6 ALTERNATIVES

6.1 INTRODUCTION

The State CEQA Guidelines Section 15126.6(a) requires EIRs to describe "… a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason." This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

> Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code [PRC] Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed program. If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative must be discussed, but in less detail than the significant effects of the project as proposed (State CEQA Guidelines Section 15126.6[d]).

The State CEQA Guidelines further require that the "no project" alternative be considered in an EIR (Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed program with the impacts of not approving the proposed program. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR "…shall also identify an environmentally superior alternative among the other alternatives." (Section 15126[e][2]).

In defining "feasibility" (e.g., "… feasibly attain most of the basic objectives of the project …"), State CEQA Guidelines Section 15126.6(f) (1) states, in part:

> Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency's decision-making body, here the Board of Forestry and Fire Protection (Board) (See PRC Sections 21081.5, 21081[a] [3]).

The Forest Practices Rules do not include specific requirements for analysis of alternatives in a PTEIR addition to those required by CEQA (California Code of Regulations [CCR] 1092.01).

6.1.1 Summary of Alternatives Screening Criteria

In compliance with State CEQA Guidelines Section 15126.6, as described above, each alternative is evaluated in three ways:

- Does the alternative **accomplish all or most of the basic project objectives** (described below relative to each alternative)? The objectives of the program are to:
  - reduce the risk of catastrophic wildfires that could damage Lake Tahoe Basin forests, watersheds, habitats, and communities;
  - increase Lake Tahoe Basin forest resilience to effects of climate change, including prolonged drought, pest and disease outbreaks and increased tree mortality;
  - protect and restore meadow and riparian ecosystem processes and functions, and forest habitat quality in the Lake Tahoe Basin;
  - develop and implement all-lands fuel reduction, forest health improvement, and restoration projects that deliver multiple community and ecosystem service benefits; and
  - and increase the pace and scale of fuel reduction projects to assist in achieving the goals of Executive Order B-52-18.
- Is the alternative **potentially feasible** (from economic, legal, regulatory, and technological standpoints)?
- Does the alternative **avoid or substantially lessen any significant effects of the proposed project** (including consideration of whether the alternative could create significant effects additional to those of the proposed project)? Potentially significant and significant effects are described in Sections 3.2 through 3.15. Implementation of the Tahoe PTEIR would result in the following significant and unavoidable impacts:
  - Air Quality (one significant and unavoidable project-level impact related to: increased emissions from expanded treatment activities that could exceed California or national standards; two significant cumulatively considerable significant and unavoidable impacts related to contribution of PM_{10} and ozone precursors by treatment activities under the program);
  - Greenhouse gas emissions and climate change (generate GHG emissions through treatment activities); and
  - Transportation (vehicle miles traveled [VMT] generated by the proposed program would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision[b]).

Cumulative impacts for the issues listed above would also be significant and unavoidable (cumulatively considerable) as a result of implementation of the proposed program.

Each alternative that meets the evaluation criteria identified above is evaluated in the Tahoe PTEIR. Those that do not meet these criteria are described in Section 6.4, "Alternatives Considered and Eliminated from Detailed Analysis."

6.2 ALTERNATIVES EVALUATED IN THIS PROGRAM TIMBERLAND EIR

Alternatives evaluated in this PTEIR are:

- **Alternative A: No-Program**, which would include continuation of current fuel reduction efforts within the Tahoe PTEIR program area. There would be no prescribed fire with implementation of this alternative and all wildfires would be suppressed. It would reflect a slower pace and smaller scale of treatment activities compared to the proposed program;
- **Alternative B: Fire Suppression Only**, which would include active fire suppression but no active fuels treatment activities;
- **Alternative C: Manual and Mechanical Treatment Focus**, which would include a treatment approach that emphasizes mechanical and manual thinning, with limited pile burning and no understory burning; and

- **Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning**, which would include a treatment approach with less manual and mechanical thinning, and greater use of understory burning.

These alternatives are described in comparison to the proposed program under the Tahoe PTEIR. A summary of the estimated annual average acres treatment by treatment type is provided for each alternative in Table 6-1. Where elements of the alternatives would remain the same as the proposed program, details are presented in Chapter 2, "Program Description." Accordingly, the alternative descriptions below focus on elements that differ from the proposed program.

Two additional factors common to all of the alternatives and the proposed program include the following:

- Salvage would be a priority over live thinning. Salvage of dead or dying trees in areas that were previously burned or affected by a beetle infestation would be a priority over live thinning.
- All wildfires would have 100 percent suppression.

Table 6-1 Summary of Estimated Annual Acres Treated by Treatment Type for Each Alternative

	Manual Treatments	Mechanical Treatments	Pile Burning	Prescribed Understory Burning	Total Acres Treated per Year
Proposed Program	500 (40%)	300 (24%)	250 (20%)	200 (16%)	1,250
Alternative A: No-Program Alternative	199 (40%)	200 (40%)	104 (20%)	0	503
Alternative B: Fire Suppression Only	0	0	0	0	0
Alternative C: Manual and Mechanical Treatment Focus	680 (38%)	630 (35%)	490 (27%)	0	1,800
Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning	500 (40%)	100 (8%)	175 (14%)	475 (38%)	1,250

Source: Compiled by Ascent Environmental in 2019

Table 6-2 presents a comparison of the environmental effects of each alternative relative to the Tahoe PTEIR, which are further discussed in Section 6.2, below. It identifies whether an alternative would avoid any significant and unavoidable impact of the proposed program and presents the degree of environmental effects relative to the proposed program (e.g., similar, less, greater) for each resource area.

Table 6-2 Comparison of Environmental Effects of the Alternatives Relative to the Proposed Program

Resource Topic	Proposed Program	Alternative A: No-Program Alternative	Alternative B: Fire Suppression Only	Alternative C: Manual and Mechanical Treatment Focus	Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning
Aesthetics	LTSM (program and cumulative)	less	similar	similar	similar
Agriculture and Forestry Resources	LTS (program and cumulative)	similar	similar	similar	similar
Air Quality	SU (program and cumulative)	similar	similar	similar	greater
Biological Resources	LTSM (program and cumulative)	similar	greater	similar	similar
Archaeological, Historical, and Tribal Cultural Resources	LTSM (program and cumulative)	less	less	greater	similar

Resource Topic	Proposed Program	Alternative A: No-Program Alternative	Alternative B: Fire Suppression Only	Alternative C: Manual and Mechanical Treatment Focus	Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning
Energy Resources	LTS (program and cumulative)	similar	similar	greater	similar
Geology, Soils, and Land Capability	LTS (program and cumulative)	similar	similar	greater	similar
Greenhouse Gas Emissions and Climate Change	SU (program and cumulative)	similar	greater	less	greater
Hazards and Hazardous Materials	LTS (program and cumulative)	similar	similar	greater	similar
Hydrology and Water Quality	LTS (program and cumulative)	similar	similar	similar	similar
Noise and Vibration	LTS (program and cumulative)	similar	similar	greater	similar
Recreation	LTSM (program and cumulative)	less	less	greater	greater
Transportation	SU (program and cumulative)	similar	similar	greater	similar
Wildfire	LTS (program and cumulative)	greater	greater	less	similar

Notes: LTS = less than significant, LTSM = less than significant with mitigation, SU = significant and unavoidable.

Source: Compiled by Ascent Environmental in 2019

6.2.1 Alternative A: No-Program Alternative

DESCRIPTION OF THE ALTERNATIVE

Under the No-Program Alternative, project proponents would continue to implement fuel reduction efforts within the program area through existing programs, authorities, and funding and would continue to rely on the existing range of CEQA, Forest Practice Act (FPA), and California Forest Practice Rules (CFPR) compliance tools. The same range of silvicultural prescriptions, treatment methods, and biomass disposal approaches as the proposed program could occur under this alternative. Although Alternative A would comply with CFPRs where applicable, other applicable regulations, and current standard practices, it would not implement all of the Standard Project Requirements (SPRs) included in the proposed program. This alternative would reflect a slower pace and smaller scale of treatment activities compared to the proposed program. Under this alternative, an estimated 503 acres would receive fuel reduction treatments per year. Under this alternative, the current mix of treatment types would continue, resulting in 40 percent of treatments being mechanical treatments and 40 percent of treatments as manual treatments (see Table 6-1). Approximately 104 acres per year are also anticipated to be treated with pile burning. No prescribed understory burning would occur under this alternative. Project sites would be expected to be re-entered for maintenance treatment approximately 20 years after initial treatments.

Consistency with Program Objectives

CEQA requires that an EIR evaluate a no project alternative to allow decisionmakers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project, even if the no project alternative does not meet most of the basic project objectives (State CEQA Guidelines Section 15126[e]). To allow for an informed comparison of the merits of the No-Program Alternative, a discussion of the extent to which the No-Program Alternative would achieve the objectives of the Tahoe PTEIR is provided. As described below, the No-Program Alternative would achieve four of the five objectives of the Tahoe PTEIR, to some degree.

With implementation of the No-Program Alternative, fuel reduction treatment activities would continue similar to how they are implemented currently. Thus, this alternative would meet the objectives to reduce the risk of catastrophic wildfires; increase the Lake Tahoe Basin forest resilience to effects of climate change; and develop and implement all-lands fuel reduction forest health improvement, and restoration projects that deliver multiple community and ecosystem service benefits. The No-Program Alternative does not identify any meadow and riparian ecosystem restoration and, thus, would not explicitly contribute to attaining the project objective related to restore meadow and riparian ecosystem processes and functions; however, the fuels reduction treatments would contribute to all-lands fuel reduction and improving forest health. Because this alternative would result in a continuation of existing fuel reduction treatments, it would not meet the objective to increase the pace and scale of fuel reduction projects to assist in achieving the goals of Executive Order B-52-18. The No-Program Alternative would require project-by-project approvals by project proponents, which could tier from the California Vegetation Treatment Program (CalVTP) Program Environmental Impact Report (PEIR) for some activities within the State Responsibility Areas (SRA). However, treatment activities that meet the definition of timber operations for commercial purposes in PRC Section 4527(a) would still require review under the FPA. Additionally, implementation of treatment activities under the No-Program Alternative would not result in the benefits associated with having a uniform set of SPRs like the proposed program.

