

5.14 LAKE TAHOE BASIN

5.14.1 INTRODUCTION

The eastern portion of El Dorado County is located within the Lake Tahoe Basin, a unique and scenic natural and recreational resource. Because of Lake Tahoe's importance as a state and national resource, its environmental sensitivity, and the need for a region-wide approach to address environmental threats to the lake, the Lake Tahoe Basin is subject to a unique regulatory framework governed by the Tahoe Regional Planning Compact (Compact). The Compact, which was adopted by statute by California, Nevada, and the federal government, created the Tahoe Regional Planning Agency (TRPA), a bi-state agency that has primary land use authority within the basin.

Under the Compact, TRPA is required to establish specific standards, called "environmental threshold carrying capacities" (thresholds), for a range of environmental parameters, such as water quality, soil conservation, air quality, wildlife and noise. To attain and maintain these thresholds, TRPA adopted the Regional Plan for the Tahoe Basin (Regional Plan), which is the primary planning document for the Lake Tahoe Basin. The Regional Plan is implemented through a Code of Ordinances and other land use regulations adopted by TRPA. These regulatory documents together form the framework for planning and land use decisions in the Lake Tahoe Basin, and impose strict limitations on the type, extent, and rate of future development.

Local jurisdictions within the Lake Tahoe Basin—El Dorado and Placer counties in California, Washoe and Douglas counties in Nevada, and the cities of South Lake Tahoe, California, and Carson City, Nevada—retain a limited degree of land use authority (Exhibit 5.14-1). By law, local regulations must be consistent with the Regional Plan and may not be less protective of the environment than TRPA's regulations. Local permitting authority in the Lake Tahoe Basin is also limited. El Dorado County's permitting authority for the portion of the county in the Basin is governed by agreements between the County and TRPA adopted in 1992 and 2000. Pursuant to those agreements, the County generally has permitting authority for residential projects of four new units or less, modifications of existing structures, and certain other specified activities that do not require review by a TRPA Hearings Officer or the TRPA Governing Board, where such activities would not have a substantial effect on the environment and would not require environmental review under CEQA. TRPA has permitting authority for all other projects.

Exhibit 5.14-1

Tahoe basin and Surrounding Jurisdictions

The environmental impacts of the Regional Plan and its implementing regulations have been extensively analyzed by TRPA in a number of environmental impact statements and other environmental documents. Public Resources Code (PRC) §21083.5(b) provides that if a city or county adopts all or any part of TRPA's Regional Plan as part of its general plan, the city or county may satisfy its CEQA obligations by reviewing the environmental documents prepared by TRPA regarding the Regional Plan, and by providing an analysis of any significant effect on the environment not addressed in those documents.

Under each of the alternatives analyzed in this EIR, the proposed General Plan policies and land use designations for the portion of the county within the Lake Tahoe Basin are substantially consistent with or identical to those in the Regional Plan and TRPA's implementing regulations. The No Project and 1996 General Plan alternatives contain a Tahoe Basin Element setting forth a number of goals, objectives, and policies designed to maintain consistency of the county's policies and ordinances with those of TRPA and to achieve and maintain TRPA's environmental thresholds. Except for a few recreational and other large parcels for which the county's land use designations require a lower density than TRPA's regulations, the development allowed under the No Project and 1996 General Plan alternatives is generally the same as that allowed under TRPA's Regional Plan and implementing regulations. The Roadway 6-Lane "Plus" and Environmentally Constrained alternatives ensure precise consistency with TRPA plans by assigning the "adopted plan" designation to the Lake Tahoe Basin and expressly incorporating the Regional Plan, TRPA's Plan Area Statements, and the Meyers Community Plan as the basin's adopted plans.

Pursuant to PRC §21083.5(b), the County has reviewed the environmental documents prepared by TRPA that address the Regional Plan. This section briefly describes TRPA's regulatory program and summarizes TRPA's analyses of the environmental impacts of that program. The impacts of future development within the Lake Tahoe Basin under each of the equal-weight alternatives would be the same as those analyzed in TRPA's environmental documents. Development on the west slope area of the county could also have impacts on the basin, particularly with respect to traffic and air quality. These spillover impacts are also addressed in this section.

5.14.2 TRPA REGULATORY FRAMEWORK

The Compact was adopted by the California and Nevada legislatures and the U.S. Congress in 1969 in response to a rapid increase in the rate of development in the Lake Tahoe Basin and a growing recognition of the harmful effects of such development on the lake and its environs. The purpose of the Compact was to protect and restore the quality of Lake Tahoe and to address the basin's complex environmental and planning needs. In 1980, the Compact was

amended to strengthen its environmental protections and TRPA's regulatory authority. The new Compact called for TRPA to adopt environmental thresholds and to adopt a Regional Plan to attain and maintain the thresholds.

In 1982, TRPA adopted threshold standards for nine environmental components: water quality, soil conservation, air quality, fish, vegetation, wildlife, noise, recreation, and scenic resources. This was followed by the adoption of a Regional Plan in 1984, which was immediately challenged in court as inconsistent with the Compact and never took effect. That litigation was settled with the adoption of the current Regional Plan in 1987. The Regional Plan functions like a general plan for the Lake Tahoe Basin, describing the needs and goals of the region and providing statements of policy to guide decision making. At the heart of the Regional Plan is the Goals and Policies document, which includes a number of separate elements, including Land Use, Transportation, Conservation, Recreation, Public Services and Facilities, and Implementation.

The Land Use Element of the Regional Plan establishes goals for directing development to suitable locations in the basin and for maintaining the region's environmental, social, physical, and economic well-being. To implement these goals, TRPA adopted 175 Plan Area Statements, which are similar to zoning regulations. The Plan Area Statements, also adopted in 1987, contain detailed plan area maps and identify permissible uses, maximum densities, major improvements, and other land use policies, standards, and programs applicable to each plan area. There are 67 Plan Area Statements covering the unincorporated areas of El Dorado County.

TRPA is also authorized to develop community plans in lieu of plan area statements for areas in which commercial uses are or should be concentrated. The Meyers Community Plan, adopted in 1993 by TRPA and the County, is the only community plan in the El Dorado County portion of the Lake Tahoe Basin. Areawide specific plans and project-oriented master plans may also be used to augment or complement plan area statements and community plans. The Heavenly Valley Master Plan, administered jointly by the County and the U.S. Forest Service (USFS), has been approved by TRPA as a project-oriented master plan.

The Regional Plan is also implemented through TRPA's Code of Ordinances, which contains 97 chapters. The Regional Plan and Code of Ordinances strictly regulate the rate and manner in which development in the basin may proceed. For example, with certain limited exceptions, the subdivision of existing parcels is prohibited. On existing vacant parcels, new residential development requires a residential development right. Because most parcels have been assigned only a single residential development right, development of multiple units on a parcel generally cannot occur without the acquisition of development rights from other parcels

(unless the project is subject to one of TRPA's incentive programs). Development also requires a development allocation. TRPA establishes the maximum number of annual allocations allowed within each local jurisdiction in the Lake Tahoe Basin. El Dorado County is currently limited to a maximum of 111 residential allocations per year through 2006. TRPA also allocates the amount of commercial floor area and the number of tourist accommodation units that can be constructed each year.

Within the basin, eligibility for development further depends on a parcel's assigned score under TRPA's Individual Parcel Evaluation System (IPES). Lands that are the most environmentally sensitive based on erosion hazard, runoff potential, the presence of stream environment zones (SEZs), and other factors are considered low-capability lands and are given the lowest IPES ranking. Parcels with an IPES score below a threshold set by TRPA are generally ineligible for building permits until certain criteria, such as progress toward regional environmental goals, have been met and the threshold is lowered. A parcel's IPES score also determines the maximum extent of land coverage (i.e., paved surfaces and building area) permitted for that parcel. Permitted land coverage can be as low as 1% of the parcel's area for the lowest capability lands.

TRPA is also the agency with primary responsibility for transportation planning in the Lake Tahoe Basin. TRPA is the designated Regional Transportation Planning Agency for the basin under California law and also constitutes the Tahoe Metropolitan Planning Organization under federal law. In 1992, TRPA prepared a Regional Transportation Plan-Air Quality Plan (RTP-AQP) setting forth transportation policies, programs, and improvement priorities. The RTP-AQP was reaffirmed in 1994 and 1996. In 2000, TRPA prepared a Federal Transportation Plan/Regional Transportation Plan (FTP/RTP), which includes and expands upon many of the projects and improvements in the 1992 RTP-AQP.

To monitor the effectiveness of the Regional Plan and its implementing regulations in attaining and maintaining the environmental thresholds, TRPA is required to conduct a review of the environmental thresholds every 5 years. The most recent review of the thresholds was completed in 2001; the results of the review are set forth in TRPA's Threshold Evaluation Report issued in July 2002. The Threshold Evaluation Report contains a number of recommended regulatory and programmatic changes needed to attain and maintain existing thresholds. TRPA has recently adopted a number of those proposed changes. In addition, the 20-year planning horizon of the 1987 Regional Plan ends in 2007. TRPA is planning to undertake a comprehensive review and update of the Regional Plan, which could result in substantial changes to its regulatory program.

5.14.3 SUMMARY OF ENVIRONMENTAL IMPACTS

TRPA has prepared extensive environmental documentation in connection with its adoption and amendment of the Regional Plan and implementing regulations and its 5-year threshold evaluations. TRPA's environmental documentation is prepared pursuant to the provisions of the Compact regarding environmental review, which are similar to those of CEQA and the National Environmental Policy Act.

In 1983, TRPA prepared an environmental impact statement (EIS) for the original 1984 Regional Plan. In 1986, TRPA prepared a supplemental EIS analyzing the current Regional Plan (adopted in 1987), and prepared another EIS in 1987 for its adoption of the Plan Area Statements and ordinances implementing the Regional Plan. TRPA also prepared substantial environmental analysis in connection with its adoption of the Water Quality Management Plan for the Lake Tahoe Region in 1988 and the RTP-AQP in 1992. All of these documents concluded that the programs adopted by TRPA would lead to the attainment of TRPA's thresholds and thus the impacts of those programs on the environment would generally be less than significant or beneficial.

