

3 APPROACH TO THE ANALYSIS

This chapter describes the approach to the environmental analysis, including NEPA and CEQA requirements, common terminology used in this EIS/EIR, and organization of the analysis. Additionally, this chapter discusses the analysis methodology used in the evaluation of cumulative effects, and describes the cumulative setting, including the list of related projects.

3.1 NEPA AND CEQA REQUIREMENTS FOR ENVIRONMENTAL ANALYSES

Both an EIS prepared under NEPA and an EIR prepared under CEQA are public disclosure documents to ensure environmental factors are considered during the governmental decision-making process. While there are some differences between NEPA and CEQA, this joint EIS/EIR meets the analysis requirements for both regulatory processes. The key directives and requirements of NEPA and CEQA are described below, and Section 3.4 describes specifically how this document presents the required information.

3.1.1 NEPA Overview

The Council on Environmental Quality (CEQ) regulations for implementing NEPA specify that a federal agency preparing an EIS must consider the effects of the proposed action and alternatives on the environment; these include effects on ecological, aesthetic, historical, and cultural resources and economic, social, and health effects. Environmental effects include direct, indirect, and cumulative effects. An EIS must also discuss possible conflicts with the objectives of federal, state, regional, and local land use plans, policies, or controls for the area concerned; energy requirements and conservation potential; urban quality; the relationship between short-term uses of the environment and long-term productivity; and irreversible or irretrievable commitments of resources. An EIS must identify relevant, reasonable mitigation measures that are not already included in the proposed action or alternatives that could avoid, minimize, rectify, reduce, eliminate, or compensate for the project's adverse environmental effects. (40 Code of Federal Regulations [CFR] 1502.14, 1502.16, 1508.8.)

3.1.2 CEQA Overview

The State CEQA Guidelines for implementing CEQA explain that the environmental analysis for an EIR must evaluate impacts associated with the project and identify mitigation for any potentially significant impacts. All phases of a proposed project, including construction and operation, must be evaluated in the analysis. California Code of Regulations [CCR] Section 15126.2(a) of the State CEQA Guidelines states:

An EIR shall identify and focus on the significant environmental effects of the proposed project. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.

An EIR must also discuss inconsistencies between the proposed project and applicable general plans and regional plans (State CEQA Guidelines Section 15125[d]).

3.1.3 Environmental Baseline

Both NEPA and CEQA require a discussion of an environmental baseline against which to compare potential impacts of the Proposed Action and alternatives. For the purposes of this document and pursuant to the NEPA regulations, the No Action Alternative provides a baseline for estimating the effects of the other alternatives (see CEQ's "Forty Most Asked Questions" Answer to Question 3 for more details). Using the No Action Alternative allows the analysis to contrast the impacts of the Proposed Action and alternatives with the existing condition and expected future condition if the Proposed Action were not implemented. In some instances, implementing the No Action Alternative results in a change in existing conditions; for example, if the federal action being evaluated was reauthorizing the continued use of an existing facility on federal land, selection of the No Action Alternative (i.e., not reauthorizing the facility) would result in closing, and potential abandonment or removal of the facility, causing a change in the physical environment compared to existing conditions. However, in many cases, the No Action Alternative results in the continuation of existing conditions, such as when a new facility is being considered on federal land, and selection of the No Action Alternative results in the new facility not being authorized and the site remains in its current condition.

The State CEQA Guidelines (CCR Section 15125[a]) state that:

An EIR must include a description of the physical environmental conditions in the vicinity of the project, as they exist at the time the notice of preparation is published, or if no notice of preparation is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

This EIS/EIR includes descriptions of the Environmental Setting (see Section 3.4) and the analysis of a No Action Alternative. Environmental effects of the action alternatives are assessed against the No Action Alternative. For this analysis, implementation of the No Action Alternative would result in a continuation of the existing conditions described in the Environmental Setting; therefore, analysis of the No Action Alternative provides a comparison of the effects of the action alternatives against the existing physical environmental conditions as described in the Environmental Setting.

3.1.4 Effects Analysis and Significance Criteria

Both NEPA and CEQA require the analysis of potential impacts of the Proposed Action and alternatives. While CEQA requires a determination of effect significance for each effect discussed in an EIR based on defined significance criteria, NEPA does not necessarily require this for an EIS. Under NEPA, preparation of an EIS is triggered if a federal action has the potential to "significantly affect the quality of the human environment." All impact analyses in documents prepared to comply with NEPA must consider the context and intensity of the environmental effects that would be caused by or result from the Proposed Action and any alternatives that are evaluated. Under NEPA, impacts should be addressed in proportion to their significance (40 CFR 1502.2(b)), meaning that severe impacts should be described in more detail than less consequential impacts. This is intended to help decision makers and the public focus on the project's key effects. The evaluation of effects considers the magnitude, duration, and significance of the changes. For the analysis of each resource topic considered in this EIS/EIR analytical indicators are identified to assist in the characterization and evaluation of environmental effects under NEPA (see Sections 3.3 and 3.4 below). Environmental effects that will improve the existing condition are noted, and detrimental impacts are characterized as adverse. For this EIS/EIR, effects described in the context of NEPA are identified as "no effect," "adverse," or "beneficial."

Under CEQA, significance criteria (sometimes called *thresholds of significance*) are used to make a determination of significance for each environmental impact evaluated. An adverse impact that exceeds or crosses the significance criteria is considered significant, and an impact that does not exceed or cross the criteria is considered less than significant. Like described above for NEPA, environmental effects that will improve the existing condition are noted and are considered beneficial. The CEQA significance criteria used in this EIS/EIR are based on CEQA's mandatory findings of significance (as summarized in State CEQA Guidelines Section 15065); the checklist presented in Appendix G of the State CEQA Guidelines; Placer County's CEQA checklist; and where appropriate, factual or scientific data and regulatory standards of federal, state, and local agencies. While the significance criteria used in this EIS/EIR are primarily defined in accordance with CEQA guidance, they also encompass the factors taken into account under NEPA to evaluate the context and the intensity of the effects of an action.

