County, for solid waste disposal.

The last remaining active landfill in the county, the county-owned Union Mine Landfill, only accepts processed sewage sludge wastes from septic tanks throughout the county; these wastes are processed further at an onsite wastewater treatment plant (EMD 2002a). The landfill receives approximately 600 cubic yards of sludge per year and has capacity for 140,000 cubic yards (161 years at current disposal rates) (Johnston, pers. comm., 2003).

The Lockwood Landfill is a regional sanitary landfill located near Reno, Nevada, that receives solid waste from several counties in Nevada and California. The Lockwood Landfill, which is owned and operated by Waste Management, Inc., is located on a 37,050-acre property, most of which may be used for landfill operations. Currently, 550 acres of the property are used as an active disposal unit. Another 1,000 acres are currently entitled by Storey County, Nevada, for use as a landfill in the future. The existing 550-acre disposal unit is permitted for a total capacity of approximately 43 million tons, based on the permit received from Washoe County, Nevada, in 1993. The remaining capacity for the 550-acre disposal unit is approximately 33.8 million tons. The existing permit does not restrict the maximum daily and yearly tonnage that may be received by the 550-acre disposal unit; instead, it sets the closure year for the existing 550-acre disposal unit at 2025. Currently, the Lockwood landfill receives 1.4 million tons of solid waste per year, with a daily average of 5,700 tons. Based on the tonnage of solid waste generated in the county in 2000, the county's solid wastes account for 5.8% of the solid waste received by the Lockwood Landfill.

Waste Management, Inc., expects to apply to Storey County before 2025 for a landfill use permit for the 1,000 acres; these additional 1,000 acres would extend the projected operating life of the Lockwood Landfill by 200 years, with the expected additional capacity of approximately 200 million tons (Franchi, pers. comm. 2003).

Up until 2 years ago, a small portion of the county's solid wastes was disposed of in the Potrero Hills Landfill, a regional landfill located in Solano County that currently receives solid wastes from six Northern California counties. The Potrero Hills Landfill, with a currently active disposal unit of 190 acres out of its total 1,200 acres, is permitted for a maximum disposal rate of 4,330 tons per day, or 1.6 million tons per year. Based on projected disposal rates, the 190-acre disposal unit has an estimated 10 years of landfill capacity remaining. The Potrero Hills Landfill would be applying for another operating permit for an additional disposal unit, consisting of 140 acres, that would extend the life of the landfill by approximately 45 years. The remainder of the 1,200-acre property may also be used as landfill disposal units, further extending the operational life of the landfill (Covington, pers. comm., 2003).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

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

- < utilize landfill capacity to the extent that the County would be unable to accommodate future solid-waste disposal needs;
- < interfere with the County's compliance with federal, state, and local statutes and regulations related to solid waste;
- < result in inadequate facilities/mechanisms to dispose of hazardous waste in compliance with all federal, state, and local statutes and guidelines related to hazardous-waste disposal; or
- < result in the need for new solid waste and hazardous-waste facilities, the construction of which would result in potential environmental impacts on the environment.

Impact
5.6-2

Potential for Inadequate Landfill Capacity. Additional development in the county would generate substantial additional solid waste. There is ample available and planned landfill to accommodate county needs well beyond the planning horizon and the foreseeable future under all alternatives. Given that the existing landfills are expected to have adequate landfill capacity through 2025 and beyond, this impact is considered **less than significant**. Impact significance 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
5.6-2: Potential for Inadequate Landfill Capacity	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.								

As discussed above, solid waste from El Dorado County is disposed of in the Lockwood Landfill. Based on the existing operating permit from Washoe County, the currently active disposal unit at the landfill has a closure date of 2025. The Lockwood Landfill would have capacity for an additional 200 years if operating permits were obtained as expected for a 1,000-acre disposal unit. Although the landfill currently has a special land-use permit from Storey County for the 1,000-acre site, it is not known whether operating permits will in fact be obtained (Franchi, pers. comm., 2003).

Lockwood Landfill has indicated that it would be able to provide waste disposal capacity for the county’s projected solid-waste tonnage, as shown in Table 5.6-1 for all alternatives, at 2025 and for the foreseeable future beyond that (Franchi, pers. comm., 2003). However, the County and its franchise operators may contract with landfills elsewhere in California or Nevada for disposal capacity if the capacity at Lockwood Landfill is somehow made unavailable in the future. For example, the County may choose to dispose of solid wastes at the Potrero Hills Landfill, which has also indicated that it would be able to serve the county’s projected solid-waste tonnage, as shown in Table 5.6-1, based on its existing and projected capacity (Covington, pers. comm., 2003). This option would allow the County to continually ensure sufficient landfill capacity for the solid waste generated in the county.

Union Mine Landfill has sufficient capacity to accommodate sludge disposal needs under all alternatives through 2025 and at buildout. Even assuming the worst-case buildout of the 1996

General Plan, which could triple generation rates in the future, sufficient capacity would be available for more than 50 years and beyond.

The county’s solid waste diversion rate is expected to meet the CIWMB’s 50% diversion requirements by 2005 (see Impact 5.6-3). However, even if this diversion rate is not achieved, given the availability of landfill capacity and the option of contracting with other landfills that have available capacity in the future, the future diversion rate is not expected to have a substantial effect on the sufficiency of landfill capacity in the future.

Equal-Weight Alternatives	2025			Buildout		
	Population Increase (residents)	Employee Increase (jobs)	Solid-Waste Increase ¹ (tons per year)	Population Increase (residents)	Employee Increase (jobs)	Solid-Waste Increase ¹ (tons per year)
No Project	53,610	36,188	49,263	73,829	84,360	94,304
Roadway Constrained 6-Lane “Plus”	64,601	34,455	52,347	104,137	86,688	108,257
Environmentally Constrained	80,730	42,711	65,151	137,688	67,709	107,181
1996 General Plan	81,241	42,196	64,961	196,692	86,688	145,418

¹ Based on 2.2 pounds per year of solid waste per resident (0.4015 ton per year); 4.2 pounds per day of solid waste per employee (0.7665 ton per year). These generation rates, based on 1999 data for the County, were the latest data available from CIWMB website.

Source: CIWMB Jurisdiction Profiles for El Dorado County (unincorporated) 2003

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies 5.1.1.1 and 5.1.1.2, 5.1.2.1 through 5.1.2.4, 5.1.3.1 and 5.1.3.2, 5.5.2.1 and 5.5.2.2.

No Project Alternative (2025)—Impact Discussion

New development in El Dorado County under the No Project Alternative would increase the amount of solid waste generated in the county. As shown in Table 5.6-1, the population and

job increases by 2025 under this alternative are expected to generate an additional 49,263 tons per year of solid waste into the county's existing waste stream.

Policy 5.5.2.1 requires discretionary projects to provide evidence that capacity exists within the solid-waste system for the disposal of solid waste. While this policy does not apply to ministerial projects, landfill capacity is sufficient to accommodate project needs. Furthermore, Policy 5.5.2.2 requires existing waste-related facilities to be protected from the encroachment of sensitive and/or incompatible land uses in order to preserve the existing waste processing capacity. Given these policies, and the fact that no shortages of landfill capacity and waste collection service exists or is expected by 2025, this impact is considered less than significant.

No Project Alternative (Buildout)—Impact Discussion

As shown in Table 5.6-1, the population and job increases by buildout under this alternative are expected to generate an additional 94,304 tons per year of solid waste into the county's existing waste stream. Landfill capacity is expected to be sufficient for the county beyond 2025, if permits are obtained for expansion of the Lockwood Landfill. The landfill operator has stated that sufficient landfill capacity will be available well past 2025 (Franchi, pers. comm., 2003). 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-7a, PS-1c and PS-1d, and PS-6a through PS-6c.

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

New development in El Dorado County under the Roadway Constrained 6-Lane "Plus" Alternative would increase the amount of solid waste generated in the county. As shown in Table 5.6-1, the population and job increases by 2025 under this alternative would generate an additional 52,347 tons per year of solid waste into the county's existing waste stream.

Policies LU-7a and PS-1d require discretionary projects to provide evidence that public services or adequate infrastructure, including solid-waste facilities and services, are available before project approval. While these policies do not apply to ministerial projects, landfill capacity is sufficient to accommodate projected needs. Policies PS-1c and PS-6a would require the County to work with its solid-waste franchise contractors and landfill operators to ensure

adequate landfill capacity. Given the implementation of the General Plan policies and the fact that no shortages of landfill capacity and waste collection service exist or are expected even beyond 2025, this impact is considered less than significant.