Since the adoption of the 1987 Regional Plan, TRPA has periodically monitored and assessed its progress in attaining the thresholds, most recently in the Threshold Evaluation Report issued in 2002. The Threshold Evaluation Report indicates that the Lake Tahoe Basin remains out of attainment for a number of thresholds and recommends a number of regulatory and programmatic actions needed to reach attainment. In December 2002, pursuant to one of the key recommendations in the Threshold Evaluation Report, TRPA revised provisions of its Code of Ordinances and the Regional Plan with regard to residential, commercial, and tourist allocations through 2006. In connection with that action, TRPA prepared an environmental assessment (EA) analyzing the impacts of development projected to occur under the revised allocation system.

Table 5.14-1 and the discussion that follows summarize the analysis in TRPA environmental documents addressing the Regional Plan, plan area statements, and other implementing regulations, including the documents cited above. In general, the impacts described in these documents, though basinwide, apply equally to the El Dorado County portion of the Lake Tahoe Basin. In the few cases where impacts are not discussed in the TRPA documents, additional analysis is provided below. Based on the analysis in the TRPA documents and its own supplemental analysis, the County has identified the potentially significant impacts on the basin. Most of the significant impacts identified could be eliminated by TRPA's adoption of the measures recommended in the Threshold Evaluation Report. A full list of the TRPA environmental documents reviewed is included in Chapter 8, References. These documents should be consulted for a more detailed analysis of the impacts summarized in this section.

**Table 5.14-1
Summary of Impacts to Lake Tahoe Basin**

Impact	Description	Level of Significance
Land Use and Housing	Land Use. The Regional Plan, plan area statements, and TRPA regulations direct growth to appropriate locations and are designed to prevent incompatible uses.	Less than significant
	Housing. Applicable land use designations and policies are not likely to lead to a significant loss of existing housing or create housing blight.	Less than significant
Agriculture and Forestry	Agriculture. There are minimal agricultural resources in the Lake Tahoe Basin and they are adequately protected by existing land use designations.	Less than significant
	Forestry. Forest management in the Lake Tahoe Basin is directed toward forest health and recovery and non-timber uses. TRPA regulations limit timber harvesting. Under these restrictions, timber resources are not presently available for harvest but will be restored and preserved for future beneficial use.	Less than significant
Visual Resources	Implementation of TRPA's new scenic regulations would prevent further degradation of visual quality in the Lake Tahoe Basin caused by new development and expansion of existing development, and is expected to lead to attainment of scenic thresholds over time.	Less than significant
Traffic and Circulation	Traffic increases resulting from new development on both the west slope and within the Lake Tahoe Basin would exacerbate existing Level of Service deficiencies in the basin under each of the equal-weight alternatives.	Significant
Water Resources	Water Quality. Existing exceedences of thresholds for deep-water clarity, phytoplankton, tributary quality, and stormwater runoff would be exacerbated by new development.	Significant
	Water Supply. Existing groundwater supplies are sufficient to serve projected development.	Less than significant
Utilities	Existing sewer treatment capacity is sufficient to serve projected development.	Less than significant
Recreational Facilities	Increased development would increase usage of existing overcrowded recreational facilities, and create additional demand for new facilities.	Significant

**Table 5.14-1
Summary of Impacts to Lake Tahoe Basin**

Impact	Description	Level of Significance
Human Health and Safety	The Regional Plan and TRPA regulations provide measures to minimize exposure of new development to seismic, fire, and flood hazards.	Less than significant
Geology, Soils, and Mineral Resources	The Regional Plan and TRPA regulations contain policies and regulations that would minimize the impacts of new development on erosion and soil loss.	Less than significant
Noise	New development would expose additional persons to areas experiencing occasional exceedences of TRPA noise standards.	Significant
Air Quality	Development in the Lake Tahoe Basin would increase vehicle miles traveled (VMT) and increase nonattainment with TRPA's VMT threshold. Development on the west slope would contribute additional traffic and wood smoke to the basin, further exacerbating nonattainment with the VMT threshold and the 90% regional visibility threshold, and possibly affecting attainment of traffic, ozone, atmospheric deposition, and wood smoke thresholds.	Significant
Biological Resources	Vegetation. New development could indirectly affect attainment of thresholds for uncommon plant communities, rare plants, and old-growth ecosystems by increasing visitation and recreational use of public lands where those resources are located.	Significant
	Fisheries. Fish habitat could be indirectly affected by new development through diversion of stream flows, increased sedimentation associated with increased land coverage, decreased water quality associated with increased nutrient and pollutant loading, and decreased water quality associated with increased motor vehicle and boat emissions.	Significant
	Wildlife. The Regional Plan and TRPA regulations contain policies and regulations that would protect special-interest species and habitats of special significance against degradation from growth in the Lake Tahoe Basin.	Less than significant
Cultural Resources	The Regional Plan and TRPA regulations contain policies and regulations that would reduce the impacts of allowable development on cultural resources.	Less than significant

LAND USE AND HOUSING

Approximately 87% of the land in the Lake Tahoe Basin is owned by state or federal governments. Because of the ecological significance and sensitivity of lands in the region, both the State of California and the USFS have conducted land acquisition programs in the basin. The majority of the public land in the basin is managed by the USFS and is undeveloped. The urbanized area of the basin is located primarily near the shore of Lake Tahoe, although there are some inland-developed areas (such as Meyers in El Dorado County). The permanent population of the basin is approximately 56,000 (including approximately 31,500 in El Dorado County), but recreational visitors during peak seasons increase the population to approximately twice that number. Given the restrictions on the rate of development in the basin, TRPA estimates that the basinwide population (and the population in the El Dorado County portion of the basin) will increase by about 0.4% annually, which is substantially slower than the growth rate expected for the overall population in El Dorado County and the other Lake Tahoe Basin counties. However, urban development in the basin has in some cases resulted in undesirable land use patterns, such as strip development along regional highways and physical separation of tourist accommodations from tourist attractions.

Land Use

The Regional Plan, plan area statements, and other implementing regulations are designed to protect the environmental resources of the region and provide for low-impact outdoor recreational and tourist-oriented development that is consistent with the natural features and national significance of the area. TRPA's planning documents provide for an emphasis on infill development, moderate amounts of recreation opportunities, maintenance and enhancement of the character of residential areas, a preference for public services uses over commercial development, transfers of development rights, and more incentives for affordable housing than for other forms of housing. TRPA's subdivision limitations, coverage requirements, and transfer of coverage provisions promote infill development on higher capability lands in community plan areas, create incentives to rehabilitate or replace obsolete uses, reduce unconsolidated or strip development, and contribute to enhancement of the built environment. Land use impacts are also addressed by Regional Plan policies related to housing, noise, natural hazards, air quality, water quality, community design, transportation, biological resources, soils, scenic resources, recreation, and public services. These policies, together with the land use designations set forth in each of the 67 plan area statements in the county, will promote the development of compatible land uses and direct growth to appropriate areas of the basin. Thus, this impact is considered less than significant.

Housing

The land use designations set forth in the plan area statements reflect existing land use patterns and would not be likely to lead to a significant loss of existing housing. TRPA regulations are also not likely to create housing blight. A countywide survey of housing conditions conducted in 1995 that included the Meyers area indicated that Meyers contains a disproportionate amount of substandard housing (approximately 36%), although all of this housing was identified as suitable for repair. TRPA regulations may indirectly discourage improvement of substandard housing in some cases, but overall property values in the Lake Tahoe Basin have remained high, providing an incentive for home improvements. In addition, the Meyers Community Plan is designed to improve the form and function of the neighborhood's commercial center through a combination of community design standards and transportation, environmental, and recreational improvements. These programs, together with housing policies addressing rehabilitation proposed for each of the equal-weight alternatives (discussed in Section 5.1.2, Housing), are expected to provide opportunities for improvement of existing substandard housing in the Meyers area. Thus, this impact is considered less than significant.

AGRICULTURE AND FORESTRY

Neither agriculture nor timber production is extensively practiced in the Lake Tahoe Basin, and thus, the environmental documents for the Regional Plan do not specifically address impacts to agriculture or forestry.

Agriculture

The Lake Tahoe Basin is not an important agricultural resource and there is little agricultural activity within the basin with the exception of minor grazing activity, which is permitted under the TRPA Code of Ordinances. The prohibition on subdivision in the basin further reduces the risk that these lands will be converted to other uses. Thus, the impacts on agricultural resources are considered less than significant.

Forestry

Timber production is generally not permitted in the Lake Tahoe Basin. As a result of historic logging activities in the second half of the 19th century, a majority of the Tahoe watershed had been clear cut and the remaining land was generally inaccessible. A large amount of forestland has since come under public ownership and is generally managed for noneconomic goals. TRPA regulations also limit timber-cutting activities. Under Section 18.3 of the TRPA Code of

Ordinances, the only permissible timber-related land uses are reforestation, regeneration harvest, sanitation salvage cut, selection cut, special cut, thinning, timber stand improvement, and tree farms. The TRPA Code of Ordinances expressly states that “special cut” does not include timber production purposes. Timber cutting has occurred in the basin, but has been primarily for hazard reduction and stand management purposes. TRPA’s regulations thus limit the present ability to harvest timber resources. However, those regulations are directed at restoring the health and vitality of the basin’s forest resources, which had become degraded by historic logging activities. These policies are expected to restore and preserve these resources for future beneficial use. Thus, impacts on timber resources are considered less than significant.

VISUAL RESOURCES

The Lake Tahoe Basin is widely known for its beauty and for the variety and quality of its scenic resources. The scenic attributes of the basin attract visitors for sightseeing and recreation, which are important aspects of the region’s economic base. TRPA and the USFS have mapped and inventoried the varied scenic resources of the basin, which include views of Lake Tahoe, rugged mountain peaks, and forested slopes.