The NEPA regulations explicitly require certain impacts to be discussed, including:

- ▲ irreversible or irretrievable commitment of resources (40 CFR 1502.16);
- ▲ tradeoffs between short term uses of the environment and long-term productivity (40 CFR 1502.16); and
- ▲ energy requirements and conservation potential of alternatives (40 CFR 1502.16[e]).

Effects include “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.” Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action and occur later in time or are farther removed in distance, but are still reasonably foreseeable (i.e., likely to occur within the duration of the project). Cumulative effects are the result of the incremental direct and indirect effects of any action when added to other past, present, and reasonably foreseeable future actions, and can result from individually minor but collectively major actions taking place over a period of time (see Section 3.5). Effects must be evaluated for the Proposed Action, the no action alternative, other reasonable courses of action (e.g., other alternatives), and connected actions, which means actions that are closely related to the Proposed Action and alternatives and therefore should be discussed in the same impact analysis (40 CFR 1508.25). The entirety of the proposed gondola project is a single, or connected action. The project cannot be completed without components on both National Forest System (NFS) lands and private lands being constructed. Therefore, the NEPA impact analysis encompasses portions of the project on both NFS and on private lands.

The State CEQA Guidelines (CCR Section 15382) define a significant effect on the environment as:

...a substantial, or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

Like NEPA, CEQA requires the analysis of direct, indirect, and cumulative effects, and also requires evaluation of the growth-inducing impacts of a project.

3.1.5 Resource Protection Measures and Mitigation Measures

As described in Section 2.2.6, “Resource Protection Measures,” this project (i.e., the Proposed Action [proposed project under CEQA] and all other action alternatives) incorporates a number of Resource Protection Measures (RPMs) designed to avoid and minimize environmental effects. These RPMs are considered part of the project by the Forest Service and will be conditions of approval of the Placer County Conditional Use Permit. The text of all RPMs is provided in Appendix B. The potential effects of implementing the action alternatives (provided in Chapter 4) were analyzed as follows: The effect of the action alternatives

was determined, relevant RPMs were applied, and the effectiveness of reducing adverse effects was determined. If additional measures were needed to further reduce effects, they were identified.

Potential impacts to each resource topic considered are analyzed assuming that the RPMs are applied.

As it relates to CEQA, the significance of impacts is determined before RPMs are implemented. The analysis then determined whether the RPMs would reduce significant impacts to a less-than-significant level. If significant impacts would remain, mitigation measures were added, as feasible, to further reduce the significant impact. All RPMs, as well as any supplemental mitigation measures, will be included in the Placer County mitigation monitoring and reporting program (MMRP), and their implementation would be ensured by the Conditional Use Permit conditions of approval. All RPMs are considered roughly proportional and have an essential nexus to the impacts they reduce.

Both NEPA and CEQA require the provision of mitigation measures. CEQ's NEPA Regulations require an EIS to specifically include a discussion of a means to mitigate adverse environmental effects (if not covered in the alternatives) even if the mitigation measures are outside the jurisdiction of the lead agency or the cooperating agencies. CEQA requires an EIR to present all feasible mitigation for significant adverse impacts (Section 15126.4).

Mitigation under both the CEQ's NEPA Regulations and the State CEQA Guidelines (40 CFR 1508.20; State CEQA Guidelines 15370) is defined as:

- a) Avoiding the impact altogether by not taking a certain action or parts of an action.
- b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- c) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- e) Compensating for the impact by replacing or providing substitute resources or environments.

Responsibility for ensuring that required mitigation measures and RPMs are implemented rests with the Forest Service and Placer County; in some cases it is a joint responsibility, whereas in others it is agency specific. Some mitigation measures and RPMs also include participation by regulatory agencies, such as the U.S. Fish and Wildlife Service, the California Department of Fish and Wildlife, and the Placer County Air Pollution Control District. When the enforcement of a mitigation measure or RPM is the responsibility of the Forest Service, the ultimate enforcement mechanism will be compliance the terms and conditions of the Ski Area Term Permit and associated Construction and Operation Plans administered by the Forest Service Mountain Sports Administrator, the District Ranger, and the Forest Supervisor. When the enforcement of a mitigation measure or RPM is the responsibility of Placer County, the ultimate enforcement mechanism will be contained within the MMRP and conditions of approval within the Conditional Use Permit.

3.2 APPLICATION OF NEPA AND CEQA PRINCIPLES AND TERMINOLOGY IN THIS EIS/EIR

While many concepts are common to NEPA and CEQA, there are several differences between the two in terminology, procedures, environmental document content, and substantive mandates to protect the environment. For this EIS/EIR, the more rigorous of the two laws was applied in cases in which NEPA and CEQA differ. Table 3-1 compares NEPA and CEQA terminology.

Table 3-1 Correlated NEPA and CEQA Terminology

NEPA Term	Correlating CEQA Term
Environmental Impact Statement	Environmental Impact Report
Notice of Intent	Notice of Preparation
U.S. Environmental Protection Agency Filing/Federal Register Notice and Agency/Public Review (also known as a Notice of Availability)	Notice of Completion/Notice of Availability
Record of Decision	Certification, Findings, Statement of Overriding Considerations, and Notice of Determination
Lead Agency	Lead Agency
Cooperating Agency	Responsible Agency
Purpose and Need Statement	Project Objectives
Action	Project
Proposed Action and Alternatives	Proposed Project and Alternatives
No Action Alternative	No Project Alternative
Affected Environment	Environmental Setting
Effect	Impact
Environmental Consequences	Impact Assessment

This EIS/EIR uses both NEPA and CEQA terminology in certain instances (e.g., in Chapter 1 where the purpose and need statement, and underlying project objectives are discussed). The discussion of environmental consequences, generally a NEPA term, is also known as *environmental impacts* or *environmental effects*. These terms are often considered to be synonymous (e.g., 40 CFR 1508.8), and both *environmental impacts* and *environmental effects* are used in this EIS/EIR.

