

## **CHAPTER 15 CUMULATIVE IMPACTS**

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### **15.1 INTRODUCTION**

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation (14 CCR 15126). As part of this analysis, an environmental impact report (EIR) must also identify cumulative effects of the project.

### **15.2 CUMULATIVE IMPACTS**

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed project. The CEQA Guidelines Section 15355 defines a cumulative impact as two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Although project-related impacts can be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (14 CCR 15130[a]). As indicated in the CEQA Guidelines, the discussion of cumulative impacts need not provide the same level of detail as project-related impacts. The discussion should be guided by “standards of practicality and reasonableness” (14 CCR 15130[b]).

The analysis of cumulative effects involves examining the project’s environmental effects in the context of similar effects that have been caused by past or existing projects, and the anticipated effects of future projects. Where a lead agency concludes that the cumulative effects of a project, taken together with the impacts of other closely related past, present, and reasonably foreseeable probable future projects are significant, the lead agency then must determine whether the project’s incremental contribution to such significant cumulative impact is “cumulatively considerable” (and thus significant in and of itself).

#### **15.2.1 Cumulative Context**

To ensure an adequate discussion of cumulative impacts is included in an EIR, CEQA allows the lead agency to use either a list of past, present, and probable future projects (including those projects outside of the control of the lead agency), or projections included in an adopted local, regional, or statewide plan like a general plan (CEQA Guidelines, Section 15130[b][1]). The general cumulative impact context for evaluating cumulative impacts for the majority of the technical issue areas evaluated in Chapters 4 through 14 of this Draft EIR relies on a list of specific, pending, or reasonably foreseeable development proposals in the general vicinity of the proposed project, or evaluates the potential loss of resources on a much broader, regional scale.

A list of probable future projects is provided below. Probable future projects are those in the project vicinity that have the possibility of interacting with the proposed project to generate a cumulative impact and either:

1. Are partially occupied or under construction;
2. Have received final discretionary approvals;
3. Have applications accepted as complete by local agencies and are currently undergoing environmental review; or
4. Are otherwise considered likely to be developed, based on historic development patterns, including the rate of development in the area.

It is important to note that the basis of the cumulative analysis varies by technical area. For example, traffic and traffic-related air emissions and noise analyses assume development that is planned and/or anticipated in the general area, as well as the surrounding area, because each contributes to traffic on local and regional roadways that is quantifiable. Operational air quality impacts are evaluated against conditions in the valley and surrounding areas within the Mountain Counties Air Basin for ozone. The cumulative analysis for each of the technical issues areas evaluates the proposed project’s contribution to the cumulative scenario. A description of the cumulative context for each issue area evaluated is included in Table 15-1, Geographic Scope of Cumulative Impacts, followed by the list of projects and an analysis of the cumulative impacts.

**Table 15-1  
Geographic Scope of Cumulative Impacts**

Resource/Issue Area	Geographic Area
Biological Resources	Regional and local
Visual Resources	Local (project site and surrounding public viewpoints)
Transportation and Circulation	Regional and local
Air Quality	Mountain Counties Air Basin (for air quality)
Climate Change	global for climate change (note: climate change is inherently a cumulative evaluation and is discussed in Chapter 10)
Noise	Local (immediate project vicinity where effects are localized)
Geology and Soils	Local (for soils and geology) and regional (for seismicity)
Hazards and Hazardous Materials	Local (for avalanches) and regional (for wildfire)
Hydrology and Water Quality	Regional and local
Utilities and Public Services	Local service areas

## List of Projects

A list of probable future projects that meet the requirements stated above are provided in Table 15-2, Cumulative Project List. Projects in the vicinity of the project site that have the possibility of contributing to similar environmental effects as the proposed project are listed. This list of projects was used in the development and analysis of the cumulative setting and impacts for each resource topic. Past and current projects in the project vicinity were also considered as part of the cumulative setting as they contribute to the existing conditions upon which the proposed project and each probable future project’s environmental effects are compared.

The significance criteria provided in the technical chapters are the same for the cumulative impact analysis, unless otherwise specified.

**Table 15-2  
Cumulative Project List**

Map No.	Project Name	Location	Description	Project Status
1	Village at Squaw Valley Specific Plan EIR	Terminus of Squaw Valley Road, west of SR-89, Squaw Valley	Specific Plan that would permit development of up to 900 residential units and employee units, and 297,733 sf of new and replacement commercial uses.	Final EIR adopted April 2016.
2	Resort at Squaw Creek	Squaw Valley Road	Construction of 441 condominium units.	The project has posted bonds for the Final Map, which is recorded. The bonds expire in 2018. The Resort is currently working with the Squaw Valley PSD to secure water for the project; thus it appears likely to go forward.
3	Chairlift replacements for Red Dog lift and Siberia Lift	Terminus of Squaw Valley Road, west of SR-89, Squaw Valley	Replace existing chairlifts with a high-speed, detachable, 6-person chairlift.	Environmental documents completed and projects approved. Construction is underway for the Siberia Lift.
4	Alpine Meadows Hot Wheels Lift Replacement	Alpine Meadows Ski Resort, Alpine Meadows	Replace the existing triple chairlift with a detachable quad chairlift.	Environmental review complete; project approved in December 2012. Construction has not yet begun.
5	Stanford Chalet Subdivision	Adjacent to Alpine Meadows Ski Resort	18 halfplex residential units on an existing commercial facility of 2.5 acres.	Project approved and Mitigated Negative Declaration adopted May 12, 2016.
6	Squaw/Alpine Gondola	Backside of Squaw Valley to Alpine Meadows Ski Resort	Install a gondola connecting the two ski areas.	Environmental review in process.