Factors that negatively affect the scenic quality of the basin are poorly designed residential and commercial development, roads, poorly designed buildings and signs, and power lines. The Regional Plan designates most of the urban areas and several shoreline viewsheds for scenic restoration. In the past 5 years, implementation of a regional design program has improved the quality of the urban development in the commercial core area. However, cumulative adverse visual impacts continue in shoreline and transition areas.

TRPA has several thresholds for scenic resources. The travel route rating threshold concerns the scenic quality of the region from locations along major roadways and from Lake Tahoe. The scenic quality rating threshold addresses specific views of particular scenic features in the Lake Tahoe Basin. TRPA also has a public recreation area threshold, which protects the views from public recreation areas and bike trails. The scenic quality from each of these vantage points is quantified by rating various attributes, such as physical distractions, man-made features, and variety of scenery, on a numerical scale (from 1 to 5). None of TRPA’s scenic thresholds is in full attainment. With respect to the scenic quality rating threshold, a majority of the 2025 scenic resources visible from roadways and 185 scenic resources visible from the shoreline maintained their 1982 scenic quality scores, but a combined 24 scenic resources have declined in quality since 1982 and are not in attainment, including the Jameson Beach unit in El Dorado County. With respect to the travel route rating thresholds, 26 of 53 roadway units

and 13 of 33 shoreline units are out of attainment. In addition, 7 of 48 public recreation areas and bike trails have declined in scenic quality since 1993 and are therefore not in attainment.

One of the primary factors that negatively affects attainment of the scenic thresholds is the trend of replacing existing small residences in the shoreland region with much larger residences and of eliminating setbacks on residential lots. These factors, combined with the lack of screening between the lake and residences, has resulted in scenic degradation. New development in the basin allowed under the Regional Plan and TRPA regulations would negatively affect the attainment of the scenic quality thresholds if it follows existing trends, including increased size and mass of residential and other structures, loss of lake views as a result of increased mass of buildings and construction of garages on parcels located between the lake and the highway, development of new or expanded shoreline structures, reductions in setbacks associated with residential rebuilds, increased use of architectural features that increase visibility of structures, and removal of vegetation that screens development from the lake. In its 2001 Threshold Evaluation Report, TRPA concluded that existing scenic regulations and compliance measures were inadequate to protect the scenic resources of the Lake Tahoe Basin from further degradation.

The Threshold Evaluation Report identified several mitigation measures that would allow for attainment of scenic thresholds: the adoption of bulk and mass standards for the basin, adoption of design standards for shoreline parcels, development of a visual assessment checklist, adoption of color standards for metal roofs, and adoption of height restrictions linked to existing tree canopy height. In November 2002, TRPA adopted amendments to the TRPA Code of Ordinances that set forth new shoreland design standards containing the elements discussed above and new regulations concerning architectural elements, including roofing materials. The regulations also require existing development that is not in compliance with the standards to make progress toward compliance during remodeling or reconstruction. In addition, TRPA's recent decision to link new development allocations in the Lake Tahoe Basin to implementation of environmental improvement programs (EIPs) will aid in attainment of the scenic thresholds.

With the adoption of the new scenic design standards and mitigation measures identified in the Threshold Evaluation Report, new development is not expected to interfere with attainment of TRPA's scenic thresholds, and scenic quality is expected to improve over time as the new standards are implemented. Thus, impacts on scenic resources are considered less than significant.

TRAFFIC AND CIRCULATION

New development both within and outside of the Lake Tahoe Basin may adversely affect the transportation system within the basin. Future development projected to occur in the basin and on the west slope of El Dorado County under the General Plan alternatives would increase peak-hour traffic volumes on roadways in the South Lake Tahoe area. Although TRPA has authority over land use development in the Lake Tahoe Basin, it does not control land use actions outside the basin that can affect traffic conditions within the basin. Any increase in peak-hour volumes has the potential to exacerbate existing traffic problems on key roadway segments and at major intersections in the basin. The significance of this impact depends on the level of existing traffic problems, the magnitude of the potential traffic increase from west slope development, and the specific regulations that govern traffic conditions in the basin.

The South Lake Tahoe area is served by three primary roadways: U.S. Highway 50 (U.S. 50), State Route (SR) 89, and Pioneer Trail. U.S. 50 is the main route in and out of the basin from El Dorado County while SR 89 provides access to the west and north shores of Lake Tahoe and an alternative route in and out of the South Lake Tahoe area through Alpine County. Pioneer Trail provides a bypass of U.S. 50 from Meyers into the east side of the South Lake Tahoe area near the Nevada state line. Existing roadway segment volumes and levels of service (LOS) for selected segments of these roadways are listed in Table 5.14-2 below.

Roadway Segment	Average Annual Daily Traffic (AADT) Volume¹	P.M. Peak-Hour Volume^{1,2}	P.M. Peak-Hour LOS
U.S. 50	12,100	2,200	F
- at Upper Truckee River Road	13,300	2,000	E
- at Pioneer Trail	36,500	4,250	F
- East of SR 89			
SR 89	28,000	2,800	F
- West of U.S. 50	4,400	520	C
- East of U.S. 50			
Pioneer Trail	N/A	1,450	E
- U.S. 50 to Al Tahoe Boulevard			
¹ Source = California Department of Transportation (Caltrans) Division of Traffic Safety, (http://www.dot.ca.gov/hq/traffops/saferest/trafdata/index.htm), 2001 Traffic Counts ² P.M. peak-hour volumes reported by Caltrans in areas with high seasonal fluctuations such as the Tahoe Basin represent the hour near the maximum for the year but excluding a few hours that are exceedingly high. For areas without high seasonal fluctuations such as the west slope of El Dorado County, the existing p.m. peak-hour volumes represent average weekday conditions.			

As shown in Table 5.14-2, LOS F conditions exist on sections of U.S. 50 and SR 89. Congestion is most notable at major intersections such as U.S. 50 and SR 89. According to the South “Y” Intersection Study (Fehr & Peers Associates 1997), this intersection operates at LOS F during weekday p.m. peak-hour conditions and for multiple hours of the day during peak winter and summer seasons. Congestion at this location can be severe enough to adversely affect nearby intersections as a result of extensive queuing on the intersection approaches.

As noted earlier, TRPA is the designated Regional Transportation Planning Agency for the Lake Tahoe Basin under California law and also constitutes the Tahoe Metropolitan Planning Organization under federal law. TRPA is also endowed with the authority to govern transportation and land use decisions in the basin. In 1992, TRPA prepared an RTP-AQP setting forth transportation policies, programs, and improvement priorities. The RTP-AQP was reaffirmed in 1994 and 1996. In 2000, TRPA prepared a FTP/RTP that includes and expands upon many of the projects and improvements in the 1992 RTP-AQP.

As part of the RTP-AQP, TRPA established transportation policies directed at achievement the following goals:

- < Minimize increases in vehicle travel demand.
- < Reduce VMT by achieving a 10% reduction in VMT from 1981 levels.
- < Increase travel by transit, bicycling, and walking.
- < Maintain the following LOS thresholds on the region’s highway system:
 - C LOS C on rural recreational/scenic roads,
 - C LOS D on rural developed area roads,
 - C LOS D on urban developed area roads, and
 - C LOS D for signalized intersections, with LOS E acceptable during peak periods in urban areas for up to 4 hours per day.

Minimizing vehicle travel demand and reducing VMT are common themes of TRPA land use and transportation planning documents, as is an emphasis on transit and alternative travel modes (i.e., bicycling and walking) over roadways. For example, Policy 3.B of the Regional Plan states that public or private transit services shall be given preference in mitigating traffic and transportation-related impacts caused by new, expanded, or revised development or land use activities. As a result, the FTP/RTP, which contains the latest prioritized set of transportation improvements for the Lake Tahoe Basin, contains no major roadway-widening projects. Projects that could be considered capacity enhancing are limited to spot intersection improvements at major intersections. Specific locations in the South Lake Tahoe area proposed for capacity enhancements are:

- < U.S. 50/Johnson Avenue,
- < U.S. 50/Tahoe Keys Boulevard, and
- < U.S. 50/SR 89 (South Y intersection).

Any new proposals for capacity enhancements would be subject to review and approval by TRPA and would need to be added to the FTP/RTP. Exceedences of TRPA’s LOS standards are thus expected to continue into the foreseeable future.

Future development will increase vehicle trips and worsen existing traffic problems in the Lake Tahoe Basin. Some of this development will occur in the basin while some will occur outside the basin in areas such as the west slope of El Dorado County. Each of the four equal-weight alternatives would increase development on the west slope of El Dorado County, which in turn would result in new peak-hour vehicle trips entering and exiting the basin on a typical weekday. Table 5.14-3 compares the projected contribution of each alternative to p.m. peak-hour traffic volumes on U.S. 50 at Echo Summit in 2025 (the existing p.m. peak-hour traffic volume at that location is approximately 2,200).

Table 5.14-3	
Comparison of U.S. 50 P.M. Peak-Hour Traffic Volume Increases at Echo Summit Resulting from El Dorado County General Plan Alternatives	
General Plan Alternative	Increase in P.M. Peak-Hour Volume between 2001 and 2025
No Project	650
Roadway Constrained 6-Lane “Plus”	640
Environmentally Constrained	780
1996 General Plan	770

The Roadway Constrained 6-Lane “Plus” alternative would add the least amount of new peak-hour traffic by 2025 (640 trips), with the No Project Alternative adding only slightly more traffic (650 trips). The impacts of the 1996 General Plan and Environmentally Constrained alternatives would be more severe, contributing about 770 to 780 new trips, respectively, during the peak hour. For all alternatives, these increases in peak-hour traffic volumes are considered a significant impact given the severity of existing traffic problems in the Lake Tahoe Basin.