There are additional key similarities and differences between NEPA and CEQA that are relevant to this EIS/EIR:

1. **Baseline for Impact Analysis** – For the purposes of NEPA, the baseline for impact analysis is the No Action Alternative. For CEQA, the baseline is existing conditions. As described previously in this chapter, the results of “No Action” for this project is a continuation of the existing condition; therefore, there is no meaningful difference between the No Action Alternative baseline and the existing conditions baseline.
2. **No Action Alternative Analysis** – For the purposes of NEPA and CEQA, the No Action Alternative is compared to existing conditions.
3. **Proposed Action Alternative Analysis** – For the purposes of NEPA, the Proposed Action Alternative is compared to the No Action Alternative. For the purposes of CEQA, the Proposed Action Alternative is compared to existing conditions. However, as described previously, for this EIS/EIR, there is no meaningful difference between the No Action Alternative baseline and the existing conditions baseline.
4. **Analysis of Other Action Alternatives** – For the purposes of NEPA, action alternatives other than the Proposed Action Alternative are compared to the No Action Alternative. For the purposes of CEQA, the environmental effects of the other action alternatives are compared to the environmental effects of the Proposed Action Alternative to identify whether the effects of the other action alternatives are more or less than those of the Proposed Action Alternative.
5. **Cumulative Effects Analysis** – Cumulative effects analyses under NEPA and CEQA follow the same approach as described above in bullets #3 and #4 describing the analysis of direct and indirect effects for the Proposed Action and alternatives.

This EIS/EIR was prepared to address the distinct legal requirements of NEPA and CEQA, as set forth above.

A variety of terms are used in this EIS/EIR to describe the impacts identified during the course of the environmental analysis. These and other terms are defined below.

For the NEPA analysis, environmental effects will be described as adverse when there are detrimental or negative effects. Effects will be described as beneficial when there are positive effects. When there would be no change, a “no effect” conclusion is used. For some NEPA effects conclusions, “minorly” is used to characterize adverse and beneficial effects (i.e., minorly adverse or minorly beneficial), in an effort to further distinguish the effects of the action alternatives. RPMs may be identified to reduce adverse effects. Where the RPMs are not considered by the Forest Service to be adequate under NEPA to reduce adverse effects, additional mitigation measures may be provided.

For the CEQA analysis environmental effects will be described as indicated below:

- ▲ A “less-than-significant impact” is an impact that is adverse but that is not substantial and does not exceed the defined thresholds of significance. An impact may be classified as less than significant either before or after implementation of RPMs. If an impact is less than significant before the implementation of RPMs, applicable RPMs will still be identified because they further reduce or minimize the impact, but they would not be required to determine that an impact is less than significant.
- ▲ A “significant impact” is an impact that, after implementation of RPMs, exceeds the defined thresholds of significance and would or could cause a substantial adverse change in the environment. Further mitigation measures, beyond the RPMs, are recommended to eliminate the impact or reduce it to a less-than-significant level. These RPMs will be included as mitigation measures in the MMRP.
- ▲ A “potentially significant impact” is an impact for which information may not be definitive, but where it is likely or reasonably foreseeable that a significant impact, after implementation of RPMs, may result. A potentially significant impact is equivalent to a significant impact and requires the identification of feasible mitigation measures beyond the RPMs. These RPMs will be included as mitigation measures in the MMRP.
- ▲ A “significant and unavoidable impact” is an impact that exceeds the defined thresholds of significance and that cannot be eliminated or reduced to a less-than-significant level through the implementation of RPMs and mitigation measures. These RPMs will be included as mitigation measures in the MMRP.
- ▲ Impacts may be adverse or beneficial.
- ▲ “Project site” refers to the disturbance area footprint.
- ▲ “Project area” refers to the general vicinity around the project site (roughly one mile in any direction).
- ▲ “Project” refers to the proposed Squaw Valley | Alpine Meadows Base-to-Base Gondola Project (i.e., the basic project elements as included in all action alternatives).

For both NEPA and CEQA, a determination of “no effect” can be made if the alternative results in no effect for the particular resource or topic being considered. A determination of no effect would be most common for the No Action Alternative, which typically results in a continuation of the existing physical environmental conditions as described in the Environmental Setting.

3.3 RESOURCE TOPICS CONSIDERED

A CEQA Initial Study was completed early in the EIS/EIR planning process to identify specific areas of concern and classify them as being “*key issues*,” “*issues*,” or “*resources/issues dismissed from further documentation*” (see Section 1.7, “Scope of the Analysis,” for further details). The *key issues* and *issues* are reflected in the following list of potential resources considered, which was derived from the CEQA regulations for implementing NEPA, Appendix G of the State CEQA Guidelines, Placer County’s CEQA checklist, and input received from the public during the project scoping period. The CEQA Initial Study and coordination with the Forest Service specialist review and public scoping process identified the following resources that could be affected by the Proposed Action or alternatives or were identified during scoping as resources of concern and will be addressed in the following EIS/EIR sections:

- ▲ Section 4.1, Recreation;
- ▲ Section 4.2, Visual Resources;
- ▲ Section 4.3, Wilderness;
- ▲ Section 4.4, Land Use;
- ▲ Section 4.5, Socioeconomics and Environmental Justice;
- ▲ Section 4.6, Public Safety;
- ▲ Section 4.7, Transportation and Circulation;
- ▲ Section 4.8, Utilities;
- ▲ Section 4.9, Noise;
- ▲ Section 4.10, Air Quality;
- ▲ Section 4.11, Greenhouse Gas Emissions and Climate Change;
- ▲ Section 4.12, Vegetation;
- ▲ Section 4.13, Botany;
- ▲ Section 4.14, Wildlife and Aquatics;
- ▲ Section 4.15, Wetlands;
- ▲ Section 4.16, Soils, Geology, and Seismicity; and
- ▲ Section 4.17, Hydrology and Water Quality.