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

As shown in Table 5.6-1, the population and job increases by buildout under this alternative are projected to generate an additional 108,257 tons per year of solid waste into the County’s existing waste stream. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) As described for the No Project Alternative, no shortages of landfill capacity and waste collection service exist or are expected within the foreseeable future; therefore, this impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

As shown in Table 5.6-1, the population and job increases by 2025 under this alternative would generate an additional 65,151 tons per year of solid waste into the county’s existing waste stream. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) This impact is considered less than significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

As shown in Table 5.6-1, the population and job increases by buildout under this alternative are projected to generate an additional 107,181 tons per year of solid waste into the county’s existing waste stream. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) As discussed above, landfill capacity is expected to be sufficient if Lockwood Landfill obtains future (beyond 2025) permits for landfill operations. This impact is considered 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

As shown in Table 5.6-1, the population and job increases by 2025 under this alternative would generate an additional 64,961 tons per year of solid waste into the county's existing waste stream. The 1996 General Plan Alternative would result in more residential and nonresidential development by 2025 than the other equal-weight alternatives. As described under the other equal-weight alternatives, given the adequate capacity of the landfill used by the County, this impact is considered less than significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

As shown in Table 5.6-1, the population and job increases by buildout under this alternative are projected to generate an additional 145,418 tons per year of solid waste into the County's existing waste stream at buildout. This is the highest amount of all equal-weight alternatives, and the Lockwood Landfill operator has confirmed that there is sufficient available capacity to accommodate this alternative well beyond 2025. (Please refer to 1996 General Plan Alternative (2025)—Impact Discussion above.) This impact is considered less than significant.

Impact
5.6-3

Potential Noncompliance with State-Mandated Diversion Rate. The County currently diverts less than the state-mandated 50% solid waste diversion rate. Given the long-range plans of the County and the approval of a time extension by CIWMB, the future diversion rate is expected to meet the state mandate. This impact is considered **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
5.6-3: Potential Noncompliance with State-Mandated Diversion Rate	S ₄	S ₄	S ₃	S ₃	S ₂	S ₂	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
5.6-3: Adopt a Construction and Demolition Debris Diversion Ordinance	SU ₄	SU ₄	SU ₃	SU ₃	SU ₂	SU ₂	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.								

New development in El Dorado County under all alternatives would increase the amount of solid waste generated in the county, as shown in Table 5.6-1. Currently, the county’s solid-waste diversion rate is less than the state-mandated 50%. The additional solid waste generated by 2025 would further reduce the diversion rate unless additional recycling capacity is added for solid-waste collection. Construction waste and debris associated with new development would contribute to the waste stream.

Solid-waste collection, recycling, and disposal in the county are performed primarily by private-sector operators under franchise agreements with the County. As required by the franchise agreements, the private-sector operators would provide additional facilities, equipment, and staffing or increase the efficiency of their operations in order to meet the increasing demand for waste collection and distribution services within each franchise area. The County would only be responsible for managing the franchise agreements.

In its application to the CIWMB for an extension of time for meeting the state-mandated 50% diversion rate, the County proposed to grant franchise agreements for the development of two mixed, solid-waste processing facilities, which would convert the County’s residual mixed solid waste into useful and marketable products and resources (EMD 2002a). One of these proposed mixed, solid-waste processing plants is being planned for as a part of the South

Tahoe Refuse/Herhof project. This mixed, solid-waste processing plant would be located adjacent to the existing South Lake Tahoe MRF. Construction of Phase 1 of this project is expected to be completed in June 2004. The planning process for the other proposed mixed, solid-waste processing plant, which would be located on the west slope, is currently progressing between the proposed developer and operator of this second mixed, solid-waste processing plant, Waste Management, Inc., and the County. As an alternative to this second mixed, solid-waste processing plant, Waste Management, Inc. may pursue the implementation of a three-cart truck collection system, in which solid waste is presorted by residents prior to curbside collection. This alternative may be pursued in order to achieve the CIWMB-mandated diversion rate (Jella, pers. comm., 2003).

Sorting activities associated with waste recycling on the west slope are currently conducted at the El Dorado Disposal MRF located in Diamond Springs, with some solid waste transported to another MRF located in San Joaquin County for sorting and processing. Other new recycling programs have been proposed and planned for the purpose of increasing the diversion rate, such as a transition to a three-cart recycling system in the El Dorado Hills Community Services District and free door-to-door chipping services. With the expectation that these programs and efforts would increase the diversion to 50% or more, the County has been granted the time extension and is currently considered to be in compliance with CIWMB requirements.

Table 5.2-6 provides a calculation of expected waste diversion by 2025 and buildout. Applying 50% diversion rates in 2025 based on the current regulatory scheme, this would result in an increase of up to 32,576 tons of recyclable materials (Environmentally Constrained Alternative) diverted from the solid waste stream generated on the west slope. As mentioned above, the El Dorado Disposal MRF diverted 16,545 tons in 2001. It is expected that additional MRFs would need to be constructed and/or existing MRFs would require expansion. At buildout, the amount of diverted materials would increase by up to 72,709 tons per year (1996 General Plan Alternative). As such, more new or expanded MRFs would be expected between 2025 and buildout. The locations and size of future MRFs cannot be determined at this time. (See also the discussion in Impact 5.6-5 related to siting of MRFs.)

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 5.1.1.1 and 5.1.1.2, 5.1.2.1 through 5.1.2.4, 5.1.3.1 and 5.1.3.2, 5.5.2.1 and 5.5.2.2.

No Project Alternative (2025)—Impact Discussion

Policy 5.5.2.1 requires discretionary projects to provide evidence that capacity exists within the solid-waste system for the processing, recycling, and transportation of solid waste. While this does not address ministerial development, Policies 5.1.1.1 and 5.1.1.2 would require the County to work with its franchise operators to plan for and implement needed facilities and programs in order to meet all state mandates. In addition, there may not be sufficient MRF capacity to achieve the CIWMB-mandated 50% by 2025. Therefore, this impact is considered significant.

Table 5.6-2 Estimates of Increase in Recyclable Materials Diverted from Solid Waste Stream (Tons per Year)				
Equal-Weight Alternatives	2025		Buildout	
	Solid Waste Increase¹	Recyclable Material Increase²	Solid Waste Increase¹	Recyclable Material Increase²
Alternative #1: No Project Alternative	49,263	24,632	94,304	47,152
Alternative #2: Roadway Constrained 6-Lane "Plus"	52,347	26,174	108,257	54,129
Alternative #3: Environmentally Constrained	65,151	32,576	107,181	53,591
Alternative #4: 1996 General Plan	64,961	32,481	145,418	72,709
¹ Based on generation rate of 2.2 pounds per resident and 4.2 pounds per employee. These generation rates are based on 1999 CIWMB data for the County. ² Based on diversion rate of 50%. Source: CIWMB Jurisdiction Profiles for El Dorado County (unincorporated) 2003, CIWMB Annual Report for El Dorado County 2003, EDAW 2003				

No Project Alternative (Buildout)—Impact Discussion

As shown in Tables 5.6-1 and 5.6-2, additional solid waste (94,304 tons) and recyclable materials (47,152 tons) could be added to the County’s existing waste stream. (Please refer to No Project Alternative (2025)—Impact Discussion above.) The future diversion rate is planned to meet the state mandates, but there may not be sufficient MRF capacity to achieve the 50% mandated diversion rate at buildout. 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-7a, PS-1c and PS-1d, PS-6a through PS-6c, and PS-10a.

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

New development under the Roadway Constrained 6-Lane “Plus” Alternative would increase the amount of solid waste generated in the county, as shown in Table 5.6-1.

Policies PS-1c and PS-6a require the County to collaborate with state and local entities responsible for managing solid waste to accomplish and maintain the mandated solid waste diversion rate. Policies LU-7a and PS-1d require discretionary projects to provide evidence that public services or adequate infrastructure, including recycling facilities and services, are available before project approval.

Given the implementation of the General Plan policies and the efforts being made by the County to meet the state-mandated diversion rate, the future diversion rate is expected to be sufficient to meet the state-mandate. However, there might not be sufficient facilities available to accommodate the diversion needs. Therefore, this impact is considered significant.