TRPA has identified a number of improvements and programs in the RTP-AQP, FTP/RTP, and Threshold Evaluation Report that would reduce vehicle travel demand, increase transit service capacity and convenience, and improve facilities for bicycling and walking. The

County continues to work closely with TRPA in the planning and implementation of these improvements and programs. However, these actions alone would not be sufficient to reduce this impact to a less-than-significant level.

To fully mitigate the impact, additional roadway capacity would have to be constructed in the basin. This action would require detailed analysis, review, and approval by TRPA. Approval would include amending the RTP-AQP and FTP/RTP to add the specific roadway projects. This action may not be feasible; current TRPA policies and Compact requirements do not support major roadway capacity enhancements, as they would increase VMT and local air-pollution emissions. The mitigation measures identified in Section 5.4, Traffic and Circulation, would reduce but would not eliminate the increases in basin traffic associated with west-slope development. Thus, this impact would remain significant and unavoidable.

WATER RESOURCES

Water Quality

Water quality is one of the most critical issues in the Lake Tahoe Basin and is the primary focus of much of TRPA's regulatory program. The water quality of Lake Tahoe, one of the world's clearest lakes, has declined since the 1960s due to human development and disturbance. The primary factors affecting the water quality of the lake are pollutant and sediment discharge to the lake through runoff from urban development and deposition of nutrients from air pollution. (Refer to the Air Quality section below for a discussion of atmospheric deposition.) The discharge of nutrients to the lake contributes to increasing levels of phytoplankton productivity and loss of lake clarity.

TRPA has adopted water quality thresholds for the Lake Tahoe (including the shore zone and the deep-water zone) and for discharges to the lake (including tributaries, surface-water and groundwater runoff, and other lakes in the basin). Some of the water quality thresholds are based on state and federal water quality standards and others were created by TRPA and are specific to the basin. The water quality thresholds include numerical standards, most of which were established by review of monitoring data for the lake from earlier time periods. TRPA's thresholds are based on the assumption that lake conditions during the earlier time periods are the end goal. All of the water quality thresholds have the goal of reducing nutrient, sediment, and pollutant discharges to Lake Tahoe.

The regulatory program created by TRPA's Regional Plan and implementing regulations was focused largely on attaining these water quality thresholds. In 1988, TRPA adopted the current Water Quality Management Plan for the Lake Tahoe region, which implemented

three key regulatory concepts set forth in the Regional Plan: IPES, soil and coverage requirements, and protections for SEZs. New development with its potential new runoff sources is allowed under the Regional Plan; however, TRPA's regulations restrict the amount of land disturbance allowed on SEZ lands and on lands with a high erosion potential, and they focus development on higher capability lands. In addition, the Regional Plan includes several remedial programs for water quality, including restoration projects, erosion and runoff control improvements, and regionwide application of best management practices (BMPs). TRPA's environmental analyses of the Regional Plan and its implementing regulations concluded that water quality would improve as these programs were implemented.

However, the 2001 Threshold Evaluation Report indicates that while there has been some improvement in some of the indicators, most of the water quality thresholds have not yet been fully attained. The attainment status for each of these thresholds is summarized below.

Littoral (Shore) Zone

The clarity of the lake in the shore zone is measured by the littoral zone threshold. This threshold sets numerical standards for measurements of lake clarity at 25-meter depths along the shoreline. Turbidity along the shoreline is used as an indicator of the amount of nutrient and sediment load in the shore zone, particularly in areas influenced by stream discharges. This turbidity threshold is currently in attainment. However, TRPA is reviewing this threshold to determine whether it is sufficiently protective, because despite attainment of the threshold, studies indicate increased nutrient and sediment loading to the shore zone.

Pelagic (Deep-Water) Zone

The clarity of the deep-water portion of the lake is measured by the pelagic threshold. This threshold is not in attainment. The primary indicator of deep-water clarity (Secchi depth) continues to decline at a rate of about 1 foot per year, although the rate of decline has been slower in the winter months since the 1980s. As an additional indicator of this threshold, TRPA tracks capital improvement program (CIP) projects and BMPs designed to improve lake clarity. Expenditures on CIP projects for the most recent review period were near the level established by TRPA for this indicator, although the implementation of BMPs is behind schedule.

Phytoplankton Primary Productivity

Another factor affecting lake clarity is the amount of phytoplankton in the lake. TRPA has adopted a threshold that measures levels of phytoplankton productivity. This threshold is not

in attainment. The phytoplankton levels at the monitoring station have been increasing steadily over the monitoring period. TRPA expects that attainment of this threshold will be difficult because of the complexity of lake chemistry, and is evaluating the importance of atmospheric nutrient inputs to this threshold.

Tributaries

This threshold requires attainment of California and Nevada standards for concentrations of nitrogen, phosphorus, and iron in tributaries to the lake. While some tributaries are in attainment of the standards for some pollutants, mainly in the watersheds with little or no development or disturbance, a number of tributaries remain out of attainment. However, long-term trends show decreasing concentrations of total nitrogen, phosphorus, and sediment for many tributaries.

Stormwater Runoff, Surface Water

TRPA's threshold for surface-water discharge includes numerical standards for surface discharge of nitrogen, phosphorus, iron, oil, and sediment. Surface-water runoff is one of the primary factors affecting the water quality of the lake and tributaries in the Lake Tahoe Basin. This threshold is not in full attainment. Data from the last 5 years indicate that 70% of the sites meet the soluble nitrogen standard, 60% meet the soluble phosphorus standard, 73% meet the sediment standard, and only 25% meet the iron standard. Projects that treat stormwater runoff would assist in the attainment of this threshold.

Stormwater Runoff, Groundwater

TRPA's threshold for discharges to groundwater includes numerical standards for discharge of nitrogen, phosphorus, iron, oil, and sediment. The quality of water that infiltrates groundwater affects water quality in the lake and tributaries in the basin through groundwater discharge. TRPA's standards for discharge from groundwater take into account the filtering effect of the soil profile. This threshold is not in attainment, but the majority of sites sampled over the last 5 years met the groundwater infiltration standards.

Other Lakes

The water quality of other lakes in the basin may affect the water quality in Lake Tahoe. There are more than 170 ponds or small lakes within the Lake Tahoe Basin. TRPA has not adopted specific standards for the water quality of these lakes and ponds in the basin, but TRPA has monitored water quality in a subset of these lakes. Generally, the monitored lakes

have been found to meet California and Nevada state standards for concentrations of nitrogen, dissolved oxygen, and iron. The 2001 Threshold Evaluation Report recommends adoption of a nondegradation standard for these lakes and ponds.

Summary

The effects of future development under the Regional Plan and the new development allocations on water quality are uncertain. The water quality in the Lake Tahoe Basin may be negatively affected by further development permitted under the Regional Plan and allocations, but the new development allocations would also result in increased funding for many of TRPA's water quality improvement measures. Because the basin is not in attainment with water quality thresholds, however, the incremental water quality impacts of additional development are considered significant.

TRPA's Threshold Evaluation Report and EA for the revised development allocations recommend a number of mitigation measures designed to attain the water quality thresholds, including increased funding and implementation of EIPs, increased BMP enforcement, additional studies of turbidity in shorezone areas, and prioritization of EIPs in SEZs. TRPA has already adopted the recommendation to link allocations of new development units to the implementation of BMPs and EIPs by local jurisdictions. Implementation of the other recommendations set forth in the Threshold Evaluation Report by TRPA would mitigate this impact to a less-than-significant level.

Water Supply

In the EA for the current development allocations, TRPA analyzed the capacities of water suppliers to serve the maximum development allowed under TRPA regulations through 2006. Water service capacities were determined by contacting each of the major water districts that serve the Lake Tahoe Basin. The demand for service was estimated using the maximum possible residential development. There is sufficient water supply to handle the demand from new residential development for all jurisdictions within the basin, although there are potential water rights issues in Nevada. Additionally, current usage of water in the basin is within the water allocations set forth in the California-Nevada Interstate Water Compact: 23,000 acre-feet per year (afy) for California and 11,000 afy for Nevada.

With respect to the El Dorado County portion of the basin, TRPA projects that usage will increase from 7,802 afy to 8,182 afy as a result of growth through 2006, well within the existing capacity of 31,112 afy. The vast majority of water users in the El Dorado County portion of the basin are serviced by the South Tahoe Public Utility District (STPUD), which obtains its

supply exclusively from groundwater. In its June 2002 Urban Water Management Plan, STPUD projects a demand of 3,080 million gallons annually by 2020, which would result in an excess supply of 4,422 million gallons assuming full production capacity (7,502 million gallons). One potential limitation on STPUD's production capacity is groundwater contamination from methyl tertiary butyl ether (MTBE), a gasoline additive that has leaked from South Lake Tahoe-area gas stations. STPUD has taken a number of steps to provide new wells outside of MTBE-threatened areas and to treat affected wells. However, even if STPUD could provide only the minimum water supply, the MTBE contamination (6,143 million gallons) substantially exceeds STPUD's projected 2020 demand.

Given the capacity of water suppliers to accommodate the maximum allowable development within the Lake Tahoe Basin with existing supplies, impacts on water supply are considered less than significant.

UTILITIES

All sewage generated in the Lake Tahoe Basin is exported. TRPA has analyzed the capacities of sewage treatment facilities to serve the maximum development allowed under TRPA regulations through the planning horizon of the Regional Plan. Sewer service capacities were determined by contacting each of the major sewer districts that serve the basin. Ample sewer capacity exists within the Lake Tahoe Basin to accommodate projected residential, commercial, and tourist development. This impact is considered less than significant.

RECREATION FACILITIES

The Lake Tahoe region serves as a recreation destination for residents of northern California and Nevada. There are intense peak periods of winter and summer use when the capacity of many tourist recreational facilities is exceeded. In addition, urban residential development within the Lake Tahoe Basin has contributed to demand for resident-serving recreational facilities. An issue of increasing importance is providing adequate recreational facilities for permanent residents.