Feasibility

The No-Program Alternative would reflect a continuation of current practices. Because the No-Program Alternative would involve limited changes from existing practices, the alternative would be potentially feasible to implement; however, it would not feasibly attain the objective of the proposed program to increase the pace and scale of fuel reduction to assist in achieving the goals of Executive Order B-2-18.

ENVIRONMENTAL ANALYSIS OF ALTERNATIVE A

Wildfire

As shown under Impact 3.2-2 in Section 3.2, "Wildfire," Alternative A, which is similar to Scenario 2 modeled by the LANDIS II model, the No Program Alternative would have a greater impact related to overall risk of wildfire and high-severity wildfire compared to the proposed program. The short-term effects of Alternative A would be similar to, but slightly less than, the proposed program, because Alternative A would implement the same treatment activities, but these treatments would occur on fewer acres. Alternative A would comply with existing laws and regulations, and project-level mitigation measures would minimize risk associated with treatment activities. Over the long term, the risk of the uncontrolled spread of wildfire and high-severity wildfire would be greater than under the proposed program, because Alternative A would treat fewer acres than the proposed program.

Aesthetics

Under Alternative A, the same treatment activities as the proposed program could affect aesthetic resources across the program area. However, the extent of effects on aesthetic resources would be less than the proposed program, because fuel reduction efforts would occur at a slower pace and lesser scale. As with the proposed program, the visual effects of implementing treatments would be short-term and temporary. Like the proposed program, the long-term effects of most treatments would be increased viewing distance with the potential for significant scenic impacts in sensitive areas where vegetative screening is removed; however, the impact would occur in fewer locations than under the proposed program. Treatment activities that meet the definition of timber operations for commercial

purposes in PRC Section 4527(a) would comply with CFPRs, such as 14 CCR Section 956.7 that requires restoration activities in Watercourse and Lake Protection Zones (WLPZ) that are intended to reduce soil loss and 14 CCR Section 963 that requires planning and implementation of treatment activities to occur in a manner that considers safety and avoids or substantially lessens significant adverse impacts to, among other things, visual resources. These measures would help reduce aesthetic impacts in these areas from treatment activities. The potential for treatments under Alternative A to affect aesthetic resources would be evaluated and mitigated, if necessary, through project-level CEQA review. In the long term, Alternative A could result in a scenario in which the amount of acres burned by wildfire would be similar to that of the proposed program, but the proportion of high-severity of wildfire would be greater under Alternative A. Because the total acres that could be burned by wildfire would be similar between Alternative A and the proposed program, roughly affecting aesthetics over the same amount of area, and the amount of treatment activities would be less under Alternative A, the aesthetic effects of this alternative would be less than those of the proposed program.

Agriculture and Forestry Resources

The effects of Alternative A on forestry resources would be similar to the proposed program because it would include similar treatment activities in similar locations. However, because Alternative A would result in treatment of fewer acres than would occur under the proposed program, the magnitude of tree removal with implementation of Alternative A would be less. The alternative would alter forest land through vegetation removal, but forested treatment areas would generally continue to support at least 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Similar to the proposed program, treatment activities under Alternative A would not result in the loss of forest land or conversion of forest land to a non-forest use. Because the pace and scale of treatment activities would be reduced under Alternative A compared with the proposed program, overgrown forest conditions would persist for longer and over a greater area and the likelihood of a large, high-severity wildfire occurring would be greater under Alternative A. The effects of such a fire could result in greater impacts on forestry resources than those under the proposed program. This impact would be similar to the proposed program.

Air Quality

Under Alternative A, there would be no change in existing treatments; thus, there would be no change in existing air pollutant emissions. The effects of Alternative A on air quality would be less than the proposed program because it would not increase the amount of emissions-generating treatment activities. Because Alternative A could result in a greater number of acres burned at high-severity during a wildfire compared to the proposed program, Alternative A would reduce emissions of criteria air pollutants and precursors from wildfires and associated response and cleanup efforts to a lesser extent than the proposed program over the long term. Given the unpredictability of wildfire, and the possible variability in emissions from treatment activities under Alternative A and the proposed program, quantifying the net effect of the program on emissions associated with wildfire and wildfire response would be too speculative to provide meaningful information. The potential for treatments under Alternative A to affect air quality would be evaluated and mitigated, if necessary, through project-level CEQA review. For the reasons described herein, the air quality effects of Alternative A would generally be similar to the proposed program.

Biological Resources

Vegetation treatment activities similar to those for the proposed program would continue to be implemented under Alternative A through existing programs. Over the short term, the effects of Alternative A on terrestrial and aquatic biological resources would be similar to the proposed program because it would include similar treatment activities in similar locations. Alternative A would comply with existing laws and regulations, and project-level mitigation measures would minimize risk associated with treatment activities. However, because Alternative A would result in treatment of fewer acres than under the proposed program, the magnitude of effects with implementation of Alternative A would be less.

Over the long term, the reduction in area treated under Alternative A and the slower pace of treatment compared to the proposed program could result in an increased risk of uncontrolled spread of wildfire and high-severity wildfire, disturbances from associated fire suppression activities, with the potential for increased direct and indirect effects

related to forest and other upland habitat composition and structure, special-status plant and animal species, wildlife nursery sites, erosion and water quality, riparian function, and stream and nearshore aquatic habitat quality compared to the proposed program. For example, an uncontrolled wildfire and the resulting fire suppression activities that could occur under Alternative A have a greater potential to adversely affect water quality and aquatic habitat than the proposed program because such activities could increase erosion and sediment delivery, alter existing drainage patterns, reduce riparian vegetation, and discharge contaminants (e.g., fire retardants) into surface waters. Potential adverse effects on fish and aquatic habitat could include short- and long-term increases in turbidity concentrations and water temperatures, and short-term increases in contaminant levels from fire suppression chemicals. Emergency water drafting from fish-bearing waters for firefighting could also injure or kill fish if they become impinged on intake screens or entrained into intakes and would increase the risk of introduction or spread of AIS. Furthermore, the restoration of riparian and meadow ecosystem function would not occur under Alternative A, so the potential benefit of this proposed treatment to fish populations via improved riparian function and aquatic habitat conditions would not be realized under this alternative. However, similar project requirements (e.g., SPRs and CFPRs) would be implemented as part of project-level CEQA review under Alternative A, which would be expected to avoid or minimize adverse effects. Overall, effects on biological resources from Alternative A would be similar to those of the proposed program.

Archaeological, Historical, and Tribal Cultural Resources

Under Alternative A, the same treatment activities as the proposed program could affect archaeological, historical, and tribal cultural resources within the program area but with a smaller amount of acres treated annually. However, Alternative A would not implement all of the SPRs included in the proposed program. Because not all of the SPRs would be implemented, and fuel reduction efforts would continue within the program area, there is a greater potential for adverse impacts to known and unknown resources to occur. However, Alternative A would require project-level CEQA review by project proponents or preparation of Timber Harvest Plans (THPs), which could result in project-specific mitigation to protect and otherwise avoid known and unknown resources. In the long term, Alternative A could result in a scenario in which the amount of acres burned by wildfire would be similar to that of the proposed program, but the proportion of high-severity of wildfire would be greater under Alternative A. Because the total acres that could be burned by wildfire would be similar between Alternative A and the proposed program, potentially affecting cultural resources over the same amount of area, and the amount of treatment activities would be less under Alternative A, the cultural resources effects of this alternative would be less than the proposed program. Therefore, impacts to archaeological, historical, and tribal cultural resources under this alternative would be less than those of the proposed program.

Energy Resources

Alternative A would result in similar types of effects on energy resources as the proposed program. Less energy would be consumed in the form of fossil fuel (e.g., diesel and other petroleum fuels) during treatment activities than the proposed program because Alternative A would treat fewer acres. However, there could be more high-severity wildfires under Alternative A than with the proposed program; thus, response, containment, and cleanup efforts would involve a surge in the consumption of energy resources, including the consumption of fossil fuels associated with vehicle and aerial travel for personnel traveling from throughout the state or elsewhere. Efficient energy consumption is not a primary consideration during wildfires. Rather, protecting human life and property is prioritized. Thus, the energy impacts of Alternative A would be generally similar to the proposed program.

Geology, Soils, and Land Capability

Alternative A includes manual and mechanical treatments similar to the proposed program, but would treat fewer acres each year and would not include prescribed understory burning. Because the areal extent of manual and mechanical treatments would be less under Alternative A, the magnitude of impacts related to soil erosion, landslides, and avalanches would be lower than the proposed program, although these impacts would be less than significant for Alternative A and the proposed program. Because Alternative A would not include understory burning, fire-related impacts on geology and soils such as risk of loss of soil cover, increased risk of water repellency, or the breakdown of soil structure associated with prescribed burning would not occur. Like the proposed program, manual

and mechanical treatment activities for Alternative A would comply with applicable CFPRs to reduce the impacts of soil erosion and landslides. The potential for treatments under Alternative A to affect geology and soils would be evaluated and mitigated, if necessary, through project-level CEQA review. Because the pace and scale of treatment activities would be reduced under Alternative A compared with the proposed program, overgrown forest conditions would persist for longer and over a greater area and the likelihood of a large, high intensity wildfire occurring would be greater under Alternative A. The effects of such a fire could result in greater impacts on soil erosion and landslides than those under the proposed program because a wildfire would burn at a higher intensity than fires that could occur under the proposed program and could include areas prone to erosion that would be treated under the proposed program to avoid burning. Such a fire would likely cause large increases in overland flow erosion and landslides. Overall, the effects of Alternative A related to geology, soils, and land capability would be similar to the proposed program.

Greenhouse Gas Emissions and Climate Change

Under Alternative A, there would be no change in existing treatments; thus, there would be no change in existing greenhouse gas (GHG) emissions, which are estimated in Table 6-3. Under Alternative A, treatment activities would have the potential to reduce wildfire risk, which would reduce GHG emissions and could increase carbon sequestration over the long term. This would be consistent with applicable plans, policies, and regulations adopted for the purpose of reducing GHG emissions.