**Table 15-2  
Cumulative Project List**

Map No.	Project Name	Location	Description	Project Status
7	Palisades at Squaw	Squaw Valley	63 residential units on a 19.9-acre parcel.	Environmental review in process.
8	SR-89/Fanny Bridge Improvement Project	SR-89 and SR-28 at the Truckee River Crossing, Tahoe City	Construction of a new bridge over the Truckee River, repair or replacement of Fanny Bridge, and various other improvements.	EIR/EIS/EA certified June 2015. Construction is underway.
9	Tahoe City Vision Plan	Tahoe City (contiguous with Tahoe City Community Plan boundaries)	Visioning effort to guide Area Plan development.	Planning currently underway.
10	Homewood Mountain Resort Master Plan	5145 Westlake Boulevard, Homewood	Redevelop mixed-uses at the North Base area, residential uses at the South Base area, a lodge at the Mid-Mountain Base area, and ski area.	EIR/EIS certified and project approved in December 2011. Separate federal and state lawsuits were filed challenging the certification of the EIR/EIS and the project approval. The federal lawsuit was settled in 2014. The state lawsuit is on appeal and pending before the 3rd District Court of Appeal. Construction timeframe is unknown.

SR = State Route; sf = square feet; EIR = environmental impact report; EIS = environmental impact statement; EA = environmental assessment.

## 15.2.2 Cumulative Impact Analysis

For purposes of this EIR, the project would result in a significant cumulative effect if:

- The cumulative effects of related projects (past, current, and probable future projects) are not significant and the incremental impact of implementing the proposed project is substantial enough, when added to the cumulative effects of related projects, to result in a new cumulatively significant impact; or
- The cumulative effects of related projects (past, current, and probable future projects) are already significant and implementation of the proposed project makes a considerable contribution to the effect. The standards used herein to determine a considerable contribution are that either the impact must be substantial or must exceed an established threshold of significance.

This cumulative analysis assumes that all mitigation measures identified in Chapters 4 through 14 to mitigate project impacts are adopted. The analysis analyzes whether, after adoption of project-specific mitigation, the residual impacts of the project would cause a cumulatively significant impact or would contribute considerably to existing/anticipated (without the project) cumulatively significant effects. Where the project would result in a considerable contribution to a significant cumulative impact, additional mitigation is recommended where feasible.

## Land Use

A cumulative analysis of land use is not included because land use plans or policies and zoning generally do not combine to result in cumulative impacts. The determination of significance for impacts related to these issues is whether a project would conflict with any applicable land use plan or policy adopted for the purpose of reducing or avoiding environmental impacts. Such a conflict is site-specific; it is only addressed on a project-by-project basis. As discussed in Chapter 4, Land Use, the project would be consistent with applicable land use plans and zoning requirements. There would be **no land use impacts** that would be additive and could result in a cumulative impact.

## Visual Resources

The geographic context of cumulative impacts to visual resources is confined to those areas that would be visible in the landscape in the vicinity of the project site and areas where nighttime lighting could contribute to light pollution and decreased visibility of the night sky. Therefore, cumulative impacts as related to scenic vistas and visual character would be confined to effects of development within Bear Creek Valley, in particular changes in views from Five Lakes Trail.

### ***Impact 15.1***

Would the project result in cumulative effects on visual resources?

With respect to illumination of the night sky, the project site location in Bear Creek Valley, surrounded by mountain ridges, would limit the degree to which lighting from the project area could be visible from other drainage-sheds, such as Squaw Valley to the north, the Lake Tahoe basin to the south, and the Granite Chief Wilderness area to the west. Further, the Development Standards for Alternative A and Alternative B require that lighting installed within the project site be consistent with the standards of the Dark Sky Society, which would ensure that lighting at the project site does not contribute to illumination of the night sky. Three other projects in the cumulative scenario are located in Bear Creek Valley—these include replacement of a ski lift at Alpine Meadows Ski Resort, installation of a gondola connecting Squaw Valley to Alpine Meadows Ski Resort, and the Stanford Chalet Subdivision. Replacement of the existing ski lift would not alter visual resources or add new sources of light and glare. Installation of a gondola

connecting Squaw Valley to Alpine Meadows Ski Resort would alter visual conditions in the area by introducing the gondola line, gondola chairs, and tower to support the gondola line to the viewshed. This line would traverse currently undeveloped land along the western end of Bear Creek Valley. The Stanford Chalet Subdivision would redevelop an existing commercial property with 18 halfplex residential units. This project is located between the Alpine Sierra Subdivision project site and the Alpine Meadows Ski Resort. The proposed redevelopment would intensify the level of development at the site and contribute additional changes to existing visual resources in Bear Creek Valley. This project would also introduce new sources of light, and could introduce new sources of glare, in the valley. Combined, these projects would result in a **significant cumulative impact** to visual resources in the vicinity.