“*Key issues*” that helped inform the development of alternatives include visual resources, wilderness, and Sierra Nevada yellow-legged frog. For example, and as noted above, Alternative 3 addresses issues such as proximity to the Granite Chief Wilderness and proximity to occupied habitat for Sierra Nevada yellow-legged frog at Barstool Lake. Alternative 4 addresses issues such as proximity to the Granite Chief Wilderness, visibility of the project, and proximity to residences. Other issues, including those in the above bulleted list, were also considered in the development of alternatives. See Chapter 2, “Description of Alternatives,” for additional details.

Resources/issues dismissed from further documentation are described in Section 1.7.2.

3.4 CONTENTS OF RESOURCE SECTIONS

Sections 4.1 through 4.17 of this Draft EIS/EIR are organized into the following major subsections.

- ▲ **Affected Environment** includes two sections: “Environmental Setting” and “Regulatory Setting.” These sections include the following information.
 - ▶ **Environmental Setting** provides an overview of the most current available information on physical environmental conditions in the area at the time of preparation of the Draft EIS/EIR that could be affected by implementation of the Proposed Action and alternatives in accordance with NEPA regulations (40 CFR 1502.15) and State CEQA Guidelines Section 15125.

- **Regulatory Setting** lists and describes applicable laws, regulations, and policies that affect the resource addressed in the particular section, or the assessment of effects on the resource.
- ▲ **Analysis Methods** includes the following subsections: “Methods and Assumptions,” “Effects Analysis and Significance Criteria,” and “Issues Not Discussed Further.”
 - **Methods and Assumptions** describes the methods, models, process, procedures, data sources, and/or assumptions used to conduct the effects analysis. Where possible, effects are evaluated quantitatively. Where quantification is not possible, effects of each alternative are evaluated qualitatively.
 - **Effects Analysis and Significance Criteria** provides the criteria used in this document to define the level at which an effect is considered significant in accordance with CEQA, and outlines the NEPA-specific analytical indicators discussed in the section to characterize environmental effects. Each NEPA indicator and CEQA significance threshold is analyzed in the “Direct and Indirect Environmental Consequences” section as part of an “Impact” discussion. The “Impact” discussion number for each indicator or criteria is noted in parentheses following the statement. Some “Impact” discussions encompass multiple indicators.
 - **Issues Not Discussed Further** identifies any significance criteria (or portions thereof) that are not applicable to the evaluation of the Proposed Action and alternatives, and summarizes the rationale for why the issue is not discussed further in the EIS/EIR.
- ▲ **Direct and Indirect Environmental Consequences** identifies the potential direct and indirect environmental effects of the Proposed Action and alternatives, which are analyzed at an equal level of detail. The effects are compared with significance criteria and applicable NEPA indicators, and a conclusion is made for each effect. The same methodology is applied to each alternative.

Project impacts are numbered sequentially for Alternatives 1 through 4 in each section, with the alternative identified in parenthesis in the impact title. For example, impacts for Alternative 1- No Action Alternative are numbered 4.1-1 (Alt. 1), 4.1-2 (Alt. 1), 4.1-3 (Alt. 1), and so on. Impacts for Alternative 2 are numbered 4.2-1 (Alt. 2), 4.2-2 (Alt. 2), 4.2-3 (Alt. 2), and so on. A bold font impact title, a summary of each impact, a characterization of the impact under NEPA (no effect, adverse, or beneficial), and its level of significance under CEQA, precedes the full discussion of each impact. The full impact discussion considers the potential for the alternative to result in environmental impacts both before and after RPMs are applied, and provides the evidence on which conclusions are made. In cases where impacts are still considered significant under CEQA after implementation of applicable RPMs, or the Forest Service determines that RPMs alone are not adequate under NEPA to reduce adverse effects, and feasible mitigation would reduce these effects, a mitigation measure (or measures) is described below the impact discussion, and a NEPA impact characterization and CEQA significance conclusion for the impact after implementation of the mitigation is identified.

Mitigation measures are numbered to correspond with the impact addressed by the measure; therefore, if Impact 4.1-1 (Alt. 1) is addressed by a single mitigation measure, the measure would be numbered Mitigation Measure 4.1-1 (Alt. 1). If multiple mitigation measures are provided for a single impact, a letter is added to the end of each mitigation measure number. For example, mitigation measures for Impact 4.1-1 (Alt. 1) would be numbered: Mitigation Measure 4.1-1a (Alt. 1), Mitigation Measure 4.1-1b (Alt. 1), and so on.

Because all alternatives except Alternative 1 – No Action Alternative contemplate some level of development in the project area, the alternatives may have many of the same or similar effects, and mitigation measures where necessary. In these instances, rather than repeating the entire effect discussion and mitigation measures for each alternative, the reader is referred to the initial impact discussion and mitigation descriptions, and any different conditions under the subsequent alternatives are identified.

- **Summary of Direct and Indirect Effects** presents, in narrative and tabular format, a summary of the impact analysis and conclusions provided previously for each alternative to facilitate a comparison of effects across alternatives.
- **Cumulative Effects** presents a discussion of cumulative effects. The incremental effects of each alternative are added to the effects of other past, present, and reasonably foreseeable future projects/actions, and a conclusion is presented as to whether there is a significant contribution to a significant adverse cumulative effect. See Section 3.5, “Cumulative Effects Analysis Methodology,” below, for a detailed description of how cumulative effects are analyzed throughout the EIS/EIR.

References and sources of information used in preparing each section are provided in Chapter 8, “References.”

3.5 CUMULATIVE EFFECTS ANALYSIS METHODOLOGY

This section describes the cumulative effect analysis methodology common to the evaluation of cumulative effects for all resource topics analyzed in Sections 4.1 through 4.17. Any approaches or assumptions for cumulative effects analysis that are specific to one resource area are described in the Methods and Assumptions section in that resource area section.