Because Alternative A would treat fewer acres per year than the proposed program, it would not reduce wildfire risk to the same extent as the proposed program and therefore could result in less potential long-term GHG emission reduction and carbon sequestration benefits. It is not possible to determine the exact GHG emissions from future potential wildfires under this alternative; however, it is estimated that implementation of this alternative would not reduce potential high-severity wildfires to the same extent as implementation of the proposed program. Thus, because this alternative would have less GHG emissions from treatment activities but would not avoid wildfire emissions to the extent they would be avoided by the proposed program, the GHG and climate change impacts of this alternative would be generally similar to those of the proposed program.

Table 6-3 Estimates of Greenhouse Gas Emissions Associated with Each Alternative

Treatment Method	GHG Emissions per Acre Treated ($MTCO_2e$/acre)	Proposed Program[1]	Alternative A: No-Program Alternative[1]	Alternative B: Fire Suppression Only[1, 2]	Alternative C: Manual and Mechanical Treatment Focus[1]	Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning[1]
Mechanical Treatments	1.69	507	338	NA	1,065	169
Manual Treatments	0.94	470	187	NA	639	84,500
Prescribed Understory Burning	63.2	12,640	0	NA	0	30,020
Pile Burning	38.7	9,675	4,025	NA	18,963	6,773
Total Emissions	--	23,292	4,550	NA	20,667	121,462

Notes: $MTCO_2e$/acre = metric tons of carbon dioxide–equivalent emissions per acre; NA = not available.

[1] The emissions were calculated by multiplying the GHG emissions per acre treated by the number of acres of each treatment method identified for the proposed program and alternatives included in Table 6-1.

[2] Because the future amount and severity of wildfires are unknown, it would be speculative to estimate greenhouse gas emissions for this alternative.

Source: Compiled by Ascent Environmental in 2019

Hazards and Hazardous Materials

Like the proposed program, the No-Program Alternative would also include compliance with applicable laws and regulations that reduce the risk associated with the use of fuels, oils, lubricants, and other hazardous materials. Effects related to hazardous materials would be similar to the proposed program. Even under the No-Program Alternative, individual projects must comply with CEQA's mandate to reduce impacts; therefore, it is assumed that project-level environmental review would identify and mitigate effects associated with proximity to sensitive receptors and known hazardous waste sites. Because the No-Program Alternative would treat fewer acres than the proposed program, thus using fewer hazardous materials, the hazards and hazardous materials impacts from this alternative would be less. However, there could be slightly more high-severity wildfires under this alternative than the proposed program, which would lead to the use of fuels, oils, and lubricants associated with vehicle and mechanical equipment use and the use of fire retardants. Overall, treatment activities under Alternative A would have generally similar effects on hazards and hazardous materials as the proposed program.

Hydrology and Water Quality

Fuel reduction treatment activities (i.e., manual treatment, mechanical treatment, and pile burning) similar to those listed for the proposed program would continue to be implemented under Alternative A through existing programs, so the types of effects from Alternative A on hydrology and water quality would be generally similar to the proposed program. There would be no prescribed understory burning under Alternative A, so the potential effects associated with this treatment activity would not occur (see Impact 3.12-2). While the treatment activities under Alternative A would have a similar effect on hydrology and water quality as the proposed program, a reduction in the area treated under Alternative A compared to the proposed program (see Table 6-1) would result in a reduction in the extent and magnitude of the effects. The reduction in area treated under Alternative A and the slower pace of treatment compared to the proposed program would result in a relative increase in the risk of high-severity wildfire, with the potential for increased risk of adverse effects on water quality and hydrology compared to the proposed program. Lake Tahoe West model results indicate that impacts on water quality from thinning and prescribed burning would be less than the water quality impacts of wildfires (Lake Tahoe West 2020). An uncontrolled wildfire and the resulting fire suppression activities that could occur under Alternative A have a greater potential to adversely affect water quality and hydrology than the proposed program because such activities could increase erosion, alter existing drainage patterns, reduce riparian vegetation, and discharge contaminants (e.g., fire retardants) into surface and groundwater. The potential effects on surface water quality include short- and long-term increases in turbidity concentrations, nutrient concentrations, and water temperatures. An increase in contaminant levels from fire suppression chemicals has the potential to occur in surface and groundwater. The potential effects to drainage patterns after wildfires include increased surface runoff velocities and reduced duration that surface water can infiltrate into soils. Furthermore, the restoration of riparian and meadow ecosystem function would not occur under Alternative A, so the potential benefit of this proposed treatment to hydrology and water quality would not be realized under this alternative. However, similar project requirements (e.g., SPRs and CFPRs) would be implemented as part of project-level CEQA review or THPs under Alternative A, which would avoid or minimize adverse effects of treatment activities. Overall, treatment activities under Alternative A would have generally similar effects on hydrology and water quality as the proposed program, but there would be a potential increase in adverse effects on hydrology and water quality under Alternative A compared to the proposed program because of the increased risk of high-severity wildfire and associated wildfire suppression activities.

Noise and Vibration

Short-term increases in noise under Alternative A would be similar to the proposed program; however, short-term noise increases would occur less often than the proposed program because Alternative A would treat fewer acres than the proposed program each year. As with the proposed project, vegetation treatment activities implemented under Alternative A would adhere to applicable CFPRs, other applicable regulations, and current standard practices, it would not implement all of the SPRs included in the proposed program that would help reduce potential noise or vibration impacts. The potential for treatments under Alternative A to cause noise and vibration impacts would be evaluated and mitigated, if necessary, through project-level CEQA review. With implementation of Alternative A, there could be slightly more high-severity wildfires than with the proposed program, which would generate noise associated with

fire suppression, which could include operation of fire engines, bulldozers, masticators or track chippers, water trucks, airplanes, and helicopters. Fire suppression activities would occur under emergency conditions and, as such, would not be required to adhere to local noise requirements or SPRs identified for treatment activities. Overall, the noise and vibration effects of Alternative A would be similar to the proposed program.

Recreation

The types of effects of Alternative A on recreation would be similar to the proposed program because it would include similar treatment activities in similar locations. However, because Alternative A would result in treatment of fewer acres than would occur under the proposed program, the magnitude of the effects from Alternative A on recreation would be less. The potential for treatments under Alternative A to affect recreation would be evaluated and mitigated, if necessary, through project-level CEQA review. In the long term, Alternative A could result in a scenario in which the amount of acres burned by wildfire would be similar to that of the proposed program, but the proportion of high-severity of wildfire would be greater under Alternative A. Because the total acres that could be burned by wildfire would be similar between Alternative A and the proposed program, roughly affecting recreation resources over the same amount of area, and the amount of treatment activities would be less under Alternative A, the recreation effects of this alternative would be less than those of the proposed program.

Transportation

Alternative A would implement the same treatment activities as the proposed program but would not result in an increase the amount of treatment that would occur in the program area and would not include prescribed understory burning. Thus, the extent of effects on transportation would be lesser than the proposed program because there would be no change in fuel reduction efforts from existing conditions and, thus, there would be no increase in transportation impacts. Although this alternative would not require compliance with and implementation of the SPRs of the proposed program, treatment activities would be subject to CEQA; and thus, it can be assumed that if any transportation impacts were identified during that process, project-specific mitigation similar to the aforementioned SPRs would be required. However, because Alternative A could result in a greater number of acres burned at high-severity during a wildfire than under the proposed program, which would result in use of more resources (e.g., fire crews and associated vehicles) traveling from outside of the program area to put out higher severity wildfires compared to the proposed program. Therefore, this alternative would result in similar transportation effects to those of the proposed program.

Summary

Alternative A would reduce some environmental impacts of the proposed program because it would implement fewer treatment activities. In comparison to the proposed program, because Alternative A would involve less treatment activities, there would be reduced impacts from treatment implementation related to all of the resource topics discussed above. However, because Alternative A would include less forest fuel treatment, the likelihood of a large, high-intensity wildfire occurring would increase and result in greater effects on agriculture and forestry resources; air quality; biological resources; energy; geology, soils, and land capability; greenhouse gas emissions and climate change; hazards and hazardous materials; noise; and hydrology and water quality. Thus, in the long term, impacts on these resource areas from Alternative A would be greater to those of the proposed program. Effects from Alternative A on aesthetics; archaeological, historical, and cultural resources; and recreation would be less severe than from the proposed program.

Effects related to wildfire from Alternative A would be greater over the long term, because the risk of the uncontrolled spread of wildfire and high-severity wildfire would be greater than under the proposed program since Alternative A would treat fewer acres than the proposed program.

6.2.2 Alternative B: Fire Suppression Only

DESCRIPTION OF THE ALTERNATIVE

This alternative would include no active forest management treatments. Defensible space requirements consistent with PRC 4291 would continue to be implemented within 100 feet of structures. Wildfire suppression would continue to occur throughout the program area. This alternative provides an opportunity for comparison of the effects of implementing the proposed fuel reduction treatments to the effects of not implementing fuel treatments.

Consistency with Program Objectives

Alternative B would not implement any fuels treatments and would not meet any of the objectives, which are related to increasing forest resilience, protecting and restoring meadow and riparian ecosystems and forest habitat quality, improving forest health, and increasing the pace and scale of fuel reduction projects to assist in achieving the goals of Executive Order B-52-18.

Feasibility

Alternative B would include no fuels reduction activities and would only include suppression of wildfires. Because Alternative B would not include any fuels reduction activities, the alternative would be potentially feasible to implement; however, it would not feasibly attain most of the basic objectives of the proposed program.

ENVIRONMENTAL ANALYSIS OF ALTERNATIVE B

Wildfire

As shown under Impact 3.2-2 in Section 3.2, "Wildfire," Alternative B, which is similar to Scenario 1 modeled by the LANDIS II model, would have a greater impact related to overall risk of wildfire and high-severity wildfire compared to the proposed program. The short-term effects of Alternative B would be less than the proposed program because Alternative B would not include any treatment activities, which would reduce risks related to the unintentional spread of a prescribed fire. Over the long term, the risk of uncontrollable spread of wildfire and high-severity wildfire would be greater than under the proposed program because Alternative B would not include fuel treatments to reduce wildfire risk. Thus, Alternative B would leave greater amounts of wildfire fuels, which would increase the risk of the uncontrollable spread of wildfire and high-severity wildfire. This impact would be more severe than the proposed program.