The Lake Tahoe Basin contains a wide variety of developed recreational programs and facilities including ski areas, hiking trails, bicycle trails, and boating areas. Many of the basin's recreational facilities are in need of renovation or repair, primarily because of their age. Many public recreational facilities are approaching 30 years of age. These facilities drain agency budgets because of the need to continually repair them.

TRPA has adopted thresholds for recreational resources. These thresholds are in the form of management objectives requiring that TRPA: (1) preserve and enhance the high-quality recreational experience in the Lake Tahoe Basin and obtain more legal public access for recreational opportunities, and (2) ensure that a fair share of the total basin capacity for outdoor recreation is available to the general public. The evaluation of these thresholds is influenced by many factors, some of which are difficult to quantify. TRPA has determined that the fair-share threshold is currently in attainment, but that the quality-experience threshold has not been fully attained.

New residential and tourist development in the Lake Tahoe Basin is anticipated to create a greater demand for both tourist and resident recreational facilities. This increased demand may lead to increased degradation of facilities as a result of overuse and overcrowding of facilities. Additionally, this increased demand and visitation could result in a degradation of environmental and scenic qualities of the region. New development would increase the burden on existing tourist and resident recreational facilities, detracting from the overall quality of the experience. In addition, if new recreational facilities do not keep pace with new development, the consumptive resources necessary to provide those facilities may be lost. This impact is considered significant.

TRPA has recommended several mitigation measures in the Threshold Evaluation Report, including adoption of a Regional Recreation Master Plan. Implementation of these measures by TRPA would mitigate impacts on recreational facilities to a less-than-significant level.

HUMAN HEALTH AND SAFETY

The human health and safety impacts analyzed by TRPA include landslide, avalanche, seismic hazards, flood, and wildland fire hazards. Development within the Lake Tahoe region, by virtue of its location in a rugged mountain environment, creates human exposure to natural hazards including flood, wildland fire, avalanche, and earthquakes. TRPA has mapped natural-hazard areas in the basin, including areas near faults, steep or unstable slopes, and floodplains. TRPA has not adopted thresholds related to natural hazards, but TRPA's Regional Plan contains the goal of minimizing the risks from natural hazards including flood, fire, avalanche, and earthquake.

The development associated with TRPA's Regional Plan and new allocations has the potential to expose more people to natural hazards. Residential and commercial development in the Lake Tahoe Basin may expose more people to landslides, wildfire, flooding, and avalanche through increased residential and recreational use in the region and increased travel on regional highways. TRPA's Regional Plan and regulations provide measures to minimize

exposure to natural hazards. TRPA's natural hazard policies include restrictions on the replacement of structures in identified hazard areas, restrictions on construction and grading in the 100-year floodplain, and public education regarding wildfire and fuel management. In addition, TRPA has adopted ordinances that restrict development in high-hazard areas, authorize transfers of development from flood-prone areas and steep slopes to areas more suitable for development, require subsurface investigations and slope stability reports as part of the project review process, and authorize the management of wildfire hazards. With respect to avalanche hazards, the Regional Plan restricts the construction, reconstruction or replacement of structures in identified areas of avalanche or mass instability except where precautionary measures can be implemented to insure protection of public health and safety. This impact is considered less than significant.

GEOLOGY, SOILS, AND MINERAL RESOURCES

TRPA has adopted threshold indicators for soil conservation and hydrology. TRPA's soil conservation thresholds concern the amount of land converted to urban use (i.e., impervious coverage) and the degree of preservation of SEZs. SEZs include major and minor streams, intermittent streams, drainage ways, meadows and marshes, and other areas of water influence in the Lake Tahoe Basin. TRPA's soil conservation thresholds are defined in terms of management objectives.

Impervious Coverage

The conversion of land to urban use affects the rate and extent of erosion, and water quality, by increasing the surfaces for runoff and the sources of pollutant loads. The amount of impervious ground cover (e.g., pavement and building footprints) in the basin influences the amount of erosion and the amount of sediment and pollutants that reach Lake Tahoe. TRPA's coverage threshold requires that all impervious coverage comply with the Land Capability Classification of the *Lake Tahoe Basin, California-Nevada, a Guide for Planning* (Bailey 1974) (Bailey system). This threshold involves restricting the land coverage on newly developed parcels to specified percentages and reducing the land coverage on already developed parcels where the Bailey percentage is exceeded. While there is currently an excess amount of impervious coverage remaining in the basin due to land coverage established before 1972, all coverage created since 1972 (with the exception of some unauthorized coverage) is in compliance with the Bailey percentages.

Naturally Functioning SEZs

Disturbance of SEZs affects the rate and extent of erosion along with water quality in the Lake Tahoe Basin, by reducing the capability of streams to convey storm runoff and by increasing the discharge of sediment, nutrients, and other pollutants to Lake Tahoe. TRPA's threshold for SEZs has three components: preserving existing naturally functioning SEZs; restoring 25% all disturbed SEZ lands in undeveloped, non-subdivided lands; and restoring 25% of the SEZ lands that have been identified as disturbed, developed, or subdivided, resulting in a 5% increase in the area of naturally functioning SEZ lands. While certain restoration targets have not been met, the trend toward restoration has increased from 20 acres per year to 30.7 acres per year since the introduction of TRPA's EIP.

Under the Regional Plan and its implementing ordinances, new development in the Lake Tahoe Basin must be consistent with TRPA's threshold standards for coverage. New development allowed under TRPA regulations is expected to increase the total amount of impervious coverage in the basin, which is currently in excess of threshold levels. Under TRPA's Regional Plan and regulations, development in naturally functioning SEZs is not permitted, but new development could affect SEZs by indirectly increasing levels of pollutant discharges to streams and by increasing recreational use of SEZs. Nonetheless, development allocations in the basin would provide for funding and implementation of the SEZ restoration projects needed for threshold attainment, and the incentives and other measures in TRPA's new allocation system are likely to increase the rate at which excess impervious coverage is reduced and SEZs are restored.

Summary

TRPA has concluded that the compliance measures and allocation incentives in effect, and proper installation of BMPs, are sufficient to facilitate attainment of the soil conservation thresholds. Thus, development permitted under TRPA's Regional Plan and regulations would have a less-than-significant impact on soil conservation and rates of erosion.

NOISE

The Lake Tahoe Basin is characterized by a relatively low noise level, but levels of background noise in the region are rising as a result of increased levels of human activity. Sources of noise within the basin include traffic on highways (including tire chains in the winter), intermittent aircraft noise, industrial activities, motorboats and personal watercraft, construction, pets, garbage trucks, and stereo systems. TRPA's noise thresholds are based on the goals of

reducing or eliminating activities in the basin that produce damaging or distressing noise levels and providing for community and neighborhood tranquility.

Single Event—Aircraft

TRPA has adopted numerical thresholds for noise levels caused by aircraft. A violation of the numerical noise threshold by a single aircraft would result in nonattainment of TRPA's threshold. The basin is not in attainment with this threshold because aircraft noise standards are exceeded by commercial and military flights; however, less than 1% of all flights exceed noise standards. The majority of all exceedances are due to military aircraft operations, for which the South Lake Tahoe Airport has no enforcement authority. The remaining exceedances measured during the monitoring period were the result of commuter aircraft operations from an airline carrier that no longer operates at the airport.

Single Event—Other

TRPA has adopted numerical thresholds for noise levels from single noise events, which include generation of noise from boats, motor vehicles, motorcycles, snowmobiles, and off-road vehicles. A violation of the numerical noise threshold by a single event results in nonattainment of this threshold. TRPA's monitoring data for single noise events are limited, but it appears that single event noise levels in the basin have not changed significantly in the last 5 years. The basin is not in attainment with this threshold. Data from the USFS indicate that five citations were issued for exceedances of the snowmobile noise standards in 2000-2001, and tests conducted on boats commonly seen on Lake Tahoe indicate that standards are likely exceeded by some watercraft.

Community Noise Equivalent Level

TRPA has adopted the community noise equivalent level (CNEL), a numerical threshold for the noise level in communities. The CNEL measurements include 24-hour measurements of noise levels. In most communities, noise levels have increased since 1996. Exceedances occurred in about 20% of the communities tested. In most instances, the exceedances resulted from construction activities and traffic.

Summary

New development allowed under TRPA regulations would result in an increase in noise levels in the basin caused by increased vehicle traffic, construction noise, and recreational use of the region, all of which could contribute to exceedances of single event and CNEL thresholds.

New development allocations could exacerbate these noise impacts, but the new allocations would be linked to the adoption of programs that provide for increased monitoring and enforcement of noise standard, which would partially mitigate these impacts. New development is not likely to contribute substantially to violations of the aircraft noise standard because few residents use the airport and most of the exceedances were caused by military aircraft. The basin remains out of attainment, however, with all of its noise thresholds. Thus, this impact is considered significant.

The Threshold Evaluation Report and the EA for new development allocations recommend several mitigation measures for noise impacts, including a phase-in of airport noise standards for the South Lake Tahoe Airport, increased monitoring and enforcement for single event and CNEL standards, and adopting protocols for measuring boat noise. Adoption of these measures would mitigate noise impacts to a less-than-significant level.

AIR QUALITY

Air quality in the Lake Tahoe Basin is very good to excellent. Few known violations of federal and state air quality standards have occurred in recent years.

The air quality in the basin is affected predominantly by activities within and to the west of the basin. The most important meteorological factors influencing air quality in the basin are: (1) localized inversions, which trap air masses over the basin, and prevailing westerly winds, which transport air masses from the Sacramento Valley and San Francisco Bay area into the Basin. The transport of pollutants into the basin from out-of-basin sources to the west (i.e., upwind sources) is an important factor affecting air quality in the basin.

TRPA has adopted eight threshold indicators for air quality in the basin: carbon monoxide (CO), ozone, traffic volume, VMT, atmospheric nutrient loading, particulate matter, wood smoke, and visibility. There are federal and state standards for CO, ozone, and particulate matter; compliance with these standards is evaluated by TRPA. TRPA has adopted its own, more stringent thresholds for carbon monoxide and ozone. Additionally, TRPA has adopted thresholds for visibility, traffic volume, wood smoke, VMT, and atmospheric nutrient loading. There are no federal or state counterparts for these latter thresholds.