As discussed in Chapter 5, Visual Resources, Alternative A and Alternative B would implement mitigation measures and the project-specific Development Standards to reduce the project's adverse visual impacts to the extent feasible. These include design measures and standards to minimize visibility of the built environment from off-site locations, lighting standards to ensure that lighting is consistent with the Dark Sky Society recommendations, requirements related to revegetation of disturbed areas, and requirements for selection of materials to be used on site. Compliance with requirements related to lighting standards would ensure that the proposed project under either Alternative A or Alternative B does not make a considerable contribution to cumulative impacts associated with light and glare. Additionally, Mitigation Measures 5.1a through 5.1d and 5.3a would be implemented to reduce the adverse visual effects associated with construction of subdivision improvements and lighting so that the degree to which development would blend into the surrounding area from the Five Lakes Trail and other staging areas would be less than significant. Thus, Alternative A and Alternative B would not make a considerable contribution to cumulative visual impacts in the vicinity, and this impact would be **less than significant**.

### **Biological Resources**

The biological resources issues relevant to cumulative impacts are effects related to sensitive habitats, special-status wildlife species, and wildlife movement corridors. Past and present activities have already altered biological resources in the Tahoe-Truckee region. Past, present, and foreseeable future activities that have affected or may affect biological resources in the region include logging, grazing, fuels management, recreational development and activities, residential and commercial development, and right-of-way maintenance and operation activities.

**Impact 15.2**

Would the project result in cumulative effects on sensitive habitats, including federally protected wetlands?

Alternative A and Alternative B were found to have potentially significant impacts to riparian and riverine habitats. No other sensitive habitats occur within the project site. As discussed in Chapter 6, Biological Resources, while the project site is within the critical habitat area for the Sierra Nevada yellow-legged frog, the project site does not support any potential habitat for this species. Either Alternative A or Alternative B would be required to implement Mitigation Measures 6.2a through 6.2c and Mitigation Measures 6.3a through 6.3c to ensure that the project's impacts to sensitive habitats are less than significant. These measures require avoidance of impacts to the extent feasible and compensation for any impacts that cannot be avoided.

Regionally, past development has adversely affected riparian and riverine habitats as a result of placement of fill within wetlands; construction of roads across rivers, streams, and creeks; increased sedimentation of runoff; and decreased water quality as a result of point- and non-point-sources of pollution. Current and future projects would be required to comply with local, state, and federal regulations that protect riparian and riverine habitats, as well as other wetlands and sensitive habitats. Compliance with the local, state, and federal regulations, as discussed in Chapter 6, Biological Resources, would ensure that regional impacts to riparian and riverine habitats under the cumulative scenario remain **less than significant** and the project would not contribute to a significant cumulative impact.

**Impact 15.3**

Would the project result in cumulative effects from loss of special-status wildlife and disturbance to nesting and roosting activity?

Alternative A and Alternative B were found to have potentially significant impacts to nesting yellow warbler and roosting long-legged myotis. Either Alternative A or Alternative B would be required to implement Mitigation Measures 6.1a and 6.1b to ensure that the project's impacts to nesting yellow warbler and roosting long-legged myotis are less than significant. These measures require pre-construction surveys and avoidance measures to prevent disturbance to any active nests or roosts.

Regionally, past development has adversely affected yellow warbler, long-legged myotis, Sierra marten, and Sierra Nevada snowshoe hare through habitat loss, habitat fragmentation, and disturbance to nesting and roosting activity. These species are considered species of special concern or sensitive species, but are not listed as threatened or endangered under the

California or federal Endangered Species Acts. Current and future projects, including the proposed project, would be required to comply with local, state, and federal regulations that protect sensitive species to avoid direct loss of species and disturbance to nesting and roosting activity. Additionally, under either Alternative A or Alternative B, tree removal would be limited to that needed for driveways, patios, home construction, and wildfire fuel management. It is expected that other development projects in the region would have similar degrees of tree loss, and substantial numbers of trees would be retained throughout the region, even in developed parcels. These retained trees would ensure that roosting habitat for long-legged myotis is present.

Development under the cumulative scenario would have a **less-than-significant** impact related to loss of species and disturbance to nesting and roosting activity, and the project would not contribute to a significant cumulative impact.

#### **Impact 15.4**

Would the project result in cumulative effects from loss of habitat for special-status wildlife?

Alternative A and Alternative B were found to have less-than-significant impacts to Sierra marten (*Martes americana sierrae*) and Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*) due to habitat loss and fragmentation from development within the white fir forest habitat on site that may occasionally support foraging by these species. In addition, Alternative A and Alternative B were found to have less-than-significant impacts to yellow warbler (*Setophaga petechia*) and long-legged myotis (*Myotis volans*) from habitat loss and fragmentation.

Ongoing development would result in the continued loss and fragmentation of habitat that has resulted in declines in populations of these species; therefore, this is considered a **significant** cumulative impact. Compliance with applicable local, state, and federal regulations, as discussed in Chapter 6, would ensure that new development in the region would minimize impacts to habitats for special-status species. However, development would result in unavoidable habitat loss and fragmentation that could continue to adversely affect the ability of special-status wildlife populations to survive at their present levels. These effects could be exacerbated by changes in habitat characteristics as a result of climate change.