Aesthetics

Under Alternative B, no active forest management projects would occur. Fire suppression activities would be used to control the spread of forest fires, which would likely require emergency containment actions such as excavation of fire lines, back-burning, and aerial application of fire retardant. High-intensity fires could replace mature forest environments with blackened landscapes visible from a distance. Some forests could take decades to return to an appearance similar to pre fire scenic conditions. Fire-lines excavated during suppression would leave obvious linear scars contrasting with an otherwise natural landscape. The effects described above could significantly degrade the scenic quality of views from recreation areas, scenic roadways, protected vistas, as well as views of suppression sites and the surrounding area. Because Alternative B would not implement any fuel treatment activities but would result in more high-severity fires, the impacts on aesthetics would be similar to the proposed program.

Agriculture and Forestry Resources

Alternative B would have no impact on forestry resources because no treatment activities would be implemented. However, there could be slightly more high-severity wildfires under Alternative B than with the proposed program, which could result in greater loss of forestry resources.

Air Quality

Alternative B would have no direct impact on air quality because there would be no treatment activities that would emit criteria air pollutants and precursors, toxic air contaminants, or odors. Because there could be slightly more high-severity wildfires under Alternative B than with the proposed program, Alternative B would not reduce emissions of criteria air pollutants and precursors, as well as toxic air contaminants and odors, from high-severity wildfires (see Table 3.2-3 in Section 3.2, "Wildfire") and associated response and cleanup efforts compared to the proposed program. Given the unpredictability of wildfire, and the possible variability in emissions from treatment activities under the proposed program, quantifying the net effect of Alternative B on emissions associated with wildfire and wildfire response compared to those of the proposed program would be too speculative to provide meaningful information. Overall, although Alternative B would not implement fuel treatment activities, it would result in similar air quality impacts than the proposed program due to a greater amount of high-severity wildfire over the long term.

Biological Resources

Alternative B would result in no short-term adverse treatment-related effects on terrestrial or aquatic biological resources because this alternative does not include active forest management treatments. However, in the long-term, Alternative B could result in greater adverse effects on terrestrial and aquatic biological resources than the proposed program because of an increase in the extent and severity of wildfire compared to the proposed program.

The elimination of all fuel reduction treatment activities under Alternative B, including those that currently occur, would increase the risk of uncontrollable spread of wildfire and resultant effects related to forest and other upland habitat composition and structure, erosion and water quality, riparian function, and stream and nearshore aquatic habitat quality, as discussed for Alternative A. Wildfires and the associated fire suppression activities that could occur under Alternative B have a greater potential to adversely affect fish and aquatic habitat than the proposed program because of the likelihood of increased erosion, degraded water quality, reduced riparian vegetation, and discharge of contaminants (e.g., fire retardants) into surface waters. Emergency water drafting from fish-bearing waters for firefighting could also injure or kill fish if they become impinged on intake screens or entrained into intakes and would increase the risk of introduction or spread of AIS. Potential increases in runoff volume, timing, and water velocity from large and/or high severity wildfires would increase erosion and cause elevated turbidity and sediment deposition in receiving water bodies. Potential reductions in riparian vegetation associated with wildfires would also result in warmer water temperatures because more solar radiation would reach streams. Additionally, the long-term risk and magnitude of unmitigated removal or degradation of high-quality habitats, wildlife nursery sites, breeding sites for special-status wildlife species, and special-status plant occurrences would likely be greater under Alternative B.

While Alternative B would have no treatment-related effects on biological resources, potential increases in risk of wildfire and extensive wildfire suppression activities under Alternative B would result in a greater potential for long-term adverse effects compared with the proposed program.

Archaeological, Historical, and Tribal Cultural Resources

Alternative B would have no direct impact on archaeological, historical, or tribal cultural resources because no treatment activities would be implemented. In the event of a wildfire, standard fire suppression activities would be used to control the spread of forest fires, and it is possible that such fires could destroy or degrade known and unknown cultural resources within the program area and Tahoe Basin. Because the total acres that could be burned by wildfire would be similar between Alternative B and the proposed program, potentially affecting cultural resources over the same amount of area, and no treatment activities would occur under Alternative A, the cultural resources effects of this alternative would be less than the proposed program. Therefore, impacts to archaeological, historical, and tribal cultural resources under this alternative would be less than those of the proposed program.

Energy Resources

Alternative B would have no direct impact on energy resources because no treatment activities would be implemented. However, there could be more high-severity wildfires under Alternative B than with the proposed program; thus, similar to the effects of Alternative A on energy resources described above, Alternative B would reduce the relatively inefficient consumption of energy during wildfire response to a lesser extent than the proposed

program because there could be slightly more high-severity wildfires than with the proposed program that would require more resources for fire suppression. Thus, the energy impacts of Alternative B would be generally similar to the proposed program.

Geology, Soils, and Land Capability

There would be no short-term effects on geology and soils under Alternative B because there would be no treatment activities. Over the long term, the risk of uncontrollable spread of wildfire under Alternative B would be greater than the proposed program because the forests in the program area would become increasingly overgrown, increasing both the risk and likely severity of wildfire. High-severity fire conditions associated with catastrophic wildfire would produce hydrophobic compounds on soils, reducing soil infiltration and increasing runoff in the high-severity burn areas. Additionally, catastrophic wildfire would reduce vegetation, litter, and small woody debris on the forest floor, reducing surface roughness, increasing runoff velocities, and reducing infiltration of runoff into the soil. The potential increases in the magnitude of runoff and higher runoff velocities would increase soil erosion and increase the risk of shallow landslides and debris flows. Overall, Alternative B would result in similar effects related to geology, soils, and land capability as the proposed program over the long term.

Greenhouse Gas Emissions and Climate Change

Because no increase in treatment activity would occur under Alternative B, this alternative would not be consistent with the forest management goals identified California's *2017 Climate Change Scoping Plan*, the *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*, and the *California Forest Carbon Plan* for reducing wildfire risk and increasing carbon sequestration. This would be a significant impact that would not occur under the proposed program.

Alternative B would not result in an increase in treatment activity that would generate a short-term increase in direct GHG emissions as would the proposed program. However, compared to the proposed program, Alternative B would have less potential to result in a cumulative net carbon benefit over the long term by reducing the severity of wildfires and increasing carbon sequestration. Alternative B would not reduce potential high-severity wildfires to the same extent as implementation of the proposed program. Although this alternative would have less GHG emissions from treatment activities, because Alternative B would not be consistent with plans or policies adopted for the purpose of reducing GHG emissions and would not avoid wildfire emissions to the extent they would be avoided by the proposed program, the GHG and climate change impacts of this alternative would be greater than those of the proposed program.

Hazards and Hazardous Materials

Implementation of Alternative B would result in use of hazardous materials, such as fuels, oils, and lubricants to operate equipment and vehicles used for wildfire suppression, which would be similar to those that would be used for some treatment activities, like building fire lines for prescribed burns. Additionally, fire retardant chemicals would be used to suppress wildfires. Overall, hazards and hazardous materials impacts from implementation of Alternative B would be similar to those of the proposed program.

Hydrology and Water Quality

There would be no short-term adverse treatment-related effects on hydrology and water quality under Alternative B because this alternative would include no active forest management treatments. However, in the long term, Alternative B would likely result in greater adverse effects on hydrology and water quality than the proposed program. The elimination of all fuel reduction treatment activities under Alternative B, including those that currently occur, would increase the risk of uncontrollable spread of wildfire and resultant effects on water quality and hydrology. Lake Tahoe West model results indicate that impacts on water quality from thinning and prescribed burning are less than those from wildfires (Lake Tahoe West 2020). An uncontrolled wildfire and the associated fire suppression activities that could occur under Alternative B have a greater potential to adversely affect water quality and hydrology than the proposed program because of the likelihood of increased erosion, altered drainage patterns, degraded water quality, reduced riparian vegetation, and discharge of contaminants (e.g., fire retardants) into surface water and groundwater. High-severity burn conditions associated with catastrophic wildfire would produce

hydrophobic compounds on soils, reduce infiltration in the high-severity burn areas, and cause increased runoff within burn areas. Additionally, high severity wildfire would reduce vegetation, litter, and small woody debris, thus reducing surface roughness and resulting in an increase in runoff velocities and reduction in the potential for runoff to infiltrate into the soil. Potential runoff increases and higher runoff velocities from high severity wildfires would increase erosion, altering the existing drainage patterns, and leading to elevated turbidity concentrations in receiving water bodies. Potential reductions in riparian vegetation associated with wildfires would also result in warmer water temperatures because more solar radiation would reach streams. Alternative B would have fewer short-term effects on hydrology and water quality than the proposed program, but the potential increases in runoff, erosion, turbidity, water temperature, and contaminants (e.g., fire retardants) associated with potential increases in risk of wildfire and wildfire suppression activities would increase the potential for greater adverse effects in the long term. Overall, Alternative B would have similar impacts on hydrology and water quality to those of the proposed program.

Noise and Vibration

Implementation of Alternative B would not generate noise or vibration associated with treatment activities that involve manual or mechanical thinning and, thus, would have less of a noise and vibration impact compared to the proposed program. However, Alternative B would generate noise associated with fire suppression, which could include operation of fire engines, bulldozers, masticators or track chippers, water trucks, airplanes, and helicopters. Fire suppression activities would occur under emergency conditions and, as such, would not be required to adhere to local noise requirements or SPRs identified for treatment activities. For these reasons, noise and vibration impacts during fire suppression could result in greater noise and vibration impacts on sensitive receptors than the proposed program; however, because Alternative B would involve fire suppression activities under emergency conditions that would be temporary and intermittent, the increase in noise and vibration would be a less-than-significant impact. Overall, the noise and vibration effects of Alternative B would be similar to the proposed program.

Recreation

Alternative B would have no impact on recreation, because there would be no treatment activities that could temporarily close recreation resources and displace recreation users. Also, it would not include any activities that could result in creating new unmanaged access for recreation use of motor vehicles or OHVs, or result in adversely affecting the quality of recreation user experiences. Because the total acres that could be burned by wildfire would be similar between Alternative B and the proposed program, roughly affecting recreation resources over the same amount of area, and there would be no treatment activities under Alternative B, the recreation effects of this alternative would be less than those of the proposed program.