The Regional Plan, RTP-AQP, and TRPA Code of Ordinances contain numerous air quality control measures designed to implement TRPA's thresholds, including measures addressing vehicle emission control technologies, alternative fuels, transportation control measures, indirect source control measures, BMPs, combustion heaters, and stationary source controls.

The environmental documentation for these programs concludes that threshold attainment could be achieved by implementation of these measures.

For its 2001 Threshold Evaluation Report, TRPA measured each of its air quality indicators and evaluated whether the basin is in attainment for the state and federal standards and TRPA's thresholds for each indicator. Several of these air quality indicators are important for evaluating the impacts of development on water quality and air quality in the basin. As summarized below, the basin has achieved or is tending toward attainment for a number of the thresholds. The following discussion summarizes TRPA's assessment of the attainment status for each of its air quality indicators and its analysis of the potential air quality impacts of new in-basin development that would be permitted under the recently approved allocations.

Carbon Monoxide

The primary sources of CO in the basin are residential heating devices (furnaces, fireplaces, and stoves) and motor vehicle emissions, with the vast majority of CO from motor vehicle emissions. TRPA monitors traffic volume as a separate air quality indicator (see Traffic Volume discussion below). The basin is in attainment with state, federal, and TRPA standards for CO. The most stringent of these standards requires that CO concentrations not exceed 6.0 parts per million (ppm) averaged over 8 hours and 20 ppm averaged over 1 hour. No CO standards were exceeded on any days from 1996 to 2000. Reductions in CO concentrations and attainment of TRPA's more stringent CO threshold are attributed primarily to emission controls on motor vehicles in California and the clean-burning fuels required in California.

New development allowed in the Lake Tahoe Basin under TRPA regulations would not alter the basin's CO attainment status. An increase in CO emissions of roughly 30% would be necessary to result in concentrations that would exceed the thresholds. TRPA estimates that the maximum allowable in-basin development under the current allocations would result in only a 2% increase in CO emissions; thus, this increase would have a less-than-significant impact on CO concentrations in the basin.

Ozone

Motor vehicles, power plants, and other stationary sources are the primary sources of ozone precursors, such as oxides of nitrogen (NO_x) and hydrocarbon gases. Ozone levels are highest in the summer when weather conditions promote the atmospheric reactions that create ozone. Ozone concentrations in the Lake Tahoe Basin are heavily influenced by atmospheric transport of ozone precursors from upwind areas outside the region. The basin is generally in compliance with state and federal ozone standards, but not with TRPA's more stringent

threshold. The basin has not exceeded the federal 1-hour ozone standard (0.12 ppm) since 1982. TRPA's ozone standard (0.08 ppm averaged over 1 hour) has been exceeded at one or more of the monitoring stations every year since it was adopted, but the number of days exceeding the ozone standard has generally decreased since the threshold was adopted. Average ozone concentrations have been declining in the basin.

The observed reduction in average ozone concentrations in the Lake Tahoe Basin appears to be the result of cleaner emissions from motor vehicles. Exceedances of TRPA's ozone standard have generally occurred in the summer, when tourism is high and weather conditions transport pollutants into the Basin from upwind areas. Transport of ozone or its precursors into the region from upwind areas may be a significant factor in observed ozone concentrations. More study of the contribution of upwind sources to ozone concentrations in the basin is needed, but data suggest that three of the four exceedances of TRPA's standard in summer 2001 may have been caused by out-of-basin sources.

The development allowed in the Lake Tahoe Basin under TRPA regulations would result in an increase in VMT and associated increases in emissions of ozone precursors. TRPA has estimated that the impact of in-basin development allowed under the current allocations would be NO_x increases of 4% and hydrocarbon increases of 3%. These increases in NO_x and hydrocarbons would have a less-than-significant impact on the overall ozone concentrations in the basin.

Traffic Volume

TRPA's environmental thresholds do not include traffic, but TRPA considers traffic volume and VMT to be indirect indicators of air quality. (Impacts to traffic levels of service are discussed separately above.)

TRPA's traffic volume threshold requires a 7% reduction in winter traffic volumes on the U.S. 50 corridor from 1981 levels. Although travel on the seven main access routes into the Lake Tahoe Basin increased about 20% from 1981 to 1995 and 8.85% from 1995 to 1999, traffic volume at the indicator intersection used by TRPA to determine compliance with this threshold, Park Avenue and U.S. 50 in South Lake Tahoe (the historic location of a CO hot spot and monitoring location), has decreased since 1987 at the times of concern (winter between 4 p.m. and midnight). This threshold was attained in 1996. According to TRPA, although traffic counts at the indicator intersection were discontinued in 1997, traffic counts on nearby roadways indicate that traffic volumes have likely remained steady at that intersection. Accordingly, TRPA has presumed attainment with this threshold, but has acknowledged that exact data are unavailable to make a conclusive determination.

Traffic volumes would likely increase as a result of increased development within the basin and could affect the traffic volume indicator. However, according to TRPA, traffic volumes may be able to increase slightly without causing nonattainment of TRPA's U.S. 50/Park Avenue threshold. TRPA does not expect the additional traffic volume associated with new in-basin development to cause an exceedance of the traffic volume threshold. This impact is considered less than significant. However, as discussed below, increased traffic caused by out-of-basin traffic could result in nonattainment of this threshold.

Vehicle Miles Traveled

TRPA's VMT threshold calls for a VMT reduction of 10% below 1981 levels. Although existing measures have kept increases in VMT to less than 1% annually, the basin is not in attainment for this threshold. TRPA's analysis indicates that VMT have increased since 1981 by approximately 8.5% (to 1,790,602 miles in 1999). The development allowed in the basin under the current allocations is expected to increase VMT by 155,398 miles above current levels. This would exacerbate the nonattainment status of this threshold. There is some question as to whether VMT is an appropriate indicator for visibility and NO_x problems, and the Threshold Evaluation Report recommends a reassessment of this threshold. However, TRPA has not yet revised this threshold. Because increased development would further interfere with the VMT threshold, this impact is considered significant.

For new development to not result in a VMT increase, additional trips and VMT that would result from increased development would have to be absorbed by other modes of transportation. The Threshold Evaluation Report recommends a number of supplemental measures that would reduce VMT, including a program of mass transit and other control measures. However, TRPA forecasts that VMT will continue to increase and that the basin will remain in nonattainment with the VMT threshold. Thus, this impact is considered significant and unavoidable.

Atmospheric Deposition of Nutrients

Atmospheric deposition of nutrients, particularly nitrogen and phosphorus, affects algal growth in Lake Tahoe, and hence, clarity of the lake. A primary source of atmospheric nutrients in the basin is gaseous nitrogen emissions from motor vehicles. TRPA's threshold related to atmospheric deposition of nutrients concerns inputs of nitrogen to the lake. The basin is in attainment of the interim target for deposition of nitrogen, and it also may be in attainment of the threshold. Concentrations of nitrate appear to have been reduced by more than 20% from the 1973-1981 annual average, and concentrations of nitrogen dioxide decreased 15% from 1975 to 2000. TRPA is initiating studies of the impacts of atmospheric

deposition of phosphorus on the lake. Presently, there is no threshold for atmospheric deposition of phosphorus.

New in-basin development would add sources of gaseous nitrogen emissions to the basin as a result of additional VMT associated with new development. The VMT added by new development are not expected to affect attainment of TRPA's threshold for atmospheric nitrogen deposition. The effect of additional VMT associated with past development appears to have been more than offset by NO_x reductions as a result of cleaner motor vehicles. Increased development under TRPA regulations is not expected to affect this threshold. This impact is considered less than significant.

Particulate Matter

The primary sources of particulate matter in the basin are entrained roadway dust, residential wood combustion, and forest fires. The basin is in attainment with state and federal standards for respirable particulate matter with an aerodynamic diameter of 10 micrometer or less (PM₁₀). PM₁₀ concentrations have been decreasing in the basin over the last 16 years. The primary factors contributing to the reduction are TRPA's wood heater retrofit program, improvements in wood heating devices, and the popularity of gas heaters.

The development allowed under TRPA regulations would affect concentrations of particulate matter primarily through an increase in VMT and an increase in residential heating devices, but the impacts would be less than significant. The relative contribution of vehicle use to airborne particulate matter is currently not known, but any increase in VMT that would result from new development allocations would be partially offset by linked transportation improvements and increased funding for projects funded by TRPA's air quality mitigation fee. Because all new wood heaters installed in the basin must meet strict emission standards, new residential allocations would not likely cause a significant increase in wood smoke. Accordingly, impacts related to particulate matter are considered less than significant.

Wood Smoke

TRPA has adopted a threshold indicator for wood smoke that is distinct from its threshold indicator for particulate matter. Residential wood burning is the major source of wood smoke in the basin. TRPA's wood smoke threshold requires a reduction in wood smoke by 15% below 1981 values for the subregional and regional levels. TRPA has not identified a method for direct measurement of wood smoke, but the best available methodology suggests that wood smoke levels may have been reduced by 15% at the subregional level, but not at the regional

level. Accordingly, TRPA has concluded that while attainment status is unknown, the basin is likely nonattainment for this threshold.

TRPA has concluded that development allowed under TRPA regulations would not substantially contribute to an increase in wood smoke levels in the basin because of the restrictions placed on all new residential wood-burning devices. TRPA also implements a wood heater retrofit program to attain this threshold. Impacts on wood smoke levels in the basin from in-basin development are considered less than significant. However, as discussed below, increased west slope development may result in additional transport of wood smoke and regional haze into the basin.

Visibility

Visibility, or visual range, is related to ambient concentrations of fine particulate matter, including sulfur aerosols, fine soils, ammonium nitrate, and smoke. TRPA has adopted visibility thresholds at the regional and subregional levels. The only threshold that is not being met is the 90% (i.e., haziest days) regional threshold. Regional visibility under this standard improved from 1991 to 1996, but has decreased since then. Regional visibility under the 50% threshold has improved since 1991 and is in attainment. Subregional visibility, which is affected primarily by local activities, has improved dramatically since the early 1990s.