The proposed project would have a less than cumulatively considerable contribution, and therefore **less than significant**, to this cumulative impact. The primary habitat on site is white fir forest. Alternative A would introduce residential development and associated infrastructure across approximately 33 acres of the site, leaving 14.2 acres in open space. Tree removal and modification of vegetation within residential lots would be limited to the area necessary for driveways, patios, and home construction as well as modification necessary for creation of defensible space. This would result in some retention of forest



habitat within the 33 acres of development area. Alternative B would result in similar impacts, but would increase the open space within the site to 18.9 acres.

The project site is located between existing residential development to the north, northwest, and south, and the Alpine Meadows Ski Resort to the south and southwest. Undeveloped forest habitat is present to the east and southeast. Under the cumulative scenario, no development is anticipated in this adjacent forest habitat, while there would be loss of forest habitat in the Squaw Valley area to the north. Due to the existing development adjacent to the project site, the forest habitat on site has reduced value for sensitive species. Sierra marten and Sierra Nevada snowshoe hare are expected to use the on-site forest habitat occasionally for foraging. The large area of undeveloped forest habitat to the east and southeast is expected to provide higher value habitat for these species. The loss of up to 33 acres of forest habitat used occasionally for foraging is not expected to contribute substantially to the cumulative loss of habitat for Sierra marten and Sierra Nevada snowshoe hare.

Long-legged myotis also relies on the forest habitat in the region. As discussed previously, it is expected that development in the cumulative scenario would retain a sufficient number of large and standing dead trees with cavities to support ongoing use of the forests in the region by this species, and the cumulative impact would be **less than significant**.

Yellow warbler relies on riparian habitat throughout the region. As discussed under Impact 15.1, current and future projects would be required to comply with local, state, and federal regulations that protect riparian and riverine habitats, as well as other wetlands and sensitive habitats. This would ensure that additional impacts to yellow warbler due to a loss of riparian habitat under the cumulative scenario are minimized. Either Alternative A or Alternative B would result in impacts to riparian habitat associated with constructing the road crossing of Bear Creek and three other drainage crossings. This would result in a loss of less than one-half acre of riparian habitat and vegetation. This loss would not be cumulatively considerable and the project would have a **less-than-significant** contribution to this cumulative impact.

## **Transportation and Circulation**

The potential transportation impacts of the proposed project are evaluated under long-term (20-year horizon) cumulative conditions. First, future cumulative traffic volumes are estimated without the project. Next, future cumulative volumes with the project are estimated. Finally, intersection level of service (LOS) is analyzed with and without the project.

### ***Impact 15.5***

Would the project result in cumulative impacts on level of service at Placer County and California Department of Transportation (Caltrans) roadway intersections?

### **Future Traffic Volumes without Project**

The Traffic Impacts Analysis evaluates future cumulative (20-year horizon) traffic volumes based on projections for State Route (SR) 89 in the study area provided in the *SR-89 Transportation Corridor Concept Report* (Caltrans 2012), and the projected increase in housing units in the Alpine Meadows area. Based on a comparison of the 2010 and 2030 traffic volumes provided in the *SR-89 Transportation Corridor Concept Report*, the average growth rate for traffic on SR-89 is estimated to be approximately 0.92% per year. This rate was applied to the existing peak-hour volumes on SR-89 to estimate the future cumulative volumes. County Planning Department staff estimates the number of housing units in Alpine Meadows will increase by about 101 units over the next 20 years, not including the proposed project. Compared to the existing number of units (about 794, according to 2010 Census data), this equates to an average growth rate of approximately 0.6% per year. This growth rate was applied to the existing peak-hour traffic volumes on Alpine Meadows Road to determine future cumulative winter and summer peak-hour intersection turning movement volumes without the proposed project, as shown on Figure 15-1, Cumulative Traffic Volumes.

### **Future Traffic Volumes with Project**

Adding the project-generated traffic volumes to the no-project volumes yields the future cumulative plus project volumes illustrated in Figure 15-2, Cumulative Plus Project Traffic Volumes.

Under either Alternative A or Alternative B, the proposed project will add cumulatively to the local transportation system. For potential cumulative traffic impacts within the Tahoe area, the Tahoe Area Community Plans include a fully funded Capital Improvement Program, which with payment of traffic mitigation fees for the ultimate construction of the CIP improvements, would help reduce the cumulative traffic impacts to less than significant levels. The proposed project's impacts associated with cumulative increases in traffic can be mitigated to a **less than significant** level by implementing Mitigation Measure 15.5a.

### **Intersection Level of Service**

Under future cumulative conditions without Alternative A or Alternative B, the average delays would increase, although the intersection LOS would not deteriorate, as shown in Table 15-3, Cumulative Conditions Level of Service. The SR-89/Alpine Meadows Road intersection would operate at LOS A during the summer PM peak hour and LOS B during winter AM and PM peak hours under future cumulative conditions, with or without the proposed Alpine Sierra Subdivision Project. Thus, in the cumulative scenario, there would be no significant impact at these intersections to which the project could contribute.

The “with project” data in Table 15-3 reflects the trips generated by Alternative A. Alternative B would generate slightly less traffic than Alternative A and could result in slightly shorter delays at the studied intersections but it is expected that LOS would remain the same under either alternative. Implementation of the proposed project would result in an increase in total intersection delay of less than 1.0 seconds under all scenarios. Therefore, the cumulative impact would be **less than significant**.