Transportation

Under Alternative B, no active forest management projects would occur. Fire suppression activities would be used to control the spread of forest fires, which would likely require emergency containment actions such as excavation of fire lines, back-burning, and aerial application of fire retardant.

As described under Impact 3.15-2, the proposed program would result in an increase in treatment acreage and VMT associated with implementing treatment activities. Therefore, because Alternative B would not implement any VMT-generating treatment activities, and the VMT associated with wildfire cannot be quantified due to uncertainty around the frequency and intensity of such events, this alternative could result in reduced adverse effects related to VMT. Additionally, Alternative B would not require the construction, re-design, or alteration of any public roadways; and would not result in incompatible uses along the roadway network.

A primary objective of the proposed program is to reduce the risk of catastrophic wildfires; thus, if active forest fuel treatment activities such as those that could occur under the proposed program were not to occur then the frequency and intensity of wildfires could be greater under this alternative. As described under Impact 3.15-2, wildfires require an immediate response from emergency personnel and mobilization of equipment, and those that exceed the containment capacity of local fire suppression entities would require additional resources (i.e., personnel and equipment) to be transported in to assist in firefighting efforts. This movement of personnel and equipment associated with containment of wildfires results in a surge of VMT associated with vehicle travel.

The transportation impacts from implementation of Alternative B could be greater or less than those of the proposed program because the impacts depend on a number of factors, including the number and severity of wildfires and the availability of resources to respond to the wildfires. Thus, for the reasons described herein, transportation impacts from Alternative B would be generally similar to those of the proposed program.

Summary

In comparison to the proposed program, there would be reduced direct short-term effects related to all of the resource topics discussed above because Alternative B would not implement any treatment activities,. However, because Alternative B would not reduce fire fuels, the likelihood of a large, high-intensity wildfire occurring would increase and result in greater potential effects on agriculture and forestry resources; air quality; biological resources; energy; geology, soils, and land capability; greenhouse gas emissions and climate change; hazards and hazardous materials; noise; and hydrology and water quality. Effects from Alternative B on archaeological, historical, and cultural resources and recreation would be less severe than from the proposed program.

Effects related to wildfire from Alternative B would be greater over the long term, because the risk of the uncontrolled spread of wildfire and high-severity wildfire would be greater than under the proposed program because Alternative B would not include any fuel treatment activities.

6.2.3 Alternative C: Manual and Mechanical Treatment Focus

DESCRIPTION OF THE ALTERNATIVE

Alternative C includes a treatment approach that emphasizes mechanical and manual treatments, with no prescribed understory burning and limited pile burning. This alternative is intended to reduce potential environmental effects of prescribed burning that could result from the proposed program, such as effects related to air quality, greenhouse gas emissions, and wildfire risk. This alternative would include the same silvicultural prescriptions, manual and mechanical treatment approaches, and biomass disposal approaches as the proposed program, with the exception of prescribed burning. However, this alternative would treat an estimated 1,800 acres per year. As shown in Table 6-1, it would result in manual treatments on an estimated 680 acres per year (38 percent of acres treated) and mechanical treatments on an estimated 630 acres per year (35 percent). Pile burning would occur on an estimated 490 acres per year (27 percent). With implementation of Alternative C, diameter at breast height (dbh) targets would be increased to allow for removal of trees up to 38 inches dbh, which is greater than the 30 inches dbh limit that is typically applied within the program area (TRPA Code of Ordinances Section 61.1). The ability to remove larger trees would make commercial thinning projects more financially viable. There would be no prescribed fire for this alternative aside from pile burning to remove biomass in some project areas treated with manual treatments. Maintenance treatments would occur on the same timeframe as under the proposed program.

Consistency with Program Objectives

Implementation of Alternative C would result in fuels reduction through manual and mechanical treatments and pile burning, which would provide less flexibility in options for achieving fuel reduction goals compared to the proposed program. This alternative would meet the program objectives related to reducing the risk of catastrophic wildfires, increasing forest resilience, and increasing the pace and scale of fuel reduction projects; however, relying solely on manual and mechanical treatment methods and pile burning limits the flexibility of land managers and fire districts to use the most appropriate approach for specific fuel reduction projects. Although mechanical and manual treatments would mimic some of the forest health benefits of fire, those treatment methods would not be as effective as understory burning in achieving forest health benefits of fire. However, Alternative C would result in treating a greater number of acres per year than the proposed program. Thus, Alternative C would meet these program objectives to similar to the proposed program.

Alternative C would implement fuels treatments that would generally rely on manual and mechanical treatments and pile burning that can somewhat replicate the effects of a natural fire regime but to a lesser extent than prescribed understory burning would. However, because a greater number of acres would receive fuels treatments than the proposed program, this alternative would achieve the two program objectives related to restoration and improving forest health similar to the proposed program, which includes a prescribed burning component.

Feasibility

Because Alternative C proposes to implement manual and mechanical fuels treatments and pile burning that would be an expansion of existing fuels treatment practices it would be feasible to implement. However, this alternative would not achieve the program objectives as effectively as the proposed program because it would limit the types of fuel reduction treatment options to manual and mechanical treatments and pile burning and there may be areas that would be better treated by prescribed understory burning.

ENVIRONMENTAL ANALYSIS OF ALTERNATIVE C

Wildfire

As shown in Section 3.2, "Wildfire," Alternative C, which is similar to Scenario 3 modeled by the LANDIS II model, would have a similar, but less impact related to overall risk of wildfire and high-severity wildfire compared to the proposed program. The short-term effects of Alternative C would be less than the proposed program because Alternative C would only include pile burning and manual and mechanical treatments, which would reduce risks related to the unintentional spread of a prescribed fire. Like the proposed program, implementation of SPRs and stringent safety protocols would prevent the uncontrolled spread of wildfire from other treatment activities. Over the long term, Alternative C would seek to reduce the potential for the uncontrolled spread of wildfire through manual and mechanical treatments and pile burning. Over the long term, the risk of the uncontrollable spread of wildfire and high-severity wildfire would be less than under the proposed program because although Alternative C would limit prescribed burning, it would treat a greater number of acres through manual and mechanical treatments than the proposed program. Thus, Alternative C would leave less wildfire fuels, which would decrease the risk of the uncontrollable spread of wildfire and high-severity wildfire.

Aesthetics

Under Alternative C, understory burning would not be used to reduce fuel loading; however, the other treatment activities would affect aesthetics and visual resources in the same manner as the proposed program. As with the proposed program, the visual effects of implementing treatments would be short term and temporary. Like the proposed program, the long-term effects of most treatments would be increased viewing distance with the potential for significant scenic impacts in sensitive areas where vegetative screening is removed. As with the proposed program, this alternative would implement Mitigation Measures 3.3-2 and 3.3-3 to preserve screening vegetation and reduce adverse effects to scenic quality along key areas of scenic roadway corridors or shorelines. The aesthetic effects of this alternative would be similar to the proposed program.

Agriculture and Forestry Resources

The effects of Alternative C on forestry resources would be similar to the proposed program because it would include the manual and mechanical treatments, but with limited pile burning and no prescribed understory burning. However, because Alternative C would result in treatment of more acres than would occur under the proposed program, the magnitude of tree removal with implementation of Alternative C would be greater. The alternative would alter forest land through vegetation removal, but forested treatment areas would generally continue to support at least 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Similar to the proposed program, treatment activities under Alternative C would not result in the loss of forest land or conversion of forest land to a non-forest use. This impact would be similar to the proposed program.

Air Quality

Alternative C would include manual and mechanical treatments, but with a limited proportion of pile burning and no prescribed understory burning. Additionally, this alternative would result in treatment of a greater number of acres compared to the proposed program. As shown in Table 3.5-7, "Maximum Daily Emissions," under Section 3.5, "Air Quality," manual and mechanical treatment activity under the proposed program would generate emissions of ozone precursors (i.e., reactive organic gases [ROG] and oxides of nitrogen [NO_X]) that would exceed the mass emission thresholds established by the El Dorado Air Quality Management District (EDCAQMD) and Placer County Air Pollution Control District (PCAPCD). These emissions could result in, or contribute to, ambient concentrations of ozone that exceed the national ambient air quality standards and California ambient air quality standards. Therefore, the level of significance of the effects from Alternative C on ambient air quality in the Lake Tahoe Air Basin would be similar to the proposed program. However, prescribed burning emits approximately 58 times more ROG and 161 times more NO_X than manual treatments, and approximately 144 times more ROG and 15 times more NO_X than mechanical treatments, on a per-acre basis. Although Alternative C would not include prescribed understory burning, it would treat a greater number of acres than the proposed program through manual and mechanical treatments and would include a greater amount of pile burning; thus, the magnitude of the effects from Alternative C on ambient air quality in the Lake Tahoe Air Basin would be similar to those of the proposed program. Additionally, because of the increased amount of treatments, Alternative C may result in a slight decrease in the potential for high-severity wildfire compared to the proposed program.

The potential for emissions-generating treatment activity conducted under Alternative C to expose nearby receptors to toxic air contaminants and odors would be similar to the proposed program because it would include similar emissions-generating treatment activities in similar locations.

Biological Resources

The effects of Alternative C on aquatic and terrestrial resources would be generally similar to the proposed program because this alternative would include manual and mechanical treatments, but there would be no prescribed understory burning. While the magnitude of the effects on biological resources from manual and mechanical treatments would be slightly greater than with the proposed program due to more total acres being treated annually under Alternative C, the magnitude of any effects from understory burning would be reduced because of fewer acres burned per year. As with the proposed program, manual and mechanical treatment activities under Alternative C would incorporate SPRs and CFPR measures to avoid or minimize adverse impacts to special-status plants and wildlife, wildlife and fish nursery sites, fish populations and fish movement, and riparian and aquatic habitat, and avoid or prevent the introduction or spread of AIS. Increases in the extent of manual and mechanical treatment activities would potentially cause slight increases in erosion, risk of spills or leaks of contaminants from equipment, and the need for water drafting, but adverse effects would be minimized by implementation of SPRs and adherence to the CFPRs similar to the proposed program to protect water bodies and WLPZs/SEZs, limit crossings and equipment use near waterbodies, minimize adverse effects of water drafting, and prevent spill or leaks from equipment. Additionally, treatment-related disturbances to high-quality terrestrial habitats, wildlife nursery sites, breeding sites for special-status wildlife species, and special-status plant occurrences from manual and mechanical treatments with Alternative C would generally be slightly greater than with the proposed program, depending on the specific locations of these treatments. Compared to the proposed program, the elimination of prescribed understory burning with Alternative C would reduce erosion of sediment and sedimentation of aquatic habitats and removal or degradation of terrestrial habitats.