3.5.1 Definition of Cumulative Effects

Both NEPA regulations (42 United States Code [USC] 4321 et seq.) and the CEQA statute (CCR 15000 et seq.) require that environmental documents consider cumulative effects of a proposed action. NEPA regulations define a “cumulative impact” as an “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions; cumulative effects can result from individually minor but collectively significant actions taking place over a period of time” (CEQ 2005). NEPA requires that the cumulative analysis assess the direct and indirect effects of the alternative on the affected environment, when added to the total sum of the past, present, and the reasonably foreseeable future actions (CEQ 2005).

The State CEQA Guidelines define a cumulative impact as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (14 CCR 15355). The State CEQA Guidelines require environmental documents evaluate whether a project’s incremental effect is cumulatively considerable. Cumulatively considerable, as defined in the State CEQA Guideline Section 15355, means that the “incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.”

This document analyzes cumulative effects in compliance with the requirements of both NEPA and CEQA.

3.5.2 Cumulative Effect Approach

Under NEPA, agencies are encouraged to evaluate proposed actions in context with actions occurring in the same general location or which have relevant similarities (40 CFR 1502.4). The State CEQA Guidelines Section 15130 identify two basic methods for establishing the cumulative environment in which a project is considered: (1) the use of a list of past, present, and probable future projects; or (2) the use of adopted

projections from a general plan, other regional planning document, or a certified EIR for such a planning document.

In compliance with both NEPA and CEQA, this cumulative analysis uses the “list” approach to identify the cumulative setting. The effects of past and present projects on the environment are reflected by the existing conditions in the project area. 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 effect (based on proximity and implementation schedule) and either:

- ▲ are partially occupied or under construction,
- ▲ have received final discretionary approvals,
- ▲ have applications accepted as complete by Federal, state or local agencies and are currently undergoing environmental review, or
- ▲ are proposed projects that have been discussed publicly by an applicant or that otherwise become known to a local agency and have provided sufficient information about the project to allow at least a general analysis of environmental impacts.

This analysis considers reasonably foreseeable past, present, and future projects/actions as described below in Section 3.5.3, “Cumulative Setting.” For resources where quantitative information is available, a quantitative analysis is provided; otherwise, a qualitative cumulative effect analysis is provided.

The significance criteria used in each resource section to determine the significance of an alternative’s effects on the resource are also applied to the evaluation of cumulative effects. When considered in the context of other present and probable future projects, an alternative’s contribution to cumulative effects for some resources could be significant, while the identified direct and indirect effects of the action alone are considered less than significant.

3.5.1 Cumulative Setting

3.5.1.1 GEOGRAPHIC SCOPE

The geographic area that could be affected by the project varies depending on the type of environmental resource being considered. When the effects of the project are considered in combination with those other past, present, and probable future projects to identify cumulative effects, the other projects that are considered may also vary depending on the type of environmental effects being assessed. Table 3-2 presents the general geographic areas associated with the different resources addressed in this analysis.

Table 3-2 Geographic Scope of Cumulative Impacts

Resource Issue	Geographic Area
Recreation	Regional (overall accessibility of recreational opportunities) and local (interactions with individual recreational activities)
Visual Resources	“Zone of Potential Visibility,” approximately 6.9-mile radius around project site
Wilderness	Granite Chief Wilderness Area
Land Use	Truckee Ranger District
Socioeconomics and Environmental Justice	Eastern Placer County and Town of Truckee
Public Safety	Immediate project vicinity
Transportation and Circulation	Regional and local roadways where the project could contribute traffic (Traffic Study Area)

Table 3-2 Geographic Scope of Cumulative Impacts

Resource Issue	Geographic Area
Utilities	The groundwater aquifer of Squaw Valley and Alpine Meadows for water supply and local utility service areas for energy usage and solid waste generation
Noise	Immediate project vicinity where project-generated noise could be heard concurrently with noise from other sources and mobile source noise on Squaw Valley Road and Alpine Meadows Road
Air Quality	Mountain Counties Air Basin Attainment Area, Tahoe Basin Air Basin Attainment Area
Greenhouse Gas Emissions and Climate Change	Global/statewide
Vegetation	The Tahoe-Truckee Region encompassing the projects considered in Table 3-1 and generally expressed by the area shown in Exhibit 3-1.
Botany	Bear Creek Watershed, Squaw Creek HUC, portion of upper middle Truckee River HUC
Wildlife and Aquatics	Squaw Creek, Bear Creek, and Five Lakes watersheds, and a portion of the Truckee River watershed between Bear Creek and Squaw Creek.
Wetlands	Bear Creek Watershed, Squaw Creek HUC, portion of upper middle Truckee River HUC
Soils, Geology, and Seismicity	Immediate project vicinity
Hydrology and Water Quality	Bear Creek Watershed, Squaw Creek HUC, portion of upper middle Truckee River HUC the groundwater aquifer of Squaw Valley and Alpine Meadows for the water supply scope.
Notes: HUC = hydrologic unit code	

3.5.1.2 PROJECT LIST

Table 3-3 provides the list of probable future projects that meet the requirements stated in Section 3.5.2, “Cumulative Effect Approach,” above. Projects are listed that are in the project vicinity and that have the possibility of interacting with the alternatives to generate cumulative effects. This list of projects was utilized in the development and analysis of the cumulative settings and impacts for each resource. Past and current projects in the project vicinity were also considered as part of the cumulative setting, as they contribute to the existing conditions/baseline upon which the alternatives and each probable future project’s environmental effects are compared, but are not listed in Table 3-3. The locations of cumulative projects listed in Table 3-3 relative to the project area are shown on Exhibit 3-1.

Significance criteria, unless otherwise specified, are the same for cumulative effects as direct, project effects for each environmental topic area. When considered in relation to other probable future projects, cumulative effects on some resources could be significant and more severe than those caused by the alternatives alone.