As shown in Table 15-3, the other study intersection would operate at acceptable LOS in all conditions, and the intersection of SR-89/Alpine Meadows Road would operate at acceptable LOS during the winter PM peak hour and PM peak hours in the summer. Therefore cumulative impacts for these other study locations and conditions would remain **less than significant**.

### **Transit Services**

The Tahoe Area Regional Transit (TART) provides transit services to the project area including the communities of Tahoma, Truckee, Homewood, Tahoe City, Kings Beach and Incline Village in California. Because the proposed project is a market-rate residential development and located approximately 5 miles from the nearest TART stop located at the intersection of Squaw Valley Road and SR 89, the transit ridership generated by the project is expected to be modest (not exceeding a few passengers per hour). At present, transit capacity problems are limited to the winter AM commute period, when passenger loads traveling to Squaw Valley can exceed the bus seating capacity. As ridership generated by the proposed project would typically occur after this commute period, the proposed project would not be expected to worsen the existing capacity problems. However, to ensure ongoing concurrence with transit plans in the Tahoe region, the project shall implement Mitigation Measure 15.5b which will reduce this impact to a **less than significant** level.

### **Mitigation Measures**

**MM 15.5a:** This project will be subject to the payment of traffic impact fees that are in effect in this area (Tahoe Fee District), pursuant to applicable Ordinances and Resolutions. The applicant is notified that the following traffic mitigation fee(s) will be required and shall be paid to Placer County DPW prior to issuance of any Building Permits for the project:

A. County Wide Traffic Limitation Zone: Article 15.28.010, Placer County Code

The current estimated fee is \$4,846 per single family residence. The fees were calculated using the information supplied. If either the use or the square footage changes, then the fees will change. The actual fees paid will be those in effect at the time the payment occurs.

**MM 15.5b:** Prior to recordation of the Final Map, the applicant shall establish a new Zone of Benefit (ZOB) within an existing County Service Area (CSA) or annex into a pre-existing ZOB to provide adequate funding of capital and ongoing operational transit services/requirements. The applicant shall submit to the County for review and approval a complete and adequate engineer’s report supporting the level of assessments necessary for the establishment of the ZOB. The report shall be prepared by a registered engineer in consultation with a qualified financial consultant and shall establish the basis for the special benefit appurtenant to the project.

**Table 15-3  
Cumulative Conditions Level of Service**

Intersection	Control	LOS Standard	Cumulative			
			No Project		Alternative A	
			Delay <sup>a</sup>	LOS	Delay <sup>a</sup>	LOS
<i>Winter AM</i>						
SR-89/Alpine Meadows Road	Signalized	D	18.5	B	18.8	B
Alpine Meadows Road/Site Access	SS <sup>b</sup>	C	—	—	12.4	B
<i>Winter PM</i>						
SR-89/Alpine Meadows Road	Signalized	D	16.6	B	17.3	B
Alpine Meadows Road/Site Access	SS <sup>b</sup>	C	—	—	12.7	B
<i>Summer PM</i>						
SR-89/Alpine Meadows Road	Signalized	D	9.0	A	9.4	A
Alpine Meadows Road/Site Access	SS <sup>b</sup>	C	—	—	8.5	A

**Source:** Appendix E.

**Notes:** LOS = level of service; SR = State Route; SS = stop sign controlled

<sup>a</sup> Delay is provided in seconds.

<sup>b</sup> Worst movement is reported.

## Noise

Noise and vibration are typically site-specific and dissipate with distance from the source. There are no other projects in the cumulative scenario located close enough to the project site that would be under construction at the same time as the project for construction vibration and stationary noise to combine with project noise to create substantial levels of vibration and noise impacts. Therefore, there is no cumulative impact related to construction noise and vibration to which the project could contribute.

**Impact 15.6**

Would the project result in cumulative impacts on long-term ambient noise levels?

Cumulative noise levels could be affected by additional build-out of surrounding land uses and increases in vehicular traffic on affected roadways. Several new large developments (e.g., Squaw Valley Specific Plan, Resort at Squaw Creek expansion, Squaw/Alpine Base to Base Gondola project) and others (see Table 15-2 for a complete list) are planned in the Tahoe Basin, surrounding the project area. Noise levels on SR-89 in the project area currently exceed the allowable 60 A-weighted decibel (dBA) noise level for residential exposure to transportation noise sources, and the noise level for the segments of SR-89 north and south of Alpine Meadows Road is projected to range between 66.1 and 66.6 dBA in the cumulative scenario, as shown in Table 15-4, Predicted Cumulative Traffic Noise Exposure Levels at 100 Feet from Roadway Centerlines. This would be a **significant** cumulative impact; however, the proposed project would not result in a cumulatively considerable contribution to this impact.