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

As shown in Tables 5.6-1 and 5.6-2, the population and job increases associated with buildout under this alternative are projected to generate an additional 108,257 tons per year of solid waste and 54,129 tons of recyclable material into the county’s existing waste stream. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

New development under this alternative at 2025 would increase the amount of solid waste/recyclable material generated in the county, as shown in Tables 5.6-1 and 5.6-2. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

New development under this alternative at buildout is expected to further increase the amount of solid waste/recyclable material generated in the county, as shown in Tables 5.6-1 and 5.6-2. (Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above.) 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

New development under this alternative at 2025 would increase the amount of solid waste/recyclable material generated in the county, as shown in Tables 5.6-1 and 5.6-2. (Please refer to No Project Alternative (2025)—Impact Discussion above.) This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

New development in El Dorado County under the this alternative at buildout is expected to further increase the amount of solid waste generated in the county, as shown in Table 5.6-1. (Please refer to No Project Alternative (2025)—Impact Discussion above.) This impact is considered significant.

Mitigation Measure 5.6-3—No Project Alternative

The County shall implement the following measure:

- < Mitigation Measure 5.6-3: Adopt a Construction and Demolition Debris Diversion Ordinance

This mitigation measure is described below. Construction and demolition debris constitute a significant portion of the solid waste that can be diverted from landfills. In Alameda County, it was estimated that 16% of the total solid waste stream is construction materials. Case studies showed that up to 85% of the construction waste from conventional residential development projects could be successfully diverted from the waste stream (ACWMB 2003). With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level because it is unknown to what extent the program would be successful nor the total percent of diversion. Impacts would be significant and unavoidable.

Mitigation Measure 5.6-3: Adopt a Construction and Demolition Debris Diversion Ordinance

New Policy: The County shall adopt a Construction and Demolition Debris Diversion Ordinance requiring that a minimum of 50% of the debris from construction and demolition projects be reused or recycled.

Mitigation Measure 5.6-3—Roadway Constrained 6-Lane “Plus” Alternative

Please refer to the proposed Mitigation Measure 5.6-3 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Mitigation Measure 5.6-3—Environmentally Constrained Alternative

Please refer to the proposed Mitigation Measure 5.6-3 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Mitigation Measure 5.6-3—1996 General Plan Alternative

Please refer to the proposed Mitigation Measure 5.6-3 for the No Project Alternative above. For the same reasons as expressed above, this impact would be significant and unavoidable.

Impact
5.6-4

Potential for Insufficient Facilities/Mechanisms to Dispose of Hazardous Waste. New residents and businesses would increase the amount of hazardous wastes generated in the county under each of the alternatives. Capacity for these facilities is provided by private business operators, which would be expected to continue to meet market demands. Given that the County and businesses would be required to contract with private entities who would provide treatment, storage, and disposal capacity, this impact is considered **less than significant**. (Potential impacts related to construction of these facilities are discussed in Impact 5.6-5.) Impact significance 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
5.6-4: Potential for Insufficient Facilities/ Mechanisms to Dispose of Hazardous Waste	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 use of hazardous materials would increase through 2025 as a result of the population growth that is expected under the equal-weight alternatives. The average household in the United States generates about 20 pounds of household hazardous waste per year (EPA 2003). Based on this total, Table 5.6-3 shows the forecasted generation of household hazardous waste under the alternatives. There are no such averages for businesses, which are highly valuable in their characteristics and use/generation of hazardous waste. As explained further below, the quantity of non-household hazardous waste that may be generated in the future under the General Plan alternatives is speculative.

Table 5.6-3 Estimated Additional Household Hazardous Waste Generated on the West Slope by 2025 and Buildout					
Alternative	Existing ¹ Household Hazardous Waste (tons/yr) ²	Increases by 2025		Increases by Buildout	
		Housing Units	Household Hazardous Waste (tons/yr) ²	Housing Units	Household Hazardous Waste (tons/yr) ²
No Project	447	21,434	214	29,520	295
Roadway Constrained 6-Lane “Plus”	447	25,839	258	41,652	417
Environmentally Constrained	447	32,290	323	55,078	551
1996 General Plan	447	32,491	325	78,692	787

¹ Based on estimated 44,708 housing units in 1999.
² Based on 20 pounds of household hazardous waste per household per year (EPA 2003).
Source: EPS 2002a-d, EDAW 2003

However, the number of businesses, including those that would generate, use, store, and dispose of hazardous materials, in El Dorado County would increase under each alternative. Conditionally Exempt Small Quantity Generators (CESQGs) generate small amounts of hazardous materials, most of which are used up onsite. Examples of CESQGs include 1-hour photo labs and dental offices. A few CESQGs send their hazardous wastes to the MRF for processing. While CESQGs are required to maintain records of hazardous wastes generated, CESQGs are not required to report the quantity of hazardous wastes generated. As such, data are not available on the amount of hazardous materials used by CESQGs. However, the number of CESQGs and the use of hazardous materials are expected to increase into the future as the number of residents and businesses increases.

Some CESQGs, Small Quantity Generators (SQGs) such as laboratories, printers, and dry cleaners, and Large Quantity Generators (LQGs) such as pharmaceutical companies and chemical manufacturers do not haul wastes to the MRFs. These generators are responsible for contracting with licensed hazardous waste haulers to transport and dispose of hazardous waste in licensed TSD facilities. As of October 2002, there were 235 SQGs and LQGs, including both private facilities and public facilities (EMD 2002b). The numbers of SQGs and LQGs are expected to increase as development increases in the county. Given the variety of generators and the varying hazardous waste generation rate of each, it is not possible to predict the increase in the amount of hazardous wastes by 2025.

In accordance with state and federal requirements, the County EMD, serving as the Certified Unified Program Agency (CUPA) for the County, regulates the transportation, recycling, storage, treatment, and disposal of hazardous materials from large generators. EMD, in adherence to the County Hazardous Waste Management Program (CHWMP) and HHWE, has established several programs to collect, recycle, and safely dispose of many types of hazardous wastes from households and certain small generators. The hazardous wastes collected, stored, recycled, and reused include car batteries, automotive oil, oil filters, expired or banned pesticides, herbicides, solvents, old paint, paint strippers, computer monitors, fluorescent bulbs, household batteries, and most products that are labeled with the following words: caution, warning, danger, or poison (EMD 2002a). Nonfriable asbestos-containing materials are processed at the MRF and then sent to a sanitary landfill. Friable asbestos materials are transported from the existing site of the asbestos material by private haulers to offsite licensed TSD facilities. Because the use of asbestos is restricted given various federal, state, and local regulations, ordinances, and requirements, new developments are not expected to use asbestos in a manner that is considered to be a hazard by regulations and standards.

The transportation and disposal of hazardous wastes are handled by licensed private haulers, subject to federal, state, and local licensing requirements. Hazardous wastes that are not recycled or reused would be treated and disposed of in privately operated TSD facilities. No TSD facilities are located in El Dorado County (DTSC 2001). Currently, hazardous wastes are transported to TSD facilities outside the county for treatment and disposal.

The County, through its collection programs, is responsible for the disposal of household hazardous wastes and a portion of the hazardous wastes generated by CESQGs. Household hazardous wastes that require offsite treatment and disposal are collected at the two MRFs and the El Dorado Hills Fire Station and then transported to licensed TSD facilities in other counties, or the generators transport such wastes to these facilities directly.

As discussed above, the transportation and disposal of hazardous wastes is carried out by private operators. According to the California Department of Toxic Substances Control (DTSC), there are currently 46 TSD facilities in California that can accept hazardous wastes for treatment or disposal (DTSC 2001). New and expanded TSD facilities may become available by 2025 as demand warrants. Because these facilities are private (and operate on a for-profit basis), it is reasonable to assume that they would continue to be provided throughout California in the foreseeable future, in response to demand. The CHWMP includes guidelines and standards for developing TSD facilities in the county, if such a facility would need to be constructed. Because SQGs and LQGs are responsible for the transport and disposal of their hazardous wastes, they are required to contract with haulers with sufficient TSD capacity or cease the generation of hazardous wastes.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies 5.1.1.1, 5.1.2.4, 5.1.3.1, and 5.1.3.2.

No Project Alternative (2025)—Impact Discussion

Policies 5.1.1.1, 5.1.2.4, 5.1.3.1, and 5.1.3.2 and the CUPA certification process require the County to increase the capacity of its collection and disposal programs in response to the increase in demand for services caused by population growth and new CESQGs. The County is required to coordinate with its private haulers to ensure future TSD capacity through 2025 and beyond. SQGs and LQGs are responsible for the proper disposal of their hazardous wastes, primarily by contracting with license private haulers.