Overall, the differences in effects on fisheries and aquatic habitat, wildlife nursery sites, breeding sites for special-status wildlife species, and special-status plants between Alternative C and the proposed program may not be substantial because increases in the magnitude of effects from increased manual and mechanical treatments may be partly offset by elimination of prescribed understory burning. The impacts from Alternative D on biological resources would be similar to those of the proposed program.

Archaeological, Historical, and Tribal Cultural Resources

Alternative C would include the same silvicultural prescriptions, manual and mechanical treatment approaches, and biomass disposal approaches as the proposed program, with the exception of understory burning. Under this alternative, SPRs would be implemented and would help to reduce potential cultural resource impacts; however, a greater number of acres per year would be treated than as described for the proposed program. Because treatment activities would occur in a greater area than the proposed program, there is a greater potential to encounter known and unknown resources, and therefore the potential to adversely affect archaeological, historical, and tribal cultural resources is greater under Alternative C compared to the proposed program.

Energy Resources

Because Alternative C would include treatment of a greater number of acres per year and more mechanical treatments than the proposed program, a greater amount of energy would be consumed in the form of fossil fuel (e.g., diesel and other petroleum fuels) combustion in the engines of vehicles and equipment. Like the proposed program, Alternative C would reduce the relatively inefficient consumption of energy during wildfire response. Alternative C would have a greater effect on energy resources than the proposed program.

Geology, Soils, and Land Capability

The effects of Alternative C on geology and soils would be similar to the proposed program because this alternative would include the manual and mechanical treatments, but with limited pile burning and no prescribed understory burning. However, the magnitude of the effects would be greater than the proposed program, because the total acres treated per year and the amount of mechanical treatment under Alternative C would be greater. As with the proposed program, treatment activities under Alternative C would implement SPRs and CFPR measures to avoid or minimize the potential to increase erosion, avalanches, and landslides. Alternative C would reduce the potential effects of high-severity burns related to soil erosion and landslides, but the increased amount of mechanical treatment would increase soil disturbance and the potential for soil compaction and erosion. Similar to the proposed program, the impacts of Alternative C would be less than significant provided that SPRs and CFPR measures are implemented effectively. Although the magnitude of the increases in impacts compared to those of the proposed program would likely be small, Alternative C would result in a greater impact on geology, soils, and land capability.

Greenhouse Gas Emissions and Climate Change

Alternative C would include manual and mechanical treatments like the proposed program, but with limited pile burning and no prescribed understory burning. Additionally, this alternative would treat a greater number of acres than the proposed program. Manual and mechanical treatments would result in a short-term increase in GHG emissions that would be a cumulatively considerable contribution to global climate change and, therefore, a significant and unavoidable impact. As shown in Table 6-3, "Estimates of Greenhouse Gas Emissions Associated with Each Alternative," manual and mechanical treatment activity would generate substantially less GHG emissions than prescribed understory burning and pile burning on a per-acre basis. Although the number of acres treated would be greater for Alternative C than the proposed program and the number of acres treated by pile burning would be greater, because this alternative would not include prescribed burning, the overall GHG emissions would be similar to those of the proposed program, especially when considered relative to the GHG emissions from Alternatives A and D (see Table 6-3). Additionally, because this alternative would treat a greater area than the proposed program, the potential for a long-term increase in carbon sequestration and long-term reduction in GHGs emitted by wildfire would be greater under Alternative C than the proposed program. This Alternative would still result in a significant and unavoidable impact related to GHG emissions, but the impact would be less severe than under the proposed program.

Hazards and Hazardous Materials

Alternative C would include transportation, use, storage, and disposal of fuels, oils, and lubricants, which could result in risks related to human exposure when applied in areas in close proximity to the public. This risk would be greater under Alternative C than the proposed program, because more mechanical treatments would be implemented each year without the use of prescribed burning and would be implemented over a larger area each year. Alternative C would include compliance SPR HAZ-1, like the proposed program, which would minimize risks associated with the

handling and use of hazardous materials. Alternative C would also comply with applicable laws, regulations, and SPRs that reduce the risk associated with the use of fuels, oils, lubricants, and other hazardous materials. Although the impacts would remain less than significant, overall, effects related to hazardous materials from Alternative C would be greater than those of the proposed program.

Hydrology and Water Quality

The effects of Alternative C on hydrology and water quality would be generally similar to the proposed program because this alternative would include manual and mechanical treatments, but there would be no prescribed understory burning. While the magnitude of the effects on hydrology and water quality from manual and mechanical treatments would be slightly greater than the proposed program due to more total acres being treated per year under Alternative C, the magnitude of hydrology and water quality effects from pile burning and understory burning would be reduced due to fewer acres burned per year. As with the proposed program, manual and mechanical treatment activities under Alternative C would implement SPRs to avoid or minimize adverse impacts to hydrology and water quality. Manual and mechanical treatment activities would potentially disturb and/or compact soils, transport sediment and nutrients because of subsequent soil erosion, and introduce contaminants from equipment spills and leaks, but transport of sediment, nutrients, and contaminants to water bodies would be minimized by implementation of SPRs similar to the proposed program to protect water bodies, WLPZs, and stream environment zones (SEZs), limit equipment use on wet soils and steep slopes, stabilize highly disturbed areas, and prevent spill or leaks from equipment. Compared to the proposed program, decreases under Alternative C in the amount of land subject to prescribed pile burning and elimination of prescribed understory burning would result in more litter and small woody debris that would slow down runoff, increase soil infiltration, and reduce erosion of sediment and transport nutrients to water bodies. Overall, the effects on hydrology and water quality under Alternative C would be similar to the proposed program.

Noise and Vibration

Short-term increases in noise would be greater than those of the proposed program, because Alternative C would include mechanical and manual treatments over a greater area, which generate more noise than prescribed burning because of the use of motorized equipment. As with the proposed program, vegetation treatment activities implemented under Alternative C would adhere to SPRs that require consistency with local noise policies and ordinances to the extent the program is subject to them (e.g., limit vegetation treatment activities to daytime hours, ensure proper notification of nearby sensitive receptors, locate treatment activities and staging areas away from sensitive receptors to minimize noise exposure, and minimizing flights of residential areas and designated wilderness areas). Although Alternative C would result in less-than-significant impacts related to noise, because more areas would be subject to mechanical treatments, this alternative would generate more noise than the proposed program.

Recreation

The effects of Alternative C on recreation would be similar to the proposed program because the alternative would include the manual and mechanical treatments, but with limited pile burning and no prescribed understory burning. Alternative C would treat a greater number of acres than would be treated by the proposed program each year. As with the proposed program, treatment activities under Alternative C would implement SPRs that avoid or minimize the disruption of recreational activities within designated recreation areas. However, because of the greater number of acres treated by pile burning, Alternative C would have an increased nuisance effect on the quality of recreation user experiences related to adverse air quality conditions generated by smoke from the prescribed fire. Alternative C would also result in a greater nuisance effect from noise generated by mechanical treatments.

Transportation

Under this alternative, understory burning would not be used to reduce fuel loading; however, the other treatment activities would affect transportation in the same manner and extent described for the proposed program. Additionally, this alternative would treat a greater number of acres each year than the proposed program. As with the proposed program, the transportation effects of implementing treatments would be short term and temporary. Like the proposed program, the transportation effects of most treatment activities would include increases in VMT and

potential for hazards due to smoke associated with pile burning (even if limited in nature), and the operation of incompatible uses along the roadway network during later treatment activities. Because this alternative would treat a greater number of acres per year than the proposed program, impacts related to VMT would be greater. Implementation of Alternative C would result in transportation effects greater than those of the proposed program.

Summary

Alternative C would reduce some environmental impacts related to air quality, GHG emissions and climate change, and wildfire compared to the effects of the proposed program. Impacts related to aesthetics, agriculture and forestry resources, biological resources, hydrology and water quality from Alternative C would be similar to those of the proposed program. However, because Alternative C would treat a greater number of acres per year, it could result in greater impacts related to archaeological, historical, and cultural resources; energy resources; geology, soils, and land capability; hazards and hazardous materials; noise and vibration; recreation; and transportation.

6.2.4 Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning

DESCRIPTION OF THE ALTERNATIVE

Alternative D would increase the pace and scale of fuel reduction treatments in the program area over existing conditions using a treatment approach with less mechanical treatments, and more understory burning. This alternative is intended to reduce potential environmental effects of mechanical treatments that could result from the proposed program, such as effects related to soils and water quality. As with the proposed program, this alternative would treat an estimated annual average of 1,250 acres per year. As shown in Table 6-1, prescribed understory burning would be used on an estimated average of 475 acres per year (38 percent of acres treated). Prescribed understory burning would only occur within the Planned CWPP Project areas of the program area. Manual treatments would occur on an estimated average of 500 acres per year (40 percent), ground-based mechanical thinning would occur on an estimated 100 acres per year (8 percent), and pile burning would occur on 175 acres per year (14 percent).

Consistency with Program Objectives

Implementation of Alternative D would result in fuels reduction that would primarily rely on prescribed understory burning treatments, which would result in less flexibility and options for achieving fuel reduction goals compared to the proposed program. For example, some areas within the program area (e.g., urban lots) would not be appropriate locations for using prescribed burning. Constraints related to air quality could also limit the number of days during which prescribed burning could be used resulting in fewer acres treated than planned. Thus, this alternative would meet the program objectives related to reducing the risk of catastrophic wildfires, increasing forest resilience, and increasing the pace and scale of fuel reduction projects compared to existing conditions; however, relying primarily on prescribed burning treatment methods limits the flexibility for project proponents to implement fuel reduction projects. Alternative D would meet these program objectives similar to the proposed program.