**Table 15-4**  
**Predicted Cumulative Traffic Noise**  
**Exposure Levels at 100 Feet from Roadway Centerlines**

Roadway	Segment Description	Winter Conditions			Summer Conditions		
		Cumulative No Project	Cumulative Plus Project	Change	Cumulative No Project	Cumulative Plus Project	Change
		(dBA)		(dB)	(dBA)		(dB)
SR-89	North of Alpine Meadows Road	66.6	66.6	0.0	66.4	66.4	0.0
	South of Alpine Meadows Road	66.1	66.1	0.0	66.4	66.5	0.1
Alpine Meadows Road	West of SR-89	60.9	60.9	0.0	56.3	56.7	0.4
	North of Site Access	60.0	60.1	0.1	48.0	50.2	2.2
	South of Site Access	60.0	60.1	0.1	48.0	48.0	0.0

Source: Appendix F.

Notes: dBA = A-weighted decibels; dB = decibels; SR = State Route.

The Environmental Noise Assessment (Appendix F) states that “a relatively large increase in traffic volume is required to achieve a noticeable increase in traffic noise levels (i.e., a doubling of traffic volume is required for a barely perceptible 3 decibel [dB] increase in traffic noise).” Alternative A would generate approximately 277 new daily vehicle trips on Alpine Meadows Road, while the current peak month average daily traffic on SR-89 in the project vicinity is 14,800 vehicles per day (Appendix E). As shown in Table 15-4, the project-generated traffic would have no effect on noise levels on SR-89 during winter conditions and would increase noise levels on SR-89 by 0.1 dB during summer conditions. Trip generation under Alternative B would be slightly less than that of Alternative A and accordingly would result in the same or slightly less traffic noise.

The primary source of noise in the project vicinity is local traffic, particularly on Alpine Meadows Road, and ongoing operation of the Alpine Meadows Ski Resort. Therefore, noise generated by other development projects in the region would not combine with project-generated noise except to the degree that other development projects in the region would generate traffic on Alpine Meadows Road. Based on the projected increase in traffic on Alpine Meadows Road, the Environmental Noise Assessment (Appendix F) found that noise levels in the immediate project vicinity are not expected to increase substantially compared to existing conditions. As shown in Table 15-4, noise levels on Alpine Meadows Road are expected to reach between 60.0 and 60.9 dBA in winter and between 48 and 56.7 dBA in summer.

The Environmental Noise Assessment found that the project would result in an increase in noise levels ranging from 0.0 to 2.2 dB  $L_{dn}$  during summer conditions, and 0.0 to 0.2 dB  $L_{dn}$  during winter conditions. Using the significance criteria identified in Chapter 8, the project would result in a cumulatively considerable contribution to a cumulative impact if the project would increase noise levels by 1.5 dB where noise levels are projected to be between 60.1 and 65.0 dBA or if the project would increase noise levels by 3.0 dB where noise levels are projected to be 60.0 dBA or less. As shown in Table 15-4, traffic noise level increases due to the project would remain below the applicable thresholds. Therefore, the project would not make a considerable contribution to cumulative noise levels and the project's contribution to this impact would be **less than significant**.

## **Air Quality**

The cumulative context of an air pollutant is dependent on the specific pollutant being considered. Ozone precursors are a regional pollutant; therefore, the cumulative context would be existing and future development within the entire Mountain Counties Air Basin. This means that ozone precursors generated in one location do not necessarily have ozone impacts in that area. Instead, precursors from across the region can combine in the upper atmosphere and be transported by winds to various portions of the air basin. Consequently, all ozone precursors generated throughout the air basin are part of the cumulative context.

### **Impact 15.7**

Would the project result in cumulative impacts on air pollutant emissions?

Placer County is in a federal non-attainment area for ozone and is designated as a non-attainment area for state ozone and particulate matter standards. The air basin's non-attainment designation indicates that cumulative impacts to air quality from past development would be a **significant** impact to which ongoing development in the area could contribute.

As discussed in Chapter 9, Air Quality, the Placer County Air Pollution Control District (APCD) recommends a threshold for identifying when a project should apply mitigation for air quality impacts.

Specifically, the APCD has determined that a project that emits more than 55 pounds per day of ROG or NO<sub>x</sub>, or 82 pounds per day of PM<sub>10</sub> could have a cumulatively considerable contribution to air quality impacts, and that the project should mitigate for emissions above these thresholds.

As shown in Table 9-5, Alternative A: Unmitigated Construction Air Pollutant Emissions (see Chapter 9) and Table 9-6, Alternative B: Unmitigated Construction Air Pollutant Emissions, project construction under either alternative would result in emissions of NO<sub>x</sub> greater than 55 pounds per day during the grading phases. Therefore, project construction would result in cumulatively considerable contribution to adverse air quality and the project's impacts would be **significant**. To ensure that these emissions are reduced to the extent feasible, Mitigation Measure 15.7a requires use of a construction equipment fleet during grading phases that achieves a 20% reduction in NO<sub>x</sub> emissions compared to the statewide fleet average. This would reduce NO<sub>x</sub> emissions during grading phases of construction to less than 55 pounds per day and reduce the project's contribution to the cumulative impact to a **less-than-significant** level.

As shown in Table 9-7, Alternative A: Unmitigated Long-Term Air Pollutant Emissions, and Table 9-8, Alternative B: Unmitigated Long-Term Air Pollutant Emissions, emissions of ROG, NO<sub>x</sub> and PM<sub>10</sub> that remain below the APCD Cumulative thresholds. These emissions would not make a cumulatively considerable contribution to the significant cumulative impact and the project would have a **less than significant** impact in the cumulative scenario.