Given the policies and the enforcement of existing regulations and programs, it is expected that the County and businesses that are responsible for the proper handling of the hazardous wastes they generate (e.g., SQGs and LQGs) would continue to contract with haulers with sufficient TSD capacity. Future TSD capacity would be expected to be available for the hazardous wastes generated in the county. The County or its franchise contractors may also choose to construct TSD facilities within the county in order to maintain sufficient TSD capacity (please see Impact 5.5-5 for impacts related to the construction of TSD facilities). This impact is less than significant.

No Project Alternative (Buildout)—Impact Discussion

The generation of household hazardous wastes is expected to increase through buildout of the county as a result of the population growth expected under the No Project Alternative, as shown in Table 5.6-3. The number of businesses that generate hazardous wastes could also increase, thus increasing the total amount of hazardous wastes generated in the county. Please refer to No Project Alternative (2025)—Impact Discussion above. 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 is Policies PS-1b and PS-1c.

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

The use of hazardous materials would increase through 2025 as a result of the population growth expected under the Roadway Constrained 6-Lane “Plus” Alternative. Table 5.6-3 shows the estimated increase in household hazardous wastes. The number of businesses that generate hazardous wastes would also increase under this alternative. The overall generation of hazardous wastes in the county would increase correspondingly.

The CUPA certification process and Policies PS-1b and PS-1c would require the County to coordinate with private haulers, which have contracted with the County to transport and dispose of hazardous wastes, in order to ensure future TSD capacity. Given the policies and the enforcement of existing regulations and programs, it is expected that the County and businesses that are responsible for the proper handling of the hazardous wastes they generate (e.g., SQGs and LQGs) would continue to contract with haulers with sufficient TSD capacity. Future TSD capacity outside the county would continue to be available for the hazardous wastes generated in the county. The County or its franchise contractors may also choose to construct TSD facilities within the county in order to maintain sufficient TSD capacity (please see Impact 5.6-5 for impacts related to the construction of TSD facilities). This impact is considered less than significant.

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

The generation of household hazardous wastes is expected to increase through buildout of the county, as shown in Table 5.6-3. Hazardous wastes generated by businesses could also increase. Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

The generation of hazardous wastes would increase through 2025 as a result of the population growth expected under the Environmentally Constrained Alternative. Increases in household hazardous wastes are shown in Table 5.6-3. Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered less than significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

The generation of hazardous wastes is expected to increase through buildout. Projected increases in household hazardous wastes are shown in Table 5.6-3. Please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered 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 generation of hazardous wastes would increase through 2025 as a result of the population and business growth expected under the 1996 General Plan Alternative. Increases in household hazardous wastes are shown in Table 5.6-3. Please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered less than significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

The generation of hazardous wastes is expected to increase through buildout as a result of population growth under the 1996 General Plan Alternative. Projected increases in household hazardous wastes are shown in Table 5.6-3. Please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered less than significant.

**Impact
5.6-5**

Potential for Land Use Incompatibility and Other Impacts of New and Expanded Solid-Waste and Hazardous-Waste Facilities. The projected growth in population under the equal-weight alternatives would generate the need for new and physically altered solid-waste collection, processing, and disposal facilities, such as MRFs. New and physically altered hazardous-waste collection and disposal facilities, such as collection centers and TSD facilities, would also be needed; these facilities may be developed on lands designated on the General Plan land use map as Public Facility, Industrial, Rural, or Mineral Resources, with land use permit approval. Because of the potential for land use incompatibility and other impacts associated with these types of facilities, this impact is considered **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
5.6-5: Potential for Land Use Incompatibility and Other Impacts of New and Expanded Solid-Waste and Hazardous-Waste Facilities	S ₄	S ₄	S ₃	S ₂	S ₂	S ₃	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
5.6-5(a): Implement Mitigation Measures 5.1-3(b) and 5.6-5(b); Implement Mitigation Measure 5.1-3(d)	SU ₄	SU ₄	SU ₃	SU ₂	SU ₂	SU ₃	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.								

Construction and operation of new and expanded solid-waste and hazardous-waste collection and disposal facilities under all alternatives would result in potentially significant impacts that are typically associated with such facilities. The typical potential environmental impacts that are associated with landfills, MRFs, transfer stations, hazardous waste collection centers, and hazardous-waste TSD facilities include the following:

- < Incompatible visual character
- < Accidental release of hazardous materials
- < Operational noise from dumping and sorting solid waste and from trucks
- < Odors and pests from trash

Each type of facility is allowed within certain land use designations, such as Public Facilities, and not allowed in the residential land use designations; as such, some of the impacts have been addressed in the other sections of Chapter 5 of this EIR. However, these facilities would result in impacts that are unique from the types of land uses typically associated with the land use designations. Many of these impacts are associated with land use incompatibilities with sensitive land uses, such as schools and convalescent homes. The significance of the impacts cannot be determined until the specific design and locations have been identified, but some of these impacts are likely to be significant. Therefore, this impact is considered potentially significant.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies 5.1.1.1, 5.1.1.2, 5.1.2.1, 5.1.2.2, 5.5.2.1, and 5.5.2.2.

No Project Alternative (2025)—Impact Discussion

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional solid wastes and hazardous wastes. New and expanded solid waste and hazardous waste collection and processing facilities, such as household hazardous waste collection centers, MRFs, rural transfer stations, and TSD facilities, may be required. The establishment of new landfills is highly unlikely given the sufficient capacity of existing landfills.

Policies 5.1.2.1 and 5.1.2.2 would require development projects to provide evidence that infrastructure is adequate to serve the project. This policy would ensure that the necessary solid-waste and recyclable-material collection services would be secured before occupation by future developments. Policies 5.1.1.1 and 5.1.1.2 would require the County to coordinate with its solid-waste collection and MRF operators to ensure that it would have enough solid-waste collection, processing, and disposal capacity, as well as sufficient capacity for the collection and processing of household hazardous wastes. None of these policies addresses the potential for new facilities to affect surrounding land uses. Because necessary facilities could result in land use incompatibilities, this impact is considered significant. Policy 5.5.2.2 addresses protection of solid waste processing, recycling, transformation, and disposal facilities from encroachment of sensitive and/or incompatible land uses.

No Project Alternative (Buildout)—Impact Discussion

Continuing residential and nonresidential growth through buildout could result in a need for additional solid waste and hazardous waste collection, processing, and disposal facilities; please refer to No Project Alternative (2025)—Impact Discussion above. 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-7a and PS-1b through PS-1d.

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

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for waste collection and disposal facilities. Policies LU-7a and PS-1d would require development projects to provide evidence that solid-waste and recyclable-material collection services are adequate to serve the project. Policies PS-1b and PS-1c would require the County to coordinate with solid-waste collection and MRF operators in planning for necessary future infrastructure. These policies could result in the construction of additional solid-waste and hazardous-waste collection, processing, and disposal facilities. With the implementation of the policies, necessary infrastructure would be planned for future development.

No policies are included to address potential land use incompatibilities. Please refer to No Project Alternative (2025)—Impact Discussion above. With the construction and operations of the new and expanded infrastructure, this impact is considered significant.

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

Continuing residential and nonresidential growth through the buildout of the county are expected to result in a larger number of businesses and residents, generating additional demand for waste collection and processing facilities; please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for waste collection, processing, and disposal facilities; please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

Continuing residential and nonresidential growth through the buildout of the county are expected to result in a larger number of businesses and residents, generating additional demand for solid-waste and hazardous-waste collection, processing, and disposal facilities; please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. 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

Additional residential and nonresidential development are expected to occur through 2025 under this alternative, generating additional demand for waste collection, processing, and disposal facilities; please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Additional residential and nonresidential development are expected to occur through buildout, generating additional demand for solid-waste and hazardous-waste collection and processing facilities; please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

Mitigation Measure 5.6-5—No Project Alternative

The County shall implement both of the following measures:

- < Mitigation Measure 5.6-5(a): Implement Mitigation Measure 5.3-1(b)
- < Mitigation Measure 5.6-5(b): Implement Mitigation Measure 5.3-1(d)

These proposed mitigation measures are described below. With implementation of these measures, impacts would be reduced but not to a less-than-significant level.

Mitigation Measure 5.6-5(a): Implement Mitigation Measure 5.3-1(b)

The County shall implement Mitigation Measure 5.1-3(b) described in Section 5.1, Land Use and Housing.