Development allowed under TRPA regulations is not expected to significantly affect subregional visibility. Despite development over the past 10 years, subregional visibility (which is affected primarily by local sources) has substantially improved. In-basin development is also not expected to significantly contribute to regional visibility because development at comparable levels in recent times has not had a substantial impact on regional visibility. The impacts of in-basin development on visibility are considered less than significant. However, as discussed below, regional visibility could be significantly affected by out-of-basin development.

Impacts of Out-of-Basin Development on Basin Air Quality

Increased development outside of the Lake Tahoe Basin, including development in El Dorado County, could affect attainment of TRPA's air quality thresholds, particularly its VMT and regional visibility thresholds. As discussed in the Traffic and Circulation section, above, the VMT threshold is not currently being met and would be significantly affected by increased traffic generated by in-basin development. Development on the west slope area of El Dorado County would contribute additional traffic to the basin. This would add to VMT in the basin and will make attainment of the VMT threshold more difficult. Other thresholds related to VMT and currently in attainment, such as traffic volume, ozone, and atmospheric nitrogen

deposition, could also be affected by the increase in traffic. West slope development would also result in increased wood smoke, which could contribute to regional visibility impacts in the basin. Regional haze is transported into the basin from upwind sources, including the Sacramento Valley and San Francisco Bay area. TRPA has not yet been able to quantify the relative contribution of out-of-basin development to the basin's air pollution problems. However, development on the west slope of the county would increase under all four equal-weight alternatives and would therefore contribute to these problems. This impact is considered a significant and unavoidable impact.

BIOLOGICAL RESOURCES

TRPA has divided its management of biological resources in the Lake Tahoe Basin into three different categories: vegetation, fish, and wildlife. For each category, TRPA has established thresholds by which it evaluates progress toward protection and preservation of biological resources in the basin. In some instances, TRPA has used biological classification systems developed by federal agencies, but for the most part, TRPA's thresholds for biological resources were created by TRPA and are specific to its management objectives for the basin.

Vegetation

Vegetation in the Lake Tahoe Basin reflects extensive past logging activities. The resulting second-growth forest has, until recently, received little active management, except for fire suppression. Many of the forest stands are even-aged and dense, which makes the forest communities susceptible to pest outbreaks and catastrophic fire. As a result of past logging activities, the region contains very little old-growth forest. The basin supports a diversity of plant species and community types over its topographic range. The state and federal governments own a large amount of land in the region, and many of the vegetation communities are managed by public agencies. TRPA has adopted threshold indicators for vegetation that are designed to monitor the distribution and abundance of common vegetation communities, uncommon plant communities, rare plants, and old-growth ecosystems. TRPA's adopted goals for vegetation in the basin are to increase the diversity of plant communities, protect and restore unique ecosystems, and conserve sensitive plants and communities.

Common Vegetation

TRPA's threshold for common vegetation requires the maintenance of several common vegetation communities, including yellow pine forest, red fir forest, subalpine forest, deciduous riparian forest, and shrub and wetland associations. TRPA's threshold includes numerical abundance requirements for each vegetation community. This threshold is not in

attainment because not all of the abundance requirements are currently met. Specifically, the region lacks young yellow pine and red fir forest communities. This threshold could be in full attainment by 2020 if active ecosystem management is used to alter the composition and diversity of existing vegetation communities. In the future, TRPA may add aspen stands to this threshold indicator and apply a nondegradation standard for this vegetation type.

Uncommon Plant Communities

TRPA's threshold for uncommon plant communities requires nondegradation of plant communities that provide unique scientific, ecological, or scenic values. TRPA has designated four plant communities for monitoring pursuant to this threshold: Grass Lake, Osgood Swamp, Freel Peak Cushion Plant Community, and Deep Water Plants. TRPA is considering adding additional communities for protection under this indicator, including Hell Hole (boreal bog), Upper Truckee Marsh, Taylor Creek Marsh, Pope Marsh, Meeks Meadow and Page Meadows, and Slaughterhouse Canyon. This standard is in attainment for the three community types that have been monitored. Grass Lake, Osgood Swamp, and the Freel Peak Cushion Plant Community are protected under the jurisdiction of the USFS. Grass Lake and Osgood Swamp are not threatened by recreational visitation or other disturbances. The Freel Peak cushion plant community is experiencing some degradation from hikers and recreational users, but TRPA staff and the USFS are monitoring the impacts. The Deep Water Plant community has not been monitored and its status is unknown.

Rare Plants

This threshold requires a minimum number of populations for four different plant species: Longpetaled Lewisia, Cup Lake Draba, Lake Tahoe Draba, and Tahoe Yellow Cress. This standard is not in attainment because of the lack of sufficient population sites for the Tahoe Yellow Cress. Populations of longpetaled Lewisia, Cup Lake Draba and Lake Tahoe Draba appear to be stable. The number of populations of Tahoe Yellow Cress has declined since 1993. This species is the subject of a conservation plan effort, including a proposal to plant seedlings of the species. It is not known whether these efforts will be successful in establishing additional populations of Tahoe Yellow Cress.

Old-Growth Ecosystems

TRPA's standard requires that 55% of the region's forests shall be in old-growth condition. TRPA uses the USFS vegetation classification system for classification of old-growth forests. The basin is not in attainment with this threshold. As a result of past logging, only 5% of the

region's forests are in old-growth condition. TRPA estimates that this threshold could be in full attainment by 2060 if forest lands are managed for old-growth conditions.

Summary

The development allowed under TRPA regulations is not likely to affect the attainment of the vegetation thresholds directly because the thresholds can be largely attained by management and protection of public lands and other areas not eligible for development within the basin. The primary measures recommended for attainment of many of the vegetation thresholds involve management of public lands. Most or all of the uncommon plant communities, rare plant populations, and old-growth forest communities are on public lands and lands not eligible for development. According to TRPA, existing locations of Tahoe Yellow Cress on public lands are sufficiently protected by TRPA's current regulations. However, development could indirectly affect attainment of the thresholds for uncommon plant communities, rare plants, and old-growth ecosystems by increasing visitation and recreational use of public lands. This impact is considered significant.

TRPA has proposed a number of measures to mitigate impacts on vegetation, including the adoption of a Tahoe Yellow Cress conservation strategy, development of an invasive weed control program, development of an aspen stands conservation plan, improvement of wildland fire planning, and amendments to the TRPA Code of Ordinances to strengthen vegetation protections. Implementation of these measures by TRPA would reduce vegetation impacts to a less-than-significant level.

Fish

The lakes and streams of the Lake Tahoe Basin once supported seven species of native fish, including abundant populations of Lahontan cutthroat trout and mountain whitefish. Historic logging, water diversions, grazing, commercial fishing, road building, and the introduction of nonnative fish and other aquatic species have contributed to the decline or extinction of native fish and the degradation of fish habitat in the region. TRPA has adopted four threshold indicators for fisheries. TRPA's management goal is to improve aquatic habitat essential for the growth, reproduction, and perpetuation of existing and threatened fish resources in the basin. TRPA's thresholds specifically address preservation of aquatic habitat and reintroduction of the Lahontan cutthroat trout.

Lake Habitat

TRPA's lake habitat threshold requires nondegradation of fish habitat in Lake Tahoe and establishment of 5,948 acres of excellent lake habitat for fish species. TRPA is continuing to investigate factors that affect fish habitat in the lake, including physical disturbance of spawning areas in the shore zone, pollution from boats, introduction of exotic vegetation, and proliferation of nonnative fish populations. At present, TRPA believes that the basin is not in attainment with this threshold.

Stream Habitat

TRPA's stream habitat threshold is to achieve 75 miles of excellent, 105 miles of good, and 38 miles of marginal stream habitat as indicated by TRPA's Stream Habitat Quality Overlay Map. TRPA has not completed an inventory of stream habitat in the basin and is still trying to determine how to evaluate and classify stream habitat as required by the threshold. Other than collecting data to identify opportunities for habitat improvements, limited effort was put forth in monitoring stream fish habitat between 1996 and 2000. Some stream restoration projects were initiated in the summer of 2000. TRPA's Fisheries Technical Advisory Group has concluded that the basin is not in attainment with this threshold.

Instream Flow

TRPA's instream flow threshold provides that "[u]ntil in-stream flow standards are established in the Regional Plan to protect fishery values, a nondegradation standard shall apply to instream flows." TRPA monitors attainment of this threshold by evaluating new diversions from streams. According to TRPA's records, no new stream diversions have been approved in the basin since 1996, and consequently, streamflows have not been diminished as a result of TRPA's approval of development projects. The basin is in attainment with the interim nondegradation standard.

Lahontan Cutthroat Trout Reintroduction

TRPA's Lahontan cutthroat trout reintroduction threshold is a policy stating that the TRPA Governing Board shall support, in response to justifiable evidence, state and federal efforts to reintroduce Lahontan cutthroat trout. The basin is in attainment with this threshold. A population of Lahontan cutthroat trout was established in the early 1990s.

Summary

The development allowed under TRPA regulations is not expected to affect fish habitat directly because TRPA regulations prohibit development in SEZs, and “spawning” and “feed and cover” lake habitats. However, development could affect fishery thresholds indirectly through diversion of streamflows, increased sedimentation associated with increased land coverage, decreased water quality associated with increased nutrient and pollutant loading, and decreased water quality associated with increased motor vehicle and boat emissions. This impact is considered significant.

The Threshold Evaluation Report recommends a number of actions that would aid in attainment of TRPA’s fishery thresholds, including research to identify the distribution of existing fish habitat and to determine the effects of invasive species on native fish. TRPA’s implementation of these actions, together with fisheries-related projects listed in the EIP, policies in the Regional Plan, and existing compliance measures, would reduce fisheries impacts to a less-than-significant level.