### ***Mitigation Measures***

**MM 15.7a:** Prior to issuance of Grading permits, the applicant shall provide a written calculation to the Placer County Air Pollution Control District (APCD) for approval demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used during the grading phases of the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20% oxides of nitrogen (NO<sub>x</sub>) reduction as compared to the California Air Resources Board statewide fleet average emissions. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. The Construction Mitigation Calculator available at the following link shall be used to calculate compliance with this condition: <http://www.airquality.org/ceqa/mitigation.shtml>. The completed calculator worksheet shall be submitted to the Placer County APCD prior to the start of construction.

## Greenhouse Gases

The discussion of greenhouse gas (GHG) emissions generated by the proposed project in Chapter 10, Greenhouse Gases, is inherently a cumulative impact analysis. The GHG emissions from a single project cannot result in changes in climatic conditions; therefore, the emissions from one project must be considered in a cumulative context.

### ***Impact 15.8***

Would the project result in cumulative impacts on GHG emissions?

The State of California has recognized the importance of controlling GHG emissions to lessen the effects of climate change. The state's legislative and regulatory efforts indicate that ongoing climate change effects represent a significant cumulative impact.

As discussed in Chapter 10, Alternative A would result in GHG emissions of 1,037 tons per year of carbon dioxide equivalents (CO<sub>2</sub>e) emissions during project operation at full build out in year 2021, while Alternative B would result in 961.41 metric tons of CO<sub>2</sub>e annually. The Placer County APCD recommends use of a threshold of 1,100 metric tons CO<sub>2</sub>e. As the project's emissions would be below this threshold, the project's contribution to this cumulative impact would be less than cumulatively considerable and therefore **less than significant**.

## Geology and Soils

Projects outside Bear Creek Valley would not interact with the proposed project relative to impacts on soils, geology, and seismicity, including snow avalanche hazards (addressed in Chapter 13, Hazards and Hazardous Materials). The only other project in the cumulative scenario within Bear Creek Valley is the replacement of a ski lift within Alpine Meadows Ski Resort. This would not alter soils and geologic conditions in the vicinity. Therefore, **no impacts** related to geology and soils are expected to occur in the cumulative scenario.

## Hydrology and Water Quality

Projects within the Middle Truckee River Basin could result in adverse effects on hydrology and water quality within the watershed.

The exposure of people to flood hazards is considered highly localized and does not combine with other projects; there would be no cumulative impact associated with flood hazards.



**Impact 15.9**

Would the project result in cumulative impacts associated with the rate or amount and water quality of surface runoff?

As discussed in Chapter 12, Hydrology and Water Quality, water quality in Bear Creek and the Middle Truckee River has been impaired by past development activity in the region. Construction activities associated with various projects in the Middle Truckee River watershed could adversely affect groundwater and surface water as a result of erosion associated with grading, earth moving, and excavation; and sediment mobilization during crossings of wetlands and stream corridors. This would represent a potentially significant cumulative impact. However, current and future projects would be required to comply with local, state, and federal regulations that protect water quality and require development to implement best management practices to ensure that runoff rates and volumes do not increase as a result of development. Compliance with the local, state, and federal regulations, as discussed in Chapter 12, would ensure that regional impacts to water quality and surface runoff under the cumulative scenario remain **less than significant** and the project would not contribute to a significant cumulative impact.

**Hazards and Hazardous Materials**

As noted under Geology and Soils, hazards related to snow avalanches are highly localized and there would be no related cumulative impact.

**Impact 15.10**

Would the project result in cumulative impacts associated with increased risks of wildfire?

Past and future development in the region could contribute to an increased risk of wildfire occurring and an increased risk of exposure of people and structures to wildfire risk. These risks could increase as a result of changing precipitation and vegetation growth patterns due to global climate change. The increased fire risk in the area would be a significant impact of the cumulative development scenario. Under either Alternative A or Alternative B, the proposed project would implement a fire fuel management plan across the entire project site, including areas within open space parcels and other non-development areas within the site. Additionally, the project applicant would be required to purchase and donate to the North Tahoe Fire Protection District a new fire engine and to contribute a fair-share contribution towards upgrading three booster pump stations to improve fire flow and water pressure. These actions would ensure that fire risk on the project site is minimized and that the North Tahoe Fire Protection District has adequate fire suppression resources throughout their service area. By

improving fire protection conditions, the proposed project would have a less than cumulatively considerable, and therefore **less than significant**, contribution to this cumulative impact.

### **Public Services and Utilities**

A project's potential to result in inefficient and wasteful consumption of electricity or other energy sources is a project-specific impact that would not combined with other projects to create a cumulative impact.

#### ***Impact 15.11***

Would the project result in cumulative impacts associated with the provision of public services (police, fire, schools)?

As development increases in the project region, demands for public services would also increase. However, development anticipated in the cumulative scenario is generally consistent with the land use plans for the region. Plans for adequately providing public services to future development are generally prepared based on land use development plans and trends, and reflect anticipated growth in the region. Therefore, impacts related to provision of public services under the cumulative development scenario are anticipated to remain **less than significant**, and there would be no cumulative impact to which the project would contribute.