Mitigation Measure 5.6-5(b): Implement Mitigation Measure 5.3-1(d)

The County shall implement Mitigation Measure 5.1-3(d) described in Section 5.1, Land Use and Housing.

These mitigation measures would reduce land use incompatibility-related impacts, such as changes in visual character, traffic safety, construction noise, and operational use. However, without project- and site-specific information from future solid-waste-transfer and hazardous-waste facilities, it would be speculative to determine whether all impacts would be less than significant. Facilities would be permitted within appropriate land use designations and would be required to follow all other policies described in this EIR as relevant. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—Roadway Constrained 6-Lane “Plus” Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of these mitigation measures, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—Environmentally Constrained Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of these mitigation measures, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—1996 General Plan Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of these mitigation measures, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

5.6.3 POWER SUPPLY SYSTEMS

EXISTING CONDITIONS

Planning Environment

Electricity Supplier

Electricity on the west slope of El Dorado County is supplied by Pacific Gas and Electric Company (PG&E). PG&E owns and operates electricity infrastructure in the county and throughout Northern California that includes power lines, powerhouses, and substations. Powerhouses are located at Chili Bar on the South Fork American River and at Forebay Reservoir in Pollock Pines. A total of nine electric substations are located throughout the county; an additional station is proposed at Pine Hill on a 10-acre site at the southeast corner of the intersection of Starbuck Road and Fremont's Loop. PG&E no longer owns all of its facilities, having sold some recently as a result of legislative deregulation. PG&E produces some of its own power and purchases some of its electricity through the Independent System Operator, which in turn obtains electricity from a number of companies that operate power plants throughout the Western Grid. The Western Grid is a multistate grid that provides electricity from as far away as Washington State and Canada.

The Sacramento Municipal Utility District (SMUD) also owns and maintains power lines in El Dorado County; however, it does not provide electricity services to users in the county.

Natural Gas Supplier

PG&E supplies natural gas on the west slope of El Dorado County. Currently, natural gas distribution lines only extend from the west (Sacramento County) to the community of El Dorado Hills and the El Dorado Hills Business Park. The households in the remaining portions of the west slope of the county use either all electric energy or use propane in place of natural gas.

Propane Suppliers

Propane, also known as liquefied petroleum gas, can be used as an additional energy source to electric energy in areas without access to a natural gas distribution lines. From the refinery or processing plant, propane is shipped to an intermediate terminal; from there it is shipped to the local propane supplier for delivery to commercial and residential end users. All propane is transported under pressure in its more compact liquid form. Typically, propane is transported by trucks or pipelines (NPGA 2002).

Propane used in El Dorado County is transported to privately owned and operated local propane suppliers, which store propane in “bulk plants” on their premises. There are 12 propane facilities on the west slope that use bulk plants (EMD 2002b), as shown in Table 5.6-4. In El Dorado County bulk plants typically have 18,000–30,000 gallons of storage capacity. Bulk propane storage tanks are constructed of steel in accordance with the Boiler and Pressure Vessel Code, Section VIII of the American Society of Mechanical Engineers Code, and the requirements of state and municipal authorities. The tanks are equipped and located as set forth in the National Fire Protection Association’s (NFPA’s) Liquefied Petroleum Gas Code (NFPA 58). Each storage tank is set a specific distance away from other tanks, buildings, and property lines, depending on its size. Bulk storage tanks are always installed on a firm foundation and are protected by an enclosure to prevent trespassing and tampering (NPGA 2002).

Once purchased by businesses and residents, the propane is generally transported by the propane suppliers in a truck and is stored in private storage tanks at homes and businesses. Tanks for residential uses are available in a variety of sizes and may be either above ground or underground. Typical capacity ranges from 100 to 1,850 gallons. A 500-gallon tank provides ample storage for the average four-bedroom home for approximately a 3-month period. Propane is typically used for home heating, water heating, cooking, clothes drying, barbecuing, and pool heating (NPGA 2002).

Table 5.6-4 Bulk Plant Propane Locations	
Owner/Operator	Location (number of facilities)
AAA Propane	Placerville (1)
Amerigas Partners	El Dorado (1)
Amerigas Propane	Placerville (2), Camino (1)
Campora Propane Service	Pollock Pines (1)
Foothill Propane	Georgetown (1)
Golden State Propane	Shingle Springs (1)
Main Street Gas Company	El Dorado (1)
Kamps Propane of El Dorado	Placerville (1), Cameron Park (1)
Suburban Propane	Placerville (1)
Source: EMD 2002b	

Regulatory/Planning Environment

Federal Energy Regulatory Commission

Prior to the construction of hydroelectric power facilities, licenses must be obtained from the Federal Energy Regulatory Commission (FERC). As a part of the license application process, environmental analyses pursuant to the National Environmental Policy Act (NEPA) must be conducted. FERC also regulates the construction of the interstate natural gas pipelines that serve California. FERC acts under the legal authority of the Federal Power Act of 1935, the Public Utility Regulatory Policies, and the Energy Policy Act of 1992, as well as the Natural Gas Act of 1938, the Natural Gas Policy Act of 1978, the Outer Continental Shelf Lands Act, the Natural Gas Wellhead Decontrol Act of 1989, and the Energy Policy Act of 1992 (FERC 2002).

U.S. Department of Transportation

Propane transportation is regulated by the U.S. Department of Transportation (US DOT). With authority stated in Title 49 of the Code of Federal Regulations, US DOT requires that all shipping papers contain a 24-hour-a-day telephone number where emergency assistance and information can be obtained. This service must be able to provide information about any cargo that is classified by US DOT as a hazardous material. There are several sources in the United States that an emergency response crew leader can contact in the case of a transportation accident (NPGA 2002).

California Public Utilities Commission

Electricity

General Order 131-D grants the California Public Utilities Commission (CPUC) permitting authority over the construction of new and expanded power plants, electric transmission lines, and substations. Pursuant to CEQA, environmental analyses must be conducted before issuance of construction permits by CPUC. The CPUC Utilities Safety Branch audits utility overhead and underground electric facilities through random field inspections (CPUC 2002).

Natural Gas

CPUC regulates local natural gas distribution facilities and services, as well as intrastate pipelines (CPUC 2002). CPUC published the *California Natural Gas Infrastructure Outlook 2002–2006 Report* (CPUC 2001), which concluded that PG&E’s natural gas infrastructure would be sufficient through the year 2006.

Propane

With authority stated in Title 49 of the Code of Federal Regulations, CPUC has jurisdiction over propane distribution systems serving 10 or more customers in residential or commercial districts, and two or more customers in mobile home parks. The CPUC Utilities Safety Branch administers the propane safety program by scheduling each propane system for a safety audit at least once every 5 years, to assure compliance with the federal pipeline safety regulations (CPUC 2002).

California Energy Commission

The California Energy Commission (CEC) has the statutory authority to site and license thermal power plants that are rated at 50 megawatts and larger and related transmission lines, fuel supply lines and other facilities. Pursuant to CEQA, environmental analyses are required prior to the issuance of energy facility licenses.

California Energy Efficient Standards

California State Building Standards Code Title 24, Part 6, the “Energy Efficiency Standards for Residential and Nonresidential Buildings,” were established in 1978 in response to a legislative mandate to reduce California’s energy consumption. Title 24, Part 6 requires that all new residential and nonresidential development comply with several energy conservation

standards by implementing a variety of energy conservation measures in new construction, including ceiling, wall, and concrete slab insulation; vapor barriers; weatherstripping on doors and windows; closeable doors on fireplaces; insulated heating and cooling ducts; water heater insulation blankets; and certified energy efficient appliances.

The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The CEC, the state's primary energy policy and planning agency, adopted new standards in 2001, as mandated by Assembly Bill 970 to reduce California's electricity demand. The new standards went into effect on June 1, 2001. The next update to the standards is expected to be adopted by the CEC by July 1, 2003, and would go into effect in 2005 (CEC 2002).

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

The General Plan would result in a significant impact if development would result in the need for new or expanded utility services and infrastructure, the construction of which would result in potential environmental impacts on the environment.