Alternative D would implement fuels treatments that would generally rely on prescribed understory burning that can replicate the effects of a natural fire regime. However, there may be restoration plans, such as removing conifers from meadows, that could not be implemented using prescribed burning. Thus, this alternative would achieve the two program objectives related to restoration and improving forest health but to a lesser degree than the proposed program.

Feasibility

Because Alternative D proposes to implement prescribed burning treatments that would be an expansion of existing fuels treatment practices it would be potentially feasible to implement. However, this alternative would not achieve the program objectives as effectively as the proposed program because it would limit the types of fuel reduction treatment options to primarily consist of prescribed burning and manual treatments. There may be areas that would be better treated by mechanical treatments.

ENVIRONMENTAL ANALYSIS OF ALTERNATIVE D

Wildfire

As shown in Section 3.2, "Wildfire," Alternative D, which is similar to Scenario 4 modeled by the LANDIS II model, would be similar to the proposed program because it would reduce the risk of high-severity wildfire to a similar degree as the proposed program. Additionally, Alternative D would treat the same number of acres each year; however, this alternative would include less mechanical treatment and pile burning but more prescribed understory burning than would occur for the proposed program. Therefore, the short-term effects of Alternative D would be greater than the proposed program because Alternative D would include more prescribed burning, which would increase risks related to the unintentional spread of a prescribed fire. Like the proposed program, SPRs and stringent safety protocols would prevent the uncontrolled spread of wildfire from other treatment activities. Over the long term, the risk of the uncontrollable spread of wildfire and high-severity wildfire would be greater than under the proposed program because Alternative D would treat a greater number of acres each year through prescribed burning than the proposed program.

Aesthetics

The expanded prescribed fire alternative would result in short-term scenic effects due to the greater extent of blackening of tree trunks and woody debris as described for the proposed program, compared to the proposed program. Scenic effects would be temporary in most cases; however, some areas may experience higher severity burns, which could have long-lasting scenic effects. Although burning would temporarily alter the appearance of the forest environment, naturally occurring fires occur on a cyclical basis in program area forests and program-related burning scenic effects would be consistent the natural forest environment. Like the proposed program, the long-term effects of most treatments would be increased viewing distance with the potential for significant scenic impacts in sensitive areas where vegetative screening is removed; however, the impact would occur in fewer locations than under the proposed program because there would be fewer manual and mechanical treatments that would remove mature trees, which would retain a limited viewing distance in more places. As with the proposed program, this alternative would implement Mitigation Measures 3.3-2 and 3.3-3 to preserve screening vegetation and reduce adverse effects to scenic quality along key areas of scenic roadway corridors or shorelines. The aesthetic effects of this alternative would be similar to the proposed program.

Agriculture and Forestry Resources

The effects of Alternative D on forestry resources would be the same as the proposed program because the alternative would treat the same number of acres of land each year as the proposed program. The alternative would alter forest land through vegetation removal, but forested treatment areas would generally continue to support at least 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Similar to the proposed program, treatment activities under Alternative D would not result in the loss of forest land or conversion of forest land to a non-forest use. This impact would be similar to the proposed program.

Air Quality

Alternative D would include limited manual and mechanical treatments and more prescribed burning. As shown in Table 3.5-7, "Maximum Daily Emissions," under Section 3.5, "Air Quality," prescribed burning would generate emissions of ozone precursors (i.e., ROG and NO_X) that would exceed the mass emission thresholds established by EDCAQMD and PCAPCD. These emissions could result in, or contribute to, ambient concentrations of ozone that exceed the national ambient air quality standards and California ambient air quality standards. Prescribed burning emits approximately 58 times more ROG and 161 times more NO_X than manual treatments, and approximately 144 times more ROG and 15 times more NO_X than mechanical treatments, on a per-acre basis. Thus, the effects of Alternative D on ambient air quality in the Lake Tahoe Air Basin would be more severe than the proposed program.

The potential for emissions-generating treatment activity conducted under Alternative D to expose nearby receptors to toxic air contaminants and odors would be similar to the proposed program because, like the proposed program,

prescribed burning would only take place in the Planned CWPP Project areas and still be subject to burn requirements of local air districts and TRPA.

Biological Resources

The effects of Alternative D on aquatic and terrestrial biological resources would be similar to the proposed program, but this alternative would include less mechanical treatment acreage and a greater amount of prescribed understory burning. In addition, the area subject to pile burning each year would be less under Alternative D than with the proposed program. Alternative D would treat the same number of acres as the proposed program each year, so variations in the effects on aquatic and terrestrial habitats compared to the proposed program would result solely from changes in the amount of area treated by the different types of treatment activities. As with the proposed program, pile burning and prescribed understory burning treatment activities under Alternative D would incorporate SPRs and CFPR measures to avoid or minimize the potential to substantially degrade aquatic habitat, cause other adverse impacts to fish populations, or cause the introduction or spread of AIS. SPRs and CFPR measures would promote low-severity understory burns that protect WLPZs/SEZs and the majority of soil and organic materials on the forest floor, thus minimizing sediment and nutrient transport to waterbodies. Decreases in the area of mechanical treatment activities under Alternative D would reduce the extent and magnitude of disturbance to riparian and aquatic habitats and the risk of introduction or spread of AIS compared to the proposed program by reducing soil disturbance, soil compaction, stream crossings, and the potential for equipment spills and leaks that could deliver sediment, nutrients, or contaminants to water bodies and by reducing the need for water drafting. Similarly, the extent and magnitude of treatment-related disturbances to high-quality terrestrial habitats, wildlife nursery sites, breeding sites for special-status wildlife species, and special-status plant occurrences from mechanical thinning would be reduced with Alternative D; and, although effects of prescribed burning could increase, incorporation of applicable SPRs, CFPR measures, and project-specific mitigation measures would protect these resources from substantial loss or degradation.

Overall, the differences in effects on fisheries and aquatic habitat, wildlife nursery sites, breeding sites for special-status wildlife species, and special-status plant occurrences between Alternative D and the proposed program may not be substantial because increases in the magnitude of effects from increased prescribed broadcast burning may be partly offset by decreases in the magnitude and extent of effects from reduced mechanical treatment. The impacts from Alternative D on biological resources would be similar to those of the proposed program.

Archaeological, Historical, and Tribal Cultural Resources

Under Alternative D, fuel reduction treatments would increase in pace and scale compared to existing conditions, and would include fewer mechanical treatments and increased understory burning. As with the proposed program, this alternative would treat an estimated annual average of 1,250 acres per year. Project-level protection measures would still be required by CEQA and the FPA to reduce potential cultural resource impacts. Because this alternative would include the same pace, scale, and area of treatment, there is a potential to affect known and unknown cultural resources through implementation of treatment activities within the program area. Therefore, Alternative D would result in similar impacts to archaeological, historical, and tribal cultural impacts as the proposed program.

Energy Resources

Alternative D would include fewer mechanical treatments and more prescribed burning, which would require some less energy use than mechanical treatments. Compared to the proposed program, less energy would be consumed in the form of fossil fuel (e.g., diesel and other petroleum fuels) combustion in the engines of vehicles and equipment. Like the proposed program, Alternative D would reduce the relatively inefficient consumption of energy during wildfire response. Overall, Alternative D would have a similar effect on energy resources to those of the proposed program.

Geology, Soils, and Land Capability

The effects from implementation of Alternative D on geology and soils would be similar to the proposed program, but this alternative would include less mechanical treatment acreage and a greater amount of prescribed understory burning. In addition, the amount of area subject to pile burning each year would be less under Alternative D than under the proposed program. Alternative D would treat the same number of acres as the proposed program each

year, so variations in the effects on geology and soils compared to the proposed program would be due entirely to changes in the percentage of the area treated by the different types of treatment activities. Understory burning can lead to an increase in the extent of impermeable soils and decreased roughness of the soil surface. These changes would alter overland flows and hence lead to potential increase in soil erosion. As with the proposed program, pile burning and prescribed understory burning treatment activities under Alternative D would implement SPRs and CFPRs to avoid or minimize potential for erosion and landslides. SPRs would promote low-severity prescribed understory burns that partially char and consume litter and small woody debris in confined areas while leaving few mineral soils exposed, and would reduce the potential for escaped fire that could lead to increased soil erosion. Decreases in the area of mechanical treatment activities under Alternative D would lessen the magnitude of potential impacts on geology and soils compared to the proposed program by reducing soil compaction and soil disturbance that could increase soil erosion. Overall, the effects on geology and soils under Alternative D would be similar to the proposed program since increases in the magnitude of effects from increased prescribed understory burning would likely be offset by decreases in the magnitude of effects from reductions in mechanical treatments. Under both the proposed program and Alternative D, the impacts on geology and soils would be less than significant.

Greenhouse Gas Emissions and Climate Change

Alternative D would include more prescribed burning and less manual and mechanical treatments than the proposed program. As shown in Table 6-3, "Greenhouse Gas Emissions Associated with Treatment Activity," prescribed burning would generate substantially higher GHG emissions than manual and mechanical treatments on a per-acre basis. Additionally, Table 6-3 shows that this alternative would be estimated to emit over five times the GHG emissions from the proposed program. Therefore, the cumulatively considerable contribution to climate change under Alternative D within the Basin would be significant and unavoidable, and more severe than the proposed program. However, because Alternative D would treat the same number of acres as the proposed program, its potential to reduce wildfire risk and increase carbon sequestration over the long term would be the same as the proposed program.

Hazards and Hazardous Materials

Alternative D would include similar transportation, use, storage, and disposal of fuels, oils, and lubricants as would occur with the proposed program, which could result in risks related to human exposure when applied in areas in close proximity to the public. Although more prescribed burning would occur under Alternative D than the proposed program, hazards and hazardous materials impacts from Alternative D would be similar to those of the proposed program because fewer mechanical treatments would be implemented each year. Alternative D would implement SPR HAZ-1, like the proposed program, which would minimize risks associated with the handling and use of hazardous materials. Alternative D would also comply with applicable laws, regulations, and SPRs that reduce the risk associated with the use of fuels, oils, lubricants, and other hazardous materials. Effects related to hazardous materials from Alternative D would be similar to those of the proposed program.