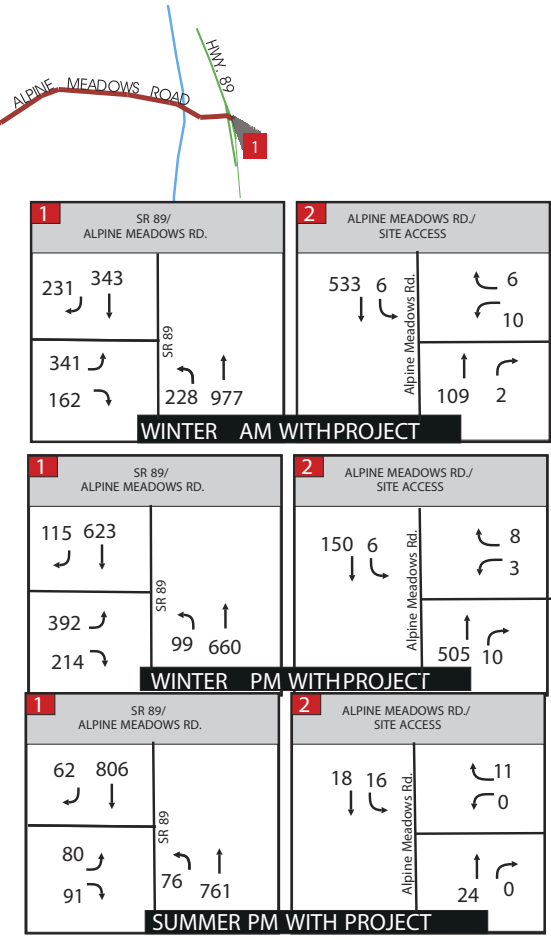
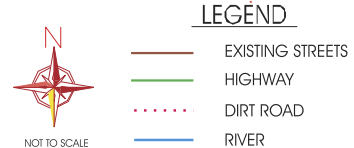
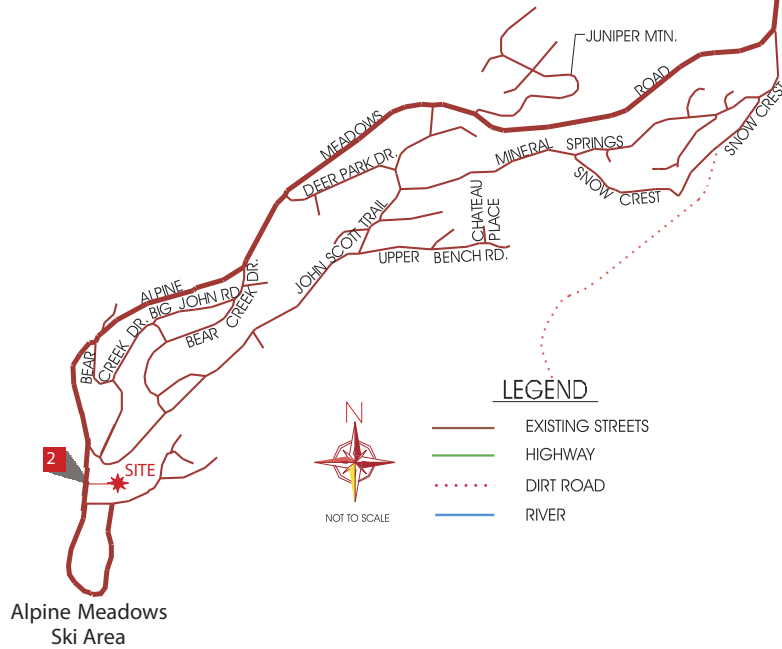
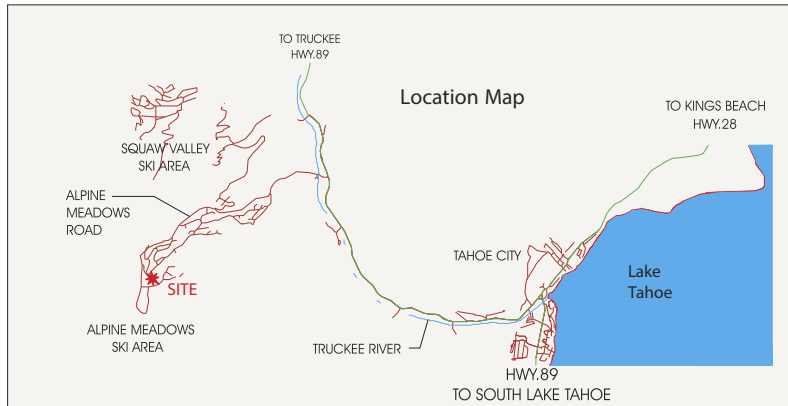
#### ***Impact 15.12***

Would the project result in cumulative impacts associated with the provision of public utilities (solid waste collection/disposal, wastewater collection and treatment, water supply)?

As development increases in the project region, demands for public utilities would also increase. However, development anticipated in the cumulative scenario is generally consistent with the land use plans for the region. Plans for adequately providing public utilities to future development are generally prepared based on land use development plans and trends, and reflect anticipated growth in the region. Therefore, impacts related to provision of public utilities under the cumulative development scenario are anticipated to remain **less than significant**, and there would be no cumulative impact to which the project would contribute.



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**FIGURE 16-2**  
**Cumulative Plus Project Traffic Volumes**

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