Wildlife

The Lake Tahoe Basin supports a diversity of wildlife species, including an estimated 217 species of birds, 59 species of mammals, 8 species of reptiles, and 5 species of amphibians. The topography of the basin provides habitat for a diverse array of wildlife species. TRPA’s wildlife management goals are focused on protecting sensitive species and preserving habitats that are rare or of special significance within the basin. TRPA’s management goals for vegetation and SEZs are coordinated with its habitat management goals for wildlife.

Special-Interest Species

TRPA’s threshold for special-interest species requires a minimum number of populations for several different species: northern goshawk, osprey, bald eagle, golden eagle, peregrine falcon, waterfowl, and deer. With respect to bird species, the threshold also requires minimum disturbance distances around perching sites and nesting trees. This threshold is not in attainment. The minimum population sizes for golden eagles and peregrine falcons are not met and may never be realized because Lake Tahoe may be suboptimal nesting habitat for these species. Additionally, recreational activities and other disturbances affect nesting habitat or wintering areas for goshawk, bald eagle, waterfowl, and deer.

Habitats of Special Significance

TRPA's habitat threshold provides that a nondegradation standard shall apply to significant wildlife habitat consisting of deciduous trees, wetlands, and meadows while providing for opportunities to increase the acreage of such riparian associations. TRPA evaluates the attainment of this threshold by determining its progress toward preservation and restoration of SEZs. This threshold is not in attainment because the basin is not in compliance with the interim SEZ restoration targets (refer to the Geology, Soils, and Mineral Resources section above).

Summary

The residential and commercial development allowed under TRPA regulations would occur primarily within the TRPA-designated urban boundary. TRPA estimates that the direct impacts of development allowed under TRPA regulations through the Regional Plan planning horizon would result in the permanent additional loss of 0.5% of wildlife habitat in the urban boundary, resulting in total land coverage within the urban boundary of the basin of 31.4%. This permanent loss of wildlife habitat within the urban boundary is not expected to reduce the population viability of urban-associated wildlife species. Development would have indirect impacts on wildlife through the increased likelihood of human-associated disturbance (including pets and nonnative sources of food), new access points to sensitive habitats from adjacent development, simplification of habitat structure (landscaping) within the urban boundary, and increased demand for recreational facilities. However, these impacts would be mitigated by the wildlife policies and regulations in the Regional Plan and the implementation of disturbance-free zones for special status-species in TRPA's Recreation and Conservation Plan Areas. TRPA has concluded that it is unlikely that development allowed under TRPA regulations would interfere with the attainment of the wildlife thresholds. TRPA's Regional Plan and regulations would have a less-than-significant impact on wildlife.

CULTURAL RESOURCES

The Lake Tahoe Basin contains historical and cultural sites such as historical mansions, resorts, trails, way stations, and Native American camps. TRPA has identified and mapped more than 73 structures and areas of historical or cultural significance within the basin. Many of these sites are on public lands away from developed areas, while others are in or near developed areas on the lakeshore or the regional highway network. The region's historical and cultural resources are threatened by development pressures and by harsh weather conditions and lack of maintenance. TRPA has not adopted thresholds for the protection of cultural and historical

resources within the basin, but its Regional Plan contains goals and policies related to the preservation of historical, cultural, and architectural sites of significance within the region.

The development associated with TRPA’s Regional Plan and new development allocations have the potential to bring about increased pressure to modify or disturb cultural and historical sites due to growth in regional land use and population. In particular, cultural and historical sites on or near the lakeshore or the highway network may be disturbed by new residential, commercial, or recreational development. New development in the county could increase the number of recreational visitors to the basin and result in an increase in the impacts of recreational visitors on cultural and historical sites.

To preserve significant cultural sites, TRPA’s existing ordinances and regulations provide for standards related to historic and architectural protection, require the protection of objects of antiquity uncovered by grading or excavation, require specific projects to address their impacts on these sites, and promote development within existing urbanized areas. Accordingly, future development in the basin would have a less-than-significant impact on cultural resources.

5.14.4 SIGNIFICANCE CONCLUSIONS AND MITIGATION

Impact
5.14-1

Impacts from New In-Basin Development. Additional development in the Tahoe Basin could interfere with the attainment of TRPA’s water quality, recreational facilities, noise, and air quality thresholds, and could exacerbate existing traffic problems. This impact is **significant**. This alternative would be the same for all four equal-weight 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	
5.14-1: Impacts from New In-Basin Development.	S ₁	S ₁	S ₁	S ₁	S ₁	S ₁	S ₁	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
5.14-1: Cooperate with TRPA in the implementation of actions recommended in the Threshold Evaluation Report	SU ₁	SU ₁	SU ₁	SU ₁	SU ₁	SU ₁	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.								

As discussed in the summary of impacts above, new development within the basin could interfere with a number of TRPA’s environmental threshold carrying capacities, including the following:

- < **Water Quality.** Existing exceedences of thresholds for deep-water clarity, phytoplankton, tributary quality, and stormwater runoff would be exacerbated by new development.
- < **Recreational Facilities.** Increased development would increase usage of existing overcrowded recreational facilities and create additional demand for new facilities.
- < **Noise.** New development would expose additional persons to areas experiencing occasional exceedences of TRPA noise standards.
- < **Air Quality.** Development in the Lake Tahoe Basin would increase VMT and increase nonattainment with TRPA’s VMT threshold.
- < **Vegetation.** New development could indirectly affect attainment of thresholds for uncommon plant communities, rare plants, and old-growth ecosystems by increasing visitation and recreational use of public lands where those resources are located.
- < **Fish Habitat.** Fish habitat could be indirectly affected by new development through diversion of stream flows, increased sedimentation associated with increased land coverage, decreased water quality associated with increased nutrient and pollutant loading, and decreased water quality associated with increased motor vehicle and boat emissions.

In addition, although TRPA does not have a traffic LOS threshold, traffic increases resulting from new development within the basin would exacerbate existing LOS deficiencies under TRPA LOS policies. These impacts are considered significant.

Mitigation Measure 5.14-1: Cooperate with TRPA in the implementation of actions recommended in the Threshold Evaluation Report

A new policy shall be added to the Land Use Element as follows:

New Policy: The County shall cooperate with TRPA in the implementation of actions recommended in TRPA's periodic threshold evaluation reports.

TRPA's most recent Threshold Evaluation Report and other environmental documents identify regulatory and programmatic actions that would allow the basin to attain TRPA's environmental thresholds. Implementation of these measures would reduce the significant impacts associated with nonattainment of these thresholds to a less-than-significant level. However, the adoption of the recommended measures is within the jurisdiction of TRPA, and the County cannot be certain if and when those measures will be adopted. The proposed mitigation measure would facilitate implementation of measures that are adopted by TRPA by ensuring County cooperation, but the potential for significant impacts would remain until most or all of the recommended measures are adopted. In addition, existing traffic LOS deficiencies are likely to remain and be exacerbated by additional development in the basin even after implementation of the recommended measures. For these reasons, this impact is considered significant and unavoidable.



Traffic and Air Quality Impacts from New Out-of-Basin Development.

Additional development in the west slope portion of the county would generate additional traffic and wood smoke that could exacerbate the basin's non-attainment of TRPA's VMT threshold and the 90% regional visibility threshold, and could affect attainment of traffic, ozone, atmospheric deposition, and wood smoke thresholds. The additional traffic could also exacerbate existing LOS deficiencies under TRPA's LOS policies. This impact is **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
5.14-2: Traffic and Air Quality Impacts from New Out-of-Basin Development.	S ₂	S ₄	S ₂	S ₃	S ₁	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
5.14-2: Adopt Mitigation Measures 5.4-1, 5.4-2 and 5.4-3 (traffic), and 5.11-2 (air quality - long-term regional emissions)	SU ₂	SU ₄	SU ₂	SU ₃	SU ₁	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.								

As discussed in the impact summary above, development on the west slope would contribute additional traffic and wood smoke to the basin, further exacerbating nonattainment with the VMT threshold and the 90% regional visibility threshold. The VMT threshold is not currently being met. Development on the west slope area of El Dorado County would contribute additional traffic to the basin, adding to VMT in the basin and making attainment of the VMT threshold more difficult. Traffic LOS would also decline as a result of the additional traffic added by west slope development, exacerbating existing deficiencies under TRPA LOS policies. West slope development would also result in increased wood smoke, which could contribute to regional visibility impacts in the basin. Regional haze is transported into the basin from upwind sources, including the Sacramento Valley and San Francisco Bay area, although the relative contribution of out-of-basin development to the basin’s air pollution problems has proven difficult to quantify.

By 2025, west slope development and contribution of traffic to the basin would be greatest under the 1996 General Plan and Environmentally Constrained alternatives. The impacts of west slope development on basin air quality and traffic under the other two equal-weight alternatives would be less due to lower levels of development and traffic, but still significant.

At buildout, the impacts of each alternative would be greater, and the differences between the alternatives would be more pronounced, with the 96 General Plan Alternative having substantially greater levels of development and traffic than the other alternatives, and the No Project Alternative having the lowest levels. Under each of the alternatives, however, the impacts would be significant.

Mitigation Measure 5.14-2: Adopt Mitigation Measures 5.4-1(a), 5.4-1(b), 5.4-1(c) or 5.4.1-(d) (traffic), and 5.11-2 (air quality - long-term regional emissions)

The mitigation measures in the Traffic and Circulation section are directed primarily at traffic congestion in the west slope and would not necessarily affect the amount of new traffic traveling from the west slope to the basin. However, these measures could have the effect of limiting development based on levels of traffic congestion, which could at least slow the rate of growth in the west slope and thus reduce the total amount of new traffic that such growth would be expected to contribute to the basin by 2025. Mitigation measure 5.11-2 is designed to reduce total emissions from automobiles and development. These measures will reduce air quality and traffic-related impacts to the basin, but not to a less-than-significant level. These impacts are therefore significant and unavoidable.