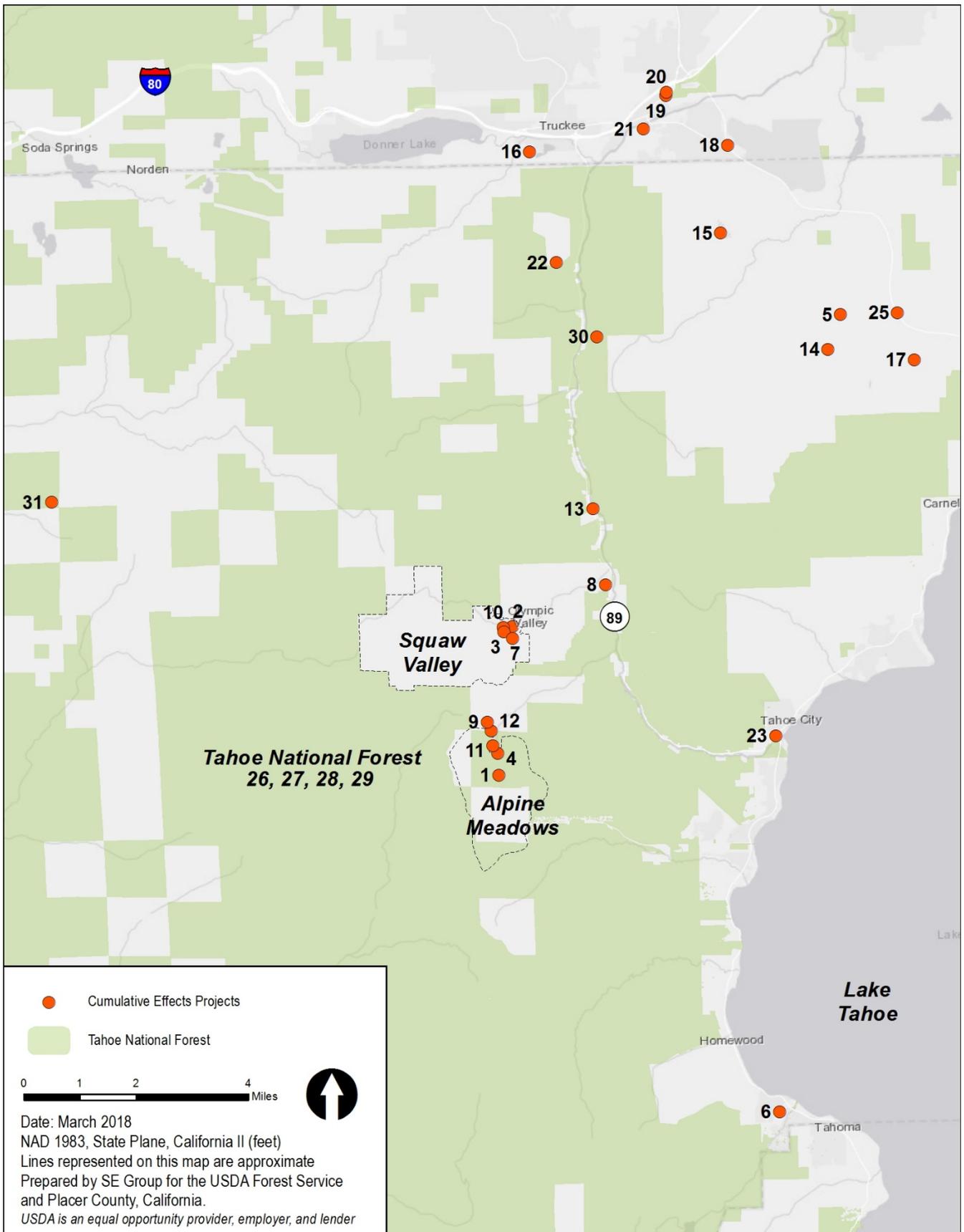


Exhibit 3-1 Cumulative Projects

Table 3-3 Cumulative Effects Projects

Map Label	Project	Approximate Straight Line Distance from Project Area	Project Description	Project Approval/ Implementation	Project Area (acres/length)
Ski Area Projects					
1	Alpine Meadows Master Development Plan	<1 mile	Overall Ski Area Master Plan outlining various improvements, including: <ul style="list-style-type: none"> ▲ Base area/guest service improvements ▲ Lift improvements (Hot Wheels replacement, Scott Chair replacement, new Rollers Chair) ▲ Snowmaking improvements ▲ Trail grading projects ▲ Miscellaneous other projects 	Accepted: 2015	2,278 acres
2	Village at Squaw Valley Specific Plan	<1 mile	The Village at Squaw Valley Specific Plan (Specific Plan) establishes the guiding approach and land use goals for the comprehensive development and enhancement of approximately 94 acres of the previously developed Squaw Valley Village located at the western end of the Olympic Valley.	Approved: 2016 Implementation: Unknown	94 acres
3	Squaw Valley Red Dog Lift Replacement	<1 mile	Replace the existing Red Dog triple chairlift with a high-speed, detachable, 6-person chairlift.	Approved: 2013 Implementation: On hold	2 acres
4	Alpine Meadows Hot Wheels Lift Replacement	<1 mile	Replace the Hot Wheels lift with a high-speed detachable quad chairlift.	Approved: 2012 Implementation: On hold	2 acres
5	Northstar Mountain Master Plan	6.5 miles	Mountain Master Plan for the existing ski resort area. Various additions and changes to ski lifts, snowmaking, trails, bridges, access, ropes course, bike trails, and campsites.	Final EIR released in June 2014 Project approval to be considered by Placer County February 2017	3,170 acres
6	Homewood Mountain Resort Master Plan	8 miles	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.	Approved: 2011 Implementation: Initiate construction in 2017 Buildout by approximately 2024	1,200 acres
7	Timberline Twister	<1 mile	Installation of a bob-sled like, gravity fed ride to be located within the existing ski resort area between the Red Dog and the Far East chairlifts.	Application provided to Placer County in 2018	6 acres
Planning and Development Projects					
8	Squaw Valley Olympic Museum and Winter Sports Heritage Center	2 miles	Proposed new 12,000-15,000 square foot two-story museum	Currently going through County Environmental Questionnaire for environmental determination purposes (March 2018)	1-2 acres (Squaw Valley Park)