Hydrology and Water Quality

The effects of Alternative D on hydrology and water quality would be similar to the proposed program, but this alternative would include less mechanical treatment acreage, a greater amount of prescribed understory burning. Alternative D would treat the same number of acres as the proposed program each year, so variations in the effects on hydrology and water quality compared to the proposed program would be due entirely to changes in the percentage of the area treated by the different types of treatment activities. Lake Tahoe West model results indicate that production of fine sediment and phosphorus is slightly lower with thinning treatments compared to prescribed fire without the implementation of SPRs (Lake Tahoe West 2020). As with the proposed program, pile burning and prescribed understory burning treatment activities under Alternative D would include SPRs and CFPRs that avoid or minimize the potential to substantially degrade or alter hydrology and water quality. SPRs and CFPRs would promote low-severity prescribed burns that partially char and consume litter and small woody debris in confined areas while leaving few mineral soils exposed, reduce the potential for escaped fire, and preserve unburned vegetated islands, WLPZs, and SEZs that reduce sediment and nutrient transport from runoff originating in treatment areas. Decreases in the area of mechanical treatment activities under Alternative D would reduce the magnitude of hydrology and water quality effects from these treatment activities compared to the proposed program by reducing the soil disturbance,

soil compaction, and potential for equipment spills and leaks that could transport sediment, nutrients, or contaminants to water bodies. Increases in the area of prescribed burning activities under Alternative D would increase the potential for escaped fire or severe burns and increase sediment and nutrient transport in runoff from burned areas. Overall, the effects on hydrology and water quality under Alternative D would be similar to the proposed program with implementation of SPRs and CFPRs.

Noise and Vibration

Short-term increases in noise would be less than the proposed program, because less mechanical treatments would occur, which generate more noise than other treatment types. While Alternative D would generate less noise from mechanical treatments, it would generate more noise from prescribed burning activities than the proposed program. As with the proposed program, vegetation treatment activities implemented under Alternative D would adhere to SPRs that require consistency with local noise policies and ordinances to the extent the project is subject to them, limit vegetation treatment activities to daytime hours, ensure proper notification of nearby sensitive receptors, locate treatment activities and staging areas away from sensitive receptors to minimize noise exposure, and minimizing flights of residential areas and designated wilderness areas.

Recreation

The effects of Alternative D on recreation would be similar to the proposed program, because this alternative would treat the same number of acres per year but would include fewer manual and mechanical treatments and a greater amount of prescribed understory burning in the Planned CWPP Project areas than would occur for the proposed program. As with the proposed program, treatment activities under Alternative D would implement SPRs that avoid or minimize the disruption of recreational activities within designated recreation areas. However, because of the increased use of prescribed burning, Alternative D would have a greater nuisance effect on the quality of recreation user experiences related to adverse air quality conditions generated by smoke from the prescribed fire.

Transportation

Implementation of Alternative D would result in the same potential effects related to VMT and hazards as described for the proposed program. This alternative could potentially result in greater hazards due to smoke associated with a greater amount of prescribed burning than would occur for the proposed program. Because mechanical treatments are the most vehicle-intensive treatment methods and this alternative would include fewer mechanical treatments, this alternative would result in a reduced VMT impact. Alternative D would comply with and implement the SPRs identified for the proposed program. Implementation of Alternative D would result in transportation effects similar to those of the proposed program.

Summary

Alternative D would not reduce environmental impacts associated with any environmental resource area. This alternative would result in greater impacts related to air quality, GHG emissions and climate change, and recreation.

6.3 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an EIR identify an environmentally superior alternative, but it does not provide a definition for the term (State CEQA Guidelines Section 15126.6(e)). For the purposes of this PTEIR, the environmentally superior alternative is the alternative that would result in the fewest potentially significant impacts while achieving most of the basic program objectives to the greatest extent. Table 6-2 presents a comparison of the environmental effects of each alternative relative to the proposed program and identifies whether an alternative would avoid any significant and unavoidable impact of the proposed program.

With each alternative, there would be environmental tradeoffs; that is, impacts to certain resource areas from an alternative would increase while others would decrease relative to the proposed program. Additionally, each alternative would result in some significant and unavoidable impacts. Each alternative, except Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning, would reduce one or more impacts of the proposed program,

and all alternatives would result in greater impacts than the proposed program for some resource areas. The extent to which an alternative achieves the program objectives should also be considered when identifying the environmentally superior alternative, particularly in this PTEIR where the program objectives have been developed to achieve environmental benefits. The proposed program would achieve the objectives to the greatest degree of any alternative. The following summarizes the overall comparison of effects between the alternatives and the proposed program as well as their ability to achieve the program objectives.

Alternative A: No-Program Alternative would not achieve project objectives to restore meadow and riparian ecosystem processes and functions or to increase the pace and scale of fuel reduction projects to assist in achieving the goals of Executive Order B-52-18 and, thus, would not increase forest resiliency and reduce potential wildfire risk to the extent that could be achieved with implementation of the proposed program. Additionally, Alternative A would require project-by-project approvals by project proponents. In some cases, projects could tier from the CalVTP PEIR; however, projects outside of the SRA and commercial timber projects would still require a project-by-project review. Additionally, implementation of treatment activities under the No-Program Alternative would not result in the benefits associated with having a uniform set of SPRs like the proposed program. Alternative A would continue to implement fuel reduction treatments resulting in fewer acres treated than the proposed program. This alternative would result in reduced impacts on a number of resources associated with treatment activities (e.g., aesthetics, air quality, cultural resources, recreation). Alternative A could result in potentially more high-severity wildfires than the proposed program over the long term and, thus, under those conditions would result in greater impacts on resources such as air quality, GHG emissions and climate change, geology and soils, and hydrology and water quality.

While Alternative B would not directly result in environmental impacts because it would not propose any fuel treatment activities, it would not reduce wildfire risk or meet any of the program objectives.

Although Alternative C would limit the types of fuel treatments (i.e., would not include understory burning). Because it would expand the amount of acres treated per year, it would effectively achieve the program objectives. In fact, because Alternative C would implement fuel treatments over a greater area than the proposed program, it would likely result in a greater benefit related to reducing potential wildfire risk compared to the proposed program. An increase in the amount of acres treated compared to the proposed program could result in greater potential impacts to a number of resource areas compared to the proposed program (i.e., cultural resources, energy resources, geology and soils, hazardous materials, noise, recreation, and hydrology and water quality).

Alternative D would not achieve the program objectives as effectively as the proposed program. Although it would treat the same number of acres per year, it would limit the types of fuel reduction treatment options to primarily consist of prescribed burning and manual treatments. There may be areas where project objectives would more effectively be met through mechanical treatments. Although implementation of this alternative would result in achieving the program objectives to a similar extent as the proposed program and would replicate the effects of a natural fire regime, it would limit the flexibility for project proponents to implement fuel reduction projects. Because Alternative D would involve more prescribed understory burning than the proposed program (more than twice the amount; see Table 6-1), this alternative would result in greater impacts on air quality, GHG, climate change, and recreation than the proposed program.

In summary, the proposed program would achieve all of the basic program objectives, but would result in potentially significant impacts and require the application of mitigation to reduce some, but not all, of the significant impacts to less-than-significant levels. The alternatives, particularly Alternative C: Manual and Mechanical Treatment Focus and Alternative D: Limited Thinning Intensity and Expanded Prescribed Burning, would reduce the severity of some resource impacts and exacerbate impacts for other resources, but would also achieve the basic program objectives to the same extent as the proposed program. Of the action alternatives (Alternatives A, C, and D), Alternative A would result in the least amount of environmental effects directly caused by treatment activities while meeting most of the program objectives, with the exception of the objective to increase the pace and scale of fuel treatments. It is worthwhile to note that, as further discussed in Chapter 4, "Social and Economic Effects," increases in fuel treatments over existing conditions that would occur with implementation of the proposed program would result in an increase in the net revenue associated with implementing fuel treatments and biomass removal and would result in a decrease in costs of property damage, health effects, tourism effects, and municipal revenue from a decrease in incidence of

wildfire. In light of these tradeoffs among the alternatives and the proposed program, none of the alternatives clearly stands out as environmentally superior. Identification of the environmentally superior alternative is, therefore, not an objective choice based on quantifiable criteria, but rather, an exercise of discretion in balancing environmental priorities among potential impacts in relation to the extent to which the alternative would meet the program objectives. If the key criterion for identifying the environmentally superior alternative is avoiding significant and unavoidable impacts and priority is given to issues related to human health, Alternative A would become the environmentally superior alternative, because it would reduce air quality impacts of the proposed program related to short-term exposure of people to toxic air contaminants during prescribed burning. If the key criterion for identifying the environmentally superior alternative is achieving the environmentally-beneficial program objectives and reducing the risk of high severity wildfire, then the proposed program would be the environmental superior alternative.

6.4 ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED ANALYSIS

As described above, State CEQA Guidelines Section 15126.6(c) provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project, and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR. (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165-1167.)

In determining what alternatives should be considered in the PTEIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision-maker(s). (See Pub. Resources Code, Section 21081(a)(3).) At the time of action on the project, the decision-maker(s) may consider evidence beyond that found in this PTEIR in addressing such determinations. The decision-maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint, and may reject an alternative on that basis provided that the decision-maker(s) adopts a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence. (*City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 998.)

The EIR should also identify any alternatives that were considered by the lead agency, but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

The following alternative was considered by CAL FIRE but is not evaluated further in this PTEIR.

6.4.1 Reduced Treatment Alternative

The project team, which includes CAL FIRE, California Tahoe Conservancy, and North Tahoe Fire Protection District, considered an alternative that would result in an annual treatment acreage goal that would be an incremental increase over the acres treated within the program area under existing conditions (or the amount of acres treated under the No-Program Alternative) but would be fewer acres than treated under the proposed program. The proportion of the types of treatment methods used would be similar to those considered for the proposed program, with an increase in the use of prescribed fire compared to existing conditions. Under existing conditions, or the No-Program Alternative, an average of 503 acres are treated each year. Implementation of the proposed program would result in up to 1,250 acres treated each year. The project team determined that the incremental difference in acres treated between the Reduced Treatment Alternative and the proposed program would not result in a substantial reduction in potential impacts that could occur with implementation of the proposed program such that any significant and unavoidable impacts from the proposed program or impacts requiring mitigation would be avoided. For these reasons, the Reduced Treatment Alternative is not evaluated further in this PTEIR.