Impact
5.6-6

Potential for Land Use Incompatibility and Other Impacts of New and Expanded Energy Supply Infrastructure. The projected growth in population under the equal-weight alternatives would generate the need for new and physically altered electric energy, natural gas, and propane facilities. Propane facilities would be developed on lands designated on the General Plan land use map that allow propane facilities, such as Industrial. Apart from the issues discussed elsewhere in this EIR, construction and operation of propane facilities may result in the potential for land use incompatibility and other impacts associated with these types of facilities. Power plants, substations, and transmission lines and natural gas transmission lines can be approved by a combination of agencies including FERC, CPUC, and CEC; these agencies are exempt from following local regulations, although in practice each of these agencies consults with local jurisdictions and the public. Therefore, the County has only limited ability to control the locations and environmental impacts of new energy infrastructure that may be needed to serve growth in the county. Further, facilities to serve the county could be constructed outside the county. There could be impacts on air quality, biological resources, visual resources, health and safety, and other resource areas, depending on the location of any future facilities. Because specific facilities and their locations have not been

identified, the impacts cannot be determined; however, this impact is considered **significant** because of potential land use incompatibility and other adverse environmental effects typically associated with energy infrastructure. The severity of this impact would increase with the increase in demand for energy; as such, the impact would be greatest under the 1996 General Plan Alternative, followed by the Environmentally Constrained, Roadway Constrained 6-Lane “Plus,” and No Project 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
5.6-6: Potential for Land Use Incompatibility and Other Impacts of New and Expanded Energy Supply Infrastructure	S ₄	S ₄	S ₃	S ₃	S ₂	S ₂	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
5.6-6: Implement Mitigation Measure 5.1-3(b)	SU ₄	SU ₄	SU ₃	SU ₃	SU ₂	SU ₂	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 alternatives, additional residential and nonresidential development would occur through 2025, generating additional demand for energy supply services, including the provision of electricity, natural gas, and propane. According to PG&E, existing electricity infrastructure would not be sufficient to serve the projected growth through 2025. PG&E has indicated that it would be able to provide the additional transmission infrastructure necessary to provide electricity services in the county.

New and expanded electric-energy infrastructure needed to serve the future population growth could be developed anywhere in the county, or outside the county; the County has limited authority for the siting of public-utility infrastructure, because land use approval authority is preempted by FERC, CPUC, and CEC.

In addition to PG&E transmission infrastructure, additional power plants, which may be operated by a number of private suppliers that would then sell electricity to PG&E, may be required to supply electric energy to the county by 2025 and buildout. Again, power plants may be built anywhere in the county, subject to approval from FERC and/or the CEC. Estimates of future consumption of electricity and the potential need for additional power plants are provided in Table 5.6-5.

Table 5.6-5 Estimated Electric Energy Consumption Increases and Number of New Power Plants Needed					
Equal-Weight Alternatives	Existing Electric Energy Consumption (MWh) ¹	2025		Buildout	
		Increase in Electric Energy Consumption (MWh) ²	Percentage of a New Power Plant Needed ³	Increase in Electric Energy Consumption (MWh) ²	Percentage of a New Power Plant Needed ³
No Project	136.53	46.83	13%	64.49	10%
Roadway Constrained 6-Lane "Plus"	136.53	56.45	16%	90.96	26%
Environmentally Constrained	136.53	70.52	20%	120.27	34%
1996 General Plan	136.53	70.96	20%	171.81	49%
<p>MWH = megawatt hour</p> <p>¹ Based on 2002 census population for entire county of 156,299.</p> <p>² Based on 2000 County total electricity consumption rate of 0.0008735 MWh per person; consumption on the per-person basis includes consumption by residential, commercial, industrial, and all other energy users in the county.</p> <p>³ Assumes available annual capacity is 70% of the installed capacity of a representative power plant, which may be built anywhere in the western United States and Canada with connection to the Western Grid. The representative power plant was based on the proposed SMUD Cosumnes Power Plant (1,000 megawatts) (CEC 2003b). This power plant was chosen because it would be one of the power plants nearest to El Dorado County, which currently does not have power plants aside from hydrological power generator; it would be a new power plant; and it uses natural gas as fuel, the most common type of fuel for electricity power plants in California. Assumes that population growth in the county would represent a growth in the population served by the Western Grid.</p> <p>Source: CEC 2003a, U.S. Census 2002</p>					

The increase in demand for electric energy may be satisfied by a variety of electric generation facilities, such as gas-fueled power plants, waste-to-fuel conversion plants, geothermal power plants, wind energy facilities, nuclear power plants, hydroelectric facilities, and oil-fueled power plants. Construction of new and expanded electricity generation facilities by private operators at as-yet-undetermined locations along the Western Grid is expected, including areas in the western United States and Canada outside El Dorado County. Typical environmental impacts associated with electricity generation facilities differ by type of facility. Examples of the construction and operational impacts associated with gas-fueled power plants and other electricity-generating facilities are as follows:

- < Conversion of agricultural land
- < Conversion of timberland
- < Change in visual character
- < Night glare
- < Increase in traffic congestion
- < Decrease in water supply
- < Degradation of surface-water quality
- < Degradation of groundwater quality
- < Increase of surface water temperature
- < Accidental release of hazardous materials
- < Operational noise
- < Exposure of construction workers to onsite contamination
- < Emissions of construction air pollutants and dust
- < Emissions of operational air pollutants
- < Exposure to seismic events
- < Conversion of critical habitats
- < Disturbance of wildlife
- < Disturbance or destruction of known and unknown cultural resources
- < Growth-inducing impacts

PG&E has also indicated that additional natural-gas distribution infrastructure in El Dorado County, the city of Folsom, and Sacramento County would be required in order to provide natural-gas services to the existing (El Dorado Hills or approximately Market Area #1) and future natural-gas service areas (Cameron Park/Shingle Springs/Rescue and Latrobe areas or approximately Market Areas #2 and #8). PG&E has indicated that it would be able to provide the distribution infrastructure necessary to provide natural-gas services to those service areas. New and expanded natural-gas infrastructure needed to serve the future population growth in these areas could in theory be developed anywhere in the county, subject to approval by CPUC. The County has limited authority regarding the siting of natural-gas distribution lines,

but some land use designations on the General Plan land use map, such as the Timberland Preserve Zone designation, specifically allow such facilities.

Additional natural-gas distribution pipelines would also be constructed in the county, as well as the city of Folsom and Sacramento County. Among the environmental impacts that could result from the development of natural-gas pipelines are the following:

- < Temporary habitat disturbance
- < Temporary traffic disturbance
- < Accidental releases of hazardous materials
- < Risk of explosion from buried pipelines
- < Structural damage from seismic events
- < Construction noise
- < Disturbance of cultural resources
- < Emissions of construction air pollutants and dust
- < Growth-inducing impacts

Additional development would also occur in areas served by propane suppliers. Additional propane bulk plants and associated facilities may be required to meet future demand. Because propane services are provided by several local private providers, propane bulk plants have different capacities, and the number of new residential units and businesses that would use propane service is unknown, the types and numbers of propane facilities needed through 2025 cannot be predicted at this time. New and expanded propane bulk plants needed to serve the future population growth would be developed on lands designated on the General Plan land use map that allow such facilities.

Among the environmental impacts that could result from the development of propane bulk plants are the following:

- < Change in visual character
- < Accidental releases of hazardous materials
- < Risk of explosion
- < Construction noise
- < Emissions of construction air pollutants and dust
- < Night glare
- < Growth-inducing impacts

Site-specific environmental impacts associated with new energy infrastructure would be addressed in the environmental documentation for individual facility development projects.

Depending on the type and capacity of the proposed energy facilities, a licensing application from CEC, FERC and/or CPUC may be required. CEC, CPUC, and FERC licensing applications include an evaluation of environmental impacts similar to the analysis required under CEQA. In addition, CEQA and/or National Environmental Policy Act (NEPA) documentation, such as an EIR/Environmental Impact Statement (EIS), may also be required for new energy facilities.

Construction and operation of propane bulk plants would require approval from the County. This type of facility is allowed within the Industrial land use designation; as such, some of the impacts have been addressed in the other sections of Chapter 5 of this EIR. However, propane bulk plants would result in impacts that are unique from the types of land uses typically associated with the land use designations. Many of these impacts are associated with land use incompatibilities with sensitive land uses, such as schools, residences, and convalescent homes. While compliance with existing regulations and safety standards can reduce the significance of potential impacts, some impacts, such as accidental releases of hazardous materials and the risk of explosion, cannot be prevented. Therefore, this impact is considered significant.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies HO-5a and HO-5b, 5.1.2.1, 5.1.2.3, 5.1.3.2, 5.6.1.1 through 5.6.1.3, and 5.6.2.1 and 5.6.2.2.