Table 3-3 Cumulative Effects Projects

Map Label	Project	Approximate Straight Line Distance from Project Area	Project Description	Project Approval/ Implementation	Project Area (acres/length)
9	White Wolf Development (aka Caldwell Property)	<1 mile	The applicant proposes to create a 38-lot subdivision on a 44-acre property situated one-half mile north of the Alpine Meadows Ski Resort in the Alpine Meadows area. The proposed project includes 38 single-family residential units (parcels .5 to 1.5 acres in size), a clubhouse/lodge, a chairlift, and seasonal recreational facilities including tennis courts and equestrian facilities.	A pre-development application was submitted in December 2015. A project application was provided to Placer County in 2016 and its status is currently incomplete.	44 acres
10	General Development in Olympic Valley	<1 mile	The 1983 Squaw Valley General Plan guides development and growth within the Squaw Valley area in a positive and progressive manner. While introducing some new concepts and approaches to solving long standing problems, this document retains the basic value judgements and overall goals of previous planning for Squaw Valley and Placer County. Placer County has estimated 569 new lodging/residential units and 80,500 square feet of commercial by 2039.	N/A	N/A
11	General Development in Alpine Meadows	<1 mile	The 1968 Alpine Meadows General Plan serves as a broad, long-range guide to community development, including: conservation, economic, housing, land use, public buildings, public services and facilities, recreation and other plan subjects.	N/A	N/A
12	Alpine Sierra Subdivision	<1 mile	Planned development to include single-family lots and commonly held parcels; 33 single-family residential units and 14 residential halfplex units.	Draft EIR released September 2017	45 acres
13	Truckee River Corridor Access Plan	3 miles	Continuous and coordinated system of preserved lands and habitat, with a connecting corridor of walking, in-line skating, equestrian, bicycle trails, and angling and boating access from Lake Tahoe to the Martis Valley	Application submitted Design and environmental review underway	N/A
14	Northstar Highlands Phase II	7.5 miles	Subdivision including 50 townhomes, 10 single family lots, and 386 condominiums for a total of 446 units; up to 147 non-residential and commercial condominiums and 4,000 square feet of commercial space	Various components are in different phases of approval and implementation	50 acres
15	Martis Camp	8 miles	A private golf and ski club community of upscale second homes; 663 lots (between 2.5 and 0.5 acres) on over 2,000 acres.	Opened in 2006. Partially built-out. Many homes and community facilities are in place, but there are also lots available	~2,000 acres
16	Coldstream Specific Plan	8.5 miles	Planned community of 345 residential units, including affordable housing units and 30,000 square feet of commercial.	Approved: 2014 Implementation: Buildout is not complete.	179 acres
17	Martis Valley West Parcel	9 miles	Mixed residential uses (including single family, town homes, cabins, condos) and commercial development (including resort services, fitness center, family entertainment, and community center); 760 residential units; homeowner amenities, and approximately 34,500 square feet of commercial development	Approved: October 2016 Implementation: Unknown	1,052-acres

Table 3-3 Cumulative Effects Projects

Map Label	Project	Approximate Straight Line Distance from Project Area	Project Description	Project Approval/ Implementation	Project Area (acres/length)
18	Joerger Ranch Specific Plan	9.5 miles	Mixed use planned community including industrial, office space, public facility, transportation, and apartment uses (318 dwelling units)	Approved: 2015 Implementation: Begin construction 2017	70 acres
19	Truckee Railyard Master Plan	10 miles	Mixed commercial and residential development: 570 residential units, 70,000 square feet of retail, 15,000 square feet of office space, 60-room hotel, movie theater, 20,000-square-foot grocery store, and 25,000-square-foot civic building.	Approved: 2009 Implementation: Construction has begun but Master Plan implementation is not complete	75 acres
20	Triumph Development Hotel and Residential Development	10 miles	Mixed use: 114 room hotel and 138 rental apartment units	IS/MND released Dec. 2016	10 acres
21	Truckee Springs Master Plan	10 miles	40 single-family residential units, or 80 multi-family residential units, or a combination of both	Application submitted in 2016	25 acres
Regional Projects					
22	Cabin Creek Biomass Facility Project	6.5 miles	Two-megawatt wood-to-energy facility that would utilize a gasification technology. Would support fuels reduction and thinning activities within and outside of the Lake Tahoe Basin. Fueled by forest-sourced material only.	Approved: 2013 Construction has not been initiated	
Transportation Projects					
23	SR 89/Fanny Bridge Improvement Project	5 miles	Construction of a new bridge over the Truckee River, repair or replacement of Fanny Bridge, and various other improvements to address traffic congestions problem around the intersection of SR 89, SR 28 and Fanny Bridge.	Approved: 2015 Initiate construction in 2017	
24	Lake Tahoe Passenger Ferry	5.5 miles	Year-round, cross-lake ferry service with a South Shore Ferry Terminal at the Ski Run Marina in South Lake Tahoe and a North Shore Ferry Terminal at the Grove Street Pier west of the Tahoe City Marina. The goals of this project are to improve mobility, connect communities, and enhance economic vitality.	NOP/NOI released in November 2013 Draft EIS/EIS/EIR on hold	~19-miles
25	Caltrans' Highway Improvement Projects	9 miles	Planned Improvements (those included in a long-term plan that can be funded) and Programmed Improvements (those included in a near-term programming document that identifies funding amounts by year) in the 2012 Transportation Corridor Concept Report for SR 267 include: widening to four lanes between the Placer County line and Northstar Drive, rehabilitating pavement and widening shoulders between Placer County line and Brockway Summit, plant establishment and protection from Northstar Drive to SR 28, class II bike lane from Brockway Summit to SR 28	Anticipated construction between 2014 and 2025.	N/A

Table 3-3 Cumulative Effects Projects

Map Label	Project	Approximate Straight Line Distance from Project Area	Project Description	Project Approval/ Implementation	Project Area (acres/length)
Forest Service Programmatic Projects					
26	TNF Forest Plan	N/A	The decision approved the Preferred Alternative in the Final EIS as the 1990 Land and Resource Management Plan. The Forest Plan protects and enhances the environmental, recreational, and wildlife benefits provided by the Tahoe while maintaining approximately the same level of livestock use and about a 10 percent reduction in timber harvest from that has occurred annually over the last 10 years.	Approved: 1990 Implementation: Ongoing	TNF
27	Sierra Nevada Forest Plan Amendment	N/A	The regional forester approved an amendment to all Forest Plans in the Sierra Nevada region related to vegetation management. This decision adopts an integrated strategy for vegetation management focused on reducing the risk of wildfire to communities in the urban-wildland interface while modifying fire behavior over the broader landscape.	Approved: 2004 Implementation: Ongoing	~1,300,000 acres
28	TNF Motorized Travel Management Plan	N/A	The Forest Service has approved a comprehensive motorized travel management plan for the TNF. The plan is designed to enhance management of National Forest System lands, sustain natural resource values through more effective management of motor vehicle use, and provide opportunities for motorized recreation experiences on National Forest System lands.	Approved: 2010 Implementation: Ongoing	TNF
29	TNF Over Snow Vehicle Use Designation	N/A	Designating over-snow vehicle (OSV) use on National Forest System roads and trails and in areas on National Forest System lands as allowed, restricted, or prohibited. Identifying where grooming for OSV use would be conducted	Under analysis Expected implementation: 2018	871,495 acres
Forest Service Site-Specific Projects					
930	Big Jack East Forest Restoration Project	5.5 miles	Treat approximately 1,700 acres in WUI Defense and Threat zone to improve defensibility, resiliency and meet WUI standards. In threat zone include heterogeneity treatments. Pile burning, under-burning as possible throughout.	Under analysis, Expected implementation: 2018	1,700 acres
31	Onion Creek Fuelbreak Project	8 miles	Thinning and sanitation treatment to establish roadside fuelbreak along ~2.5 miles of road on ~155 acres. Project designed to establish WUI near private land at The Cedars and Serene Lakes	Decision 12/2016 Implementation: 2017–2019	155 acres
32	Tahoe West Project	Surrounding and Adjacent	Tahoe Basin proactive vegetation/wildlife projects. Developing proposal with the Truckee Ranger District and Lake Tahoe Basin Management Unit.	Preliminary planning beginning spring 2017	59,013 acres from Emerald Bay to Squaw Valley

Table 3-3 Cumulative Effects Projects

Map Label	Project	Approximate Straight Line Distance from Project Area	Project Description	Project Approval/ Implementation	Project Area (acres/length)
33	Truckee River Tributaries Project	0.25 – 2 miles	Road maintenance and small-scale drainage improvements near project area. The Truckee River 2016 Tributaries Project (referred to as the TRT Project) areas are located in the Truckee Ranger District of the Tahoe National Forest in certain watersheds that empty into the Truckee River between Tahoe City and the Truckee, California.	Decisions February 2017 and 2019 Implementation 2018–2024	
34	Five Creeks Project	2 miles	Vegetation Management, watershed improvement and transportation management actions.	Preliminary planning beginning in 2019	
35	Alpine Stables Equestrian SUP	0.5 mile	Permit re-issuance to equestrian outfitter and guide who uses routes in the Alpine Meadows project area.	5-year SUP reauthorization anticipated in winter 2018	
36	Big Sugar Trail Enhancement Project	3 miles	Recreation trail management, including trail re-route, decommissioning, and new trail construction on American River Ranger District, TNF.	Developing Project	
37	French Meadows	5 miles	Developing plan for vegetation management. American River Ranger District, TNF	Decision and implementation anticipated 2018	
38	American Headwaters Project	5 miles	Land acquisition, including proposed addition to Granite Chief Wilderness	Developing Project	
39	Chipmunk Grazing Allotment	5 miles	American River Ranger District, TNF	Developing Project	
40	West Shore WUI Fuels Reduction	2 miles	The West Shore Wildland Urban Interface (WUI) Hazardous Fuels Reduction project proposes vegetation and fuels treatments to reduce stand densities, reduce fuel loading and continuity. The project is located on the West Shore of Lake Tahoe, from Emerald Bay in the south, extending to Burton Creek State Park in the north. Lake Tahoe Basin Management Unit.	Decision anticipated spring 2017 Implementation June 2017	
41	Urban Forest Defense Zone Fuels Reduction and Healthy Forest Project	Lake-wide within the Defense Zone portion of the Wildland Urban Interface	Programmatic treatments to address ongoing fuels and forest health needs on NFS urban forest parcels and within WUI Defense Zone. This EA will update and replace the current Urban Lots EA. Lake Tahoe Basin Management Unit.	Anticipated decision: fall 2017 Implementation 2020–2029	
42	Integrated Management and Use of Trails, Roads, and Facilities	Multiple locations in the Lake Tahoe Basin	SUP-related EA for the Lake Tahoe Basin Management Unit, including Twin Craggs Recreation Residence SUP, Fir Craggs Recreation Residence SUP, 3 Outfitter Guide Fishing SUPs. SUP authorizations include: 1. Maintenance and management of trails, roads, and facilities 2. Authorization of outfitter/guide activities 3. Authorization of events 4. Reissuance of special use permits for uses of NFS lands.	Decision May 2017	

Notes: EA=Environmental Assessment; SR=State Route; SUP=Special Use Permit; TNF=Tahoe National Forest
Source: Compiled by SE Group in 2018

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