No Project Alternative (2025)—Impact Discussion

Policies HO-5a, HO-5b, 5.6.2.1, and 5.6.2.2 would require new discretionary projects to implement energy conservation measures in order to reduce the demand for energy services. Policy HO-5a would assist existing residents and businesses in implementing measures for energy conservation. State building code standards (Title 24) require all new construction needing a building permit to comply with energy construction standards. Implementation of these policies and requirements would ensure that the demand for additional energy would be minimized to the extent practicable. This would reduce the environmental impacts associated with new energy infrastructure. Policies 5.1.2.1 and 5.1.2.3 would require development projects to provide evidence that infrastructure is adequate to serve the project. These policies would ensure that necessary electric, natural gas, and/or propane infrastructure would be constructed before occupation of future developments. Policy 5.6.1.1 would encourage undergrounding of existing and new utility distribution lines. These policies would indirectly result in the construction of additional power supply-related infrastructure to meet the

demand that would be generated by future development. Policies 5.6.1.2 and 5.6.1.3 would encourage the reservation of rights-of-way and the construction of utility lines in open space–greenbelt corridors. With the implementation of the policies described above, future energy demand would be reduced to the extent practicable and future land use and aesthetic conflicts would be reduced.

Given that PG&E has indicated that it can provide the necessary electric and natural-gas infrastructure (Luna, pers. comm., 2003) and that private providers would be expected to provide propane services in response to market demand, the future capacity of power supply systems is expected to be expanded to meet the future demand. Construction and operation of new and expanded electric-energy transmission, natural-gas distribution within the county, and propane gas infrastructure and facilities could result in significant impacts, as described under the general impact discussion above.

Because this alternative would result in the lowest population growth of the four equal-weight alternatives, the demand for energy facilities would also be the lowest.

No Project Alternative (Buildout)—Impact Discussion

Continuing residential and nonresidential growth through the buildout of the county is expected to result in a larger number of businesses and residents, generating demand for additional energy infrastructure; please refer to No Project Alternative (2025)—Impact Discussion above. 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-6g, LU-7a, PS-1b through PS-1d, PS-1f, and PS-10a and PS-10b.

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

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for power supply services, including the provision of electricity, natural gas, and propane. Estimates of future consumption of electricity are provided in Table 5.6-5 above. As shown in the table, the energy demand under the Roadway Constrained 6-Lane “Plus” Alternative would be higher than under the No Project Alternative but lower than under the Environmentally Constrained and 1996 General Plan alternatives.

Policies LU-7a, PS-1d, and PS-1f would require development projects to provide evidence that infrastructure is adequate to serve the project. This policy would ensure that necessary electric, natural gas, and/or propane infrastructure would be constructed for future discretionary developments. Policy LU-6g would encourage undergrounding of existing and new utility distribution lines. Policies PS-1b and PS-1c would require the County to coordinate with utility service providers in planning for necessary future infrastructure. These policies to reduce potential land use conflict and aesthetic impacts could facilitate the construction of additional power supply-related infrastructure. Policies PS-10a and PS-10b would encourage the reservation of rights-of-way and coordination between service providers and the County to minimize negative effects on existing and future residents. With the implementation of the policies described above, future land use conflicts would be reduced, and necessary infrastructure would be planned for future development.

While compliance with existing regulations and safety standards can reduce the significance of potential impacts, some impacts, such as accidental releases of hazardous materials and the risk of explosion, cannot be prevented. This impact is considered significant.

Because this alternative would result in the second lowest population growth of the four equal-weight alternatives, the demand for energy facilities would also be the second lowest.

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

Continuing residential and nonresidential growth through the buildout of the county is expected to result in a larger number of businesses and residents generating demand for additional energy infrastructure. Please refer to No Project Alternative (2025)—Impact Discussion and Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for power supply services, including the provision of electricity, natural gas, and propane. As shown in Table 5.6-5 above, the electric-energy demand would be higher under this alternative than under the No Project and Roadway Constrained 6-Lane “Plus” alternatives.

Please refer to No Project Alternative (2025)—Impact Discussion and Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

Continuing residential and nonresidential growth through the buildout of the county is expected to result in a larger number of businesses and residents generating demand for additional energy infrastructure. Estimates of future consumption of electricity and new power plants needed to supply this demand are provided in Table 5.6-5 above. As shown in this table, the electric-energy demand under this alternative would be higher than under the No Project and the Roadway Constrained 6-Lane “Plus” alternatives.

Please refer to No Project Alternative (2025)—Impact Discussion and Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. 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

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for power supply services, including the provision of electricity, natural gas, and propane. As shown in Table 5.6-5 above, the electric-energy demand under this alternative would be the highest among the alternatives.

Please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Continuing residential and nonresidential growth through buildout is expected to result in a larger number of businesses and residents generating demand for additional energy infrastructure. The 1996 General Plan Alternative would result in more residential and nonresidential development by buildout than the other three equal-weight alternatives.

Please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

Mitigation Measure 5.6-6: Implement Mitigation Measure 5.1-3(b)

Mitigation Measure—No Project Alternative

The County shall implement Mitigation Measure 5.1-3(b) described in Section 5.1, Land Use and Housing.

This mitigation measure would reduce land use incompatibility-related impacts to the extent they are known, such as changes in visual character, traffic safety, construction noise, and operational use. However, the location of future utilities is not known and the approval authority for these facilities (except propane) does not lie with the County. Without project- and site-specific information from all future energy facilities, it would be speculative to determine whether all land use incompatibility impacts would be less than significant. With implementation of this mitigation measure, impacts would be reduced, but not necessarily to a less-than-significant level. While compliance with existing regulations and safety standards can reduce the significance of potential impacts, some impacts, such as accidental releases of hazardous materials and the risk of explosion, cannot be prevented. This impact would remain significant and unavoidable.

Mitigation Measure—Roadway Constrained 6-Lane “Plus” Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—Environmentally Constrained Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—1996 General Plan Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

5.6.4 COMMUNICATION SYSTEMS

EXISTING CONDITIONS

Physical Environment

Telephone Service

Telephone service in El Dorado County is provided primarily by SBC. AT&T and other companies also provide local and long-distance phone service.

Mobile-Phone Service

Several private mobile-phone companies—Mountain Cellular, Sprint, Verizon Wireless, AT&T Wireless, T Mobile, Virgin Mobile, and Cingular—provide services in El Dorado County.

Cable Television/Broadband Internet Service

AT&T/Comcast provides cable television and broadband Internet services in El Dorado County.

Regulatory/Planning Environment

Federal Regulation

Telecommunications Act of 1996

The goal of the Telecommunications Act of 1996 is to let anyone enter any communications business and to let any communications business compete in any market against any other communications business. This law requires a close working relationship among the Federal Communications Commission, the Telecommunications Division of the CPUC, and the County to expand competition in communications (FCC 2002). This law also preserves the authority of a state or local government over decisions regarding the placement, construction, and modification of personal wireless services; the law requires that decisions limiting personal wireless service facilities must be supported by substantial evidence and prohibits regulation based on the environmental effects of radio frequency emissions to the extent that such facilities comply with the FCC's regulations concerning such emissions.

County Regulations

County Code on Community Antenna Television Systems

Chapter 5.52 of the County Code pertains to television. The Cable TV Franchise Administration of the County's General Services Department administers and monitors the four cable television franchise agreements in the County. The responsibilities of the Cable TV Franchise Administration include processing franchise renewals, transfers, and service area expansion requests in accordance with the Telecommunications Act of 1996 (GSD 2002).

County Code on Communication Facilities, Wireless

Section 17.14.200 of the County Code pertains to wireless communication facilities, including transmission and relay towers, dishes, antennae, and similar facilities. Wireless communications are permitted in all zoning districts, subject to certain standards and permitting requirements, such as height limits. Minor use permits are required for instances of co-location on existing nonbuilding structures, public facilities, and cell towers, as well as new towers in industrial, commercial, and research and development zone districts where the facility would not be adjacent to scenic highways or within 500 feet of residential zone districts. Special-use permits are required for new facilities in all other zoning districts and all other facilities that do not meet certain standards.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

The General Plan would result in a significant impact if development would result in the need to provide new utility services and infrastructure, the construction of which would result in potential environmental impacts.

Impact
5.6-7

Potential for Impacts Associated with New and Expanded Communications

Infrastructure. The projected growth in population under the equal-weight alternatives would generate the need for new and physically altered communications facilities, which would be developed on lands designated on the General Plan land use map that allow these facilities. Telephone lines can be approved by the CPUC, which is exempt from following local regulations, although in practice CPUC consults with local jurisdictions and the public. The County has authority to approve the development of cellular towers and cable lines to the extent allowed by the Telecommunications Act of 1996, which is limited. Therefore, the County has only limited ability to control the locations and environmental impacts of new communications infrastructure that may be needed to serve growth in the county. Construction and operation of cellular towers and telephone and cable lines may result in the potential for land use incompatibility and other impacts associated with these types of facilities. Further, facilities to serve the county could be constructed outside the county. There could be impacts on air quality, noise, visual resources, health and safety, and other resource areas, depending on the location of any future facilities. Because specific facilities and their locations have not been identified, the impacts cannot be precisely determined; however, this impact is considered **significant** because of potential land use incompatibility and other adverse environmental effects typically associated with communications infrastructure. 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
5.6-7: Potential for Impacts Associated with New and Expanded Communications Infrastructure	S ₄	S ₄	S ₃	S ₃	S ₂	S ₂	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
5.6-7: Implement Mitigation Measure 5.1-3(b)	SU ₄	SU ₄	SU ₃	SU ₃	SU ₂	SU ₂	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 alternatives, additional residential and nonresidential development would occur through 2025, generating additional demand for communications services. Additional communications infrastructure, including telephone lines, cellular towers, and cable lines, would need to be constructed in order to provide an adequate level of service to existing and future residents, workers, and visitors. For all of the proposed alternatives, AT&T/Comcast has indicated that it would be able to provide cable television and broadband internet infrastructure that is included in the franchise agreements with the County (Angelastro, pers. comm., 2003). Phone and wireless communication services would be provided by a number of private businesses, which are expected to develop additional infrastructure in order to serve future demand. For example, SBC has indicated that additional infrastructure would be required and may be developed to provide phone service in the county in the future (Schnabel, pers. comm., 2003).

Typical environmental impacts associated with communications facilities differ by type of facility. Examples of the construction and operational impacts associated with telephone and cable lines are as follows:

< Visual resource impacts (see discussion in Section 5.3)

- < Temporary traffic disturbance
- < Structural damage from seismic events
- < Construction noise
- < Emissions of construction air pollutants and dust
- < Growth-inducing impacts

Examples of the construction and operational impacts associated with cellular towers are as follows:

- < Visual resource impacts
- < Structural damage from seismic events
- < Construction noise
- < Emissions of construction air pollutants and dust

Site-specific environmental impacts associated with new communications facilities would be addressed in the environmental documentation for individual facility development projects, as needed. Depending on the type and capacity of the proposed communications facilities, an approval from CPUC or the County may be required. In addition, CEQA documentation, such as an EIR, may also be required for new communications facilities.

Communication facilities are allowed within all land use designations; as such, some of the impacts have been addressed in the other sections of Chapter 5 of this EIR. However, communications facilities would result in impacts that are unique from the types of land uses typically associated with the land use designations. While compliance with existing regulations and safety standards can reduce the significance of potential impacts, some impacts cannot be prevented. Therefore, this impact is considered significant.

No Project Alternative (Alternative #1)

Relevant Goals/Policies—No Project Alternative

The relevant policies of the No Project Alternative are Policies 5.6.1.1 through 5.6.1.4.

No Project Alternative (2025)—Impact Discussion

Policy 5.6.1.1 promotes the undergrounding of utility lines, including cable and telephone lines, in scenic areas and existing Community Regions and Rural Centers to reduce potential land use and aesthetic impacts. Policy 5.6.1.2 would reserve adequate rights-of-way to facilitate expansion of services in a timely manner in order to reduce potential conflicts associated with

constructing utility lines in an as-yet-undeveloped area that is designated for development. Policy 5.6.1.3 would further reduce land use conflicts with utility lines through the placement of utility line alignments within open space–greenbelt corridors. Implementation of these policies could reduce potential impacts associated with the development of telephone and cable lines, but because approval of these facilities is by an agency other than the County, the County cannot ensure that these policies would be followed.

Policy 5.6.1.4 requires special-use permits for the installation of cellular towers to provide a regulatory mechanism for reducing environmental effects. The County Code also requires minor-use permits and special-use permits for certain types of wireless communication facilities. As with the development of telephone and cable lines, development of cellular towers requires CEQA documentation; the mitigation measures included in this EIR are recommended to minimize impacts, such as visual incompatibility. However, health risk concerns are preempted by the Telecommunications Act and may not be used as a reason for conditioning or denying permits for wireless communication facilities. See Section 5.8 for additional discussion of health effects.

Given that SBC and AT&T/Comcast have indicated that they can provide the necessary communications infrastructure and that private providers would be expected to provide wireless phone services in response to market demand, the future capacity of communications systems is expected to be expanded to meet the future demand. Construction and operation of new and expanded communications facilities could result in significant impacts, as described under the general impact discussion above.

No Project Alternative (Buildout)—Impact Discussion

Additional residential and nonresidential development is expected to occur through the buildout of the county, generating additional demand for communications services; please refer to No Project Alternative (2025)—Impact Discussion above. 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-6g, LU-7a, PS-1b through PS-1e, and PS-10a and PS-10b.

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

Policies LU-7a, PS-1d, and PS-1e would require development projects to provide evidence that necessary infrastructure is adequate to serve the project. This policy would encourage the construction of communications infrastructure for future discretionary developments. Policy PS-1b and PS-1c would require the County to coordinate with service providers in planning for future infrastructure. These policies would facilitate the construction of additional communications infrastructure. Policy LU-6g promotes the undergrounding of utility lines, including cable and telephone lines, in Community Regions and Rural Centers to reduce potential land use and aesthetic impacts. Policies PS-10a and PS-10b would reserve adequate rights-of-way to facilitate expansion of services in a timely manner in order to reduce potential conflicts associated with constructing utility lines. Implementation of these policies would reduce potential impacts associated with the development of telephone and cable lines.

Given that SBC and AT&T/Comcast have indicated that they can provide the necessary communications infrastructure and that private providers would be expected to provide wireless phone services in response to market demand, the future capacity of communications systems is expected to be expanded to meet the future demand. Construction and operation of new and expanded communications facilities could result in significant impacts, as described under the general impact discussion above.

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

Additional residential and nonresidential development is expected to occur through the buildout of the county, generating additional demand for communications services; please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered 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—Roadway Constrained 6-Lane “Plus” Alternative.

Environmentally Constrained Alternative (2025)—Impact Discussion

Additional residential and nonresidential development would occur through 2025 under this alternative, generating additional demand for communications services; please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. This impact is considered significant.

Environmentally Constrained Alternative (Buildout)—Impact Discussion

Additional residential and nonresidential development is expected to occur through buildout, generating additional demand for communications services; please refer to Roadway Constrained 6-Lane “Plus” Alternative (2025)—Impact Discussion above. 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

Additional residential and nonresidential development is expected to occur through 2025 under this alternative, generating additional demand for communications services; please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

1996 General Plan Alternative (Buildout)—Impact Discussion

Additional residential and nonresidential development would occur through buildout, generating additional demand for communications services; please refer to No Project Alternative (2025)—Impact Discussion above. This impact is considered significant.

Mitigation Measure 5.6-7: Implement Mitigation Measure 5.1-3(b)

Mitigation Measure—No Project Alternative

The County shall implement Mitigation Measure 5.1-3(b) described in Section 5.1, Land Use and Housing.

This mitigation measure could reduce land use incompatibility-related impacts to the extent they are known, such as changes in visual character, traffic safety, and construction noise. However, the location of future utilities is not known and they are not generally subject to County approval. Without project- and site-specific information from all future communication facilities, it would be speculative to determine whether all land use incompatibility impacts would be less than significant. With implementation of this mitigation measure, impacts would be reduced, but not necessarily to a less-than-significant level. The limited role the County would have in approval of communication facilities is not sufficient to control whether impacts would occur. This impact would remain significant and unavoidable.

Mitigation Measure—Roadway Constrained 6-Lane “Plus” Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—Environmentally Constrained Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.

Mitigation Measure—1996 General Plan Alternative

Please refer to the proposed mitigation measure for the No Project Alternative above. With implementation of this mitigation measure, impacts would be reduced, but not to a less-than-significant level. This impact would remain significant and unavoidable.