

# CALIFORNIA TAHOE CONSERVANCY FORESTRY PROGRAM GUIDELINES



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### I. INTRODUCTION

The California Tahoe Conservancy (Conservancy) Forestry Program Guidelines (Guidelines) set forth the Conservancy’s forest management goals, procedures, and best practices. The Guidelines also set forth the standards by which future forestry projects are assessed for consistency with the Tahoe Program Timberland Environmental Impact Report (PTEIR) to comply with the California Environmental Quality Act (CEQA). The Conservancy’s Guidelines apply to the Community Forestry and Landscape Forestry Programs (Forestry Program).

The PTEIR is a programmatic environmental impact report prepared and certified by the California Department of Forestry and Fire Protection (CAL FIRE) in April 2021 to comprehensively evaluate the effects of forest management and fuel reduction on private, local jurisdiction, federal, and Conservancy lands throughout the California side of the Lake Tahoe Basin (Basin). The PTEIR addresses a long-term program of forest management and fuel reduction according to the requirements of CEQA and the California Forest Practice Rules (CFPR), and allows for a more efficient environmental review and approval process for projects that are consistent with the PTEIR. The Guidelines set forth the standards for analyzing each future project and will assess whether: 1) the project is consistent with the PTEIR treatment methods; 2) the project is within the geographic limits of the PTEIR program area; 3) the environmental effects of the project were examined in the PTEIR; and 4) no new or more significant impacts are identified.

These updated Guidelines will ensure that Conservancy Forestry Program activities are informed by the Lake Tahoe Basin Forest Action Plan (Forest Action Plan), the 2020 Integrated Vulnerability Assessment of Climate Change in the Lake Tahoe Basin, and collaborative landscape goals identified for the Basin. The Guidelines are consistent with the Lake Tahoe Basin Environmental Improvement Program (EIP), the Lake Tahoe Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy, the Lake Tahoe Basin Community Wildfire Protection Plan, and the Conservancy's 2018-2023 Strategic Plan.

## II. FORESTRY PROGRAM OVERVIEW

The Conservancy's 2018-2023 Strategic Plan outlines the goals and strategies for how the Conservancy will fulfill its mission to lead California's efforts to restore and enhance the extraordinary natural and recreational resources of the Basin. The Conservancy's Forestry Program directly implements Strategic Plan Goal 1 (Steward Conservancy Lands and Protect Basin Communities from Wildfire) and Goal 2 (Restore the Resilience of Basin Forests and Watersheds).

To achieve Goal 1 of the Strategic Plan, the Forestry Program improves forest health and reduces wildfire risk on Conservancy lands. On adjacent lands, staff coordinates with fire agencies and other land managers for projects consistent with the Forest Action Plan. This complementary work enhances community wildfire protection and reduces risks to Conservancy lands. This work involves the following:

1. Thinning vegetation and using prescribed fire on Conservancy lands within neighborhoods and in the wildland-urban interface (WUI) to protect Basin communities from wildfire and improve forest health.
2. Mitigating hazard trees and other threats to public safety on Conservancy lands.
3. Coordinating with utility companies and water providers to abate hazards to infrastructure on Conservancy lands.
4. Planning, prioritizing, and coordinating vegetation thinning, prescribed fire, and capacity building work with partners of the Tahoe Fire and Fuels Team (TFFT).
5. Assisting Basin partners with forestry work that helps achieve the goals of the Forest Action Plan by providing leadership, technical expertise, and resources.

To achieve Goal 2 of the Strategic Plan, the Forestry Program convenes and collaboratively leads multiple partnerships to create efficiencies of scope and scale, and more rapidly and comprehensively

achieve resilience goals in the Basin. The Forestry Program also works to build capacity for forest management Basinwide. This work involves the following:

1. Collaboratively leading and supporting the Lake Tahoe West Restoration Partnership, a collaborative effort to restore the resilience of forests, watersheds, and communities on 59,000 acres of Lake Tahoe's west shore.
2. Collaboratively leading and supporting the Tahoe-Central Sierra Initiative, which is restoring forest resilience on approximately 2.4 million acres by strategically linking forest restoration collaboratives.
3. Applying scientific advancements, new technologies, and innovative approaches to forest restoration.
4. Surveying, inventorying, and monitoring biological and cultural resources.
5. Continuing to develop forest management standards and guidelines, protocols, and data management systems that safeguard people and the environment and create consistency and operational efficiencies.
6. Collaboratively leading and participating in select state and regional initiatives to increase the pace and scale of forest health projects, strategically use prescribed fire, expand the restoration workforce, and increase biomass utilization.

#### A. Forestry Program Goals

The forests of the Basin depend on fire and have been shaped by centuries of frequent low-to-moderate-severity wildfires. Historically, this ecological process maintained diverse conditions and reduced tree densities well below maximum capacity, thereby reducing resource competition. Forest stands in these conditions are resilient to natural and anthropogenic disturbances. However, Comstock logging impacts and fire exclusion changed forest stand conditions, causing them to become less resilient. Climate change is amplifying the severity of disturbances with record breaking drought, pest invasions, tree mortality, and high-severity wildfire. These climate-driven impacts are predicted to worsen with increased temperatures, reduced snowpack, and more extreme fire weather.

As a result, Basin forest managers are increasing the pace and scale of thinning and prescribed fire to restore the resilience of Basin forests and to provide critical ecological services such as carbon storage and sequestration, hydrological function, and conservation of biodiversity. Below are five forest health goals and correlated general strategies, which collectively will enable forests to persist under a changing climate, restore ecological processes, combat the loss of biodiversity, and protect the communities of the Basin. The Forestry Program strives to manage forests so that:

- 1. Forests are resilient to fire, drought, insect and disease outbreaks, and other impacts associated with a changing climate.** Strategies to achieve this goal include:
  - a. Move forests closer to within the range of natural variation for tree densities and increase forest structural diversity.
  - b. Facilitate the transition of overly dense mid-seral forests toward late-seral conditions. Seral refers to the progression of plant communities and forest structure, or how far along an ecosystem is in its development. The Basin is dominated by mid-seral (younger) forests. Late-seral (older) forests are less abundant in the Basin.

- c. Use management actions and natural disturbance events to create or maintain forest openings.
  - d. Facilitate reforestation after large-scale disturbance events.
- 2. Fires burn at primarily low to moderate severity and provide ecological benefits.** Strategies to achieve this goal include:
- a. Increase the use of prescribed fire to remove understory fuels and promote changes in vertical structure.
  - b. Where fire is impractical to use as a management tool, use other treatment methods such as manual or mechanical thinning to achieve desired conditions.
- 3. Terrestrial and aquatic ecosystems support an increasing abundance and diversity of native species.** Strategies to achieve this goal include:
- a. Increase and improve the acres and quality of reproductive habitat for late seral-associated species such as California spotted owl, northern goshawk, and American marten.
  - b. Restore and maintain meadows, wetlands, and riparian areas.
  - c. Improve the habitat condition and promote climate refugia for native aquatic and terrestrial wildlife species.
  - d. Maintain and improve habitat connectivity for aquatic and terrestrial species.
  - e. Reduce the spread of invasive species.
- 4. People live safely with fire and enjoy and steward the landscape.** Strategies to achieve this goal include:
- a. Strategically locate treatments to reduce the risk of high-severity fire and increase suppression effectiveness.
  - b. Remove hazardous trees that pose a threat to adjacent structures and infrastructure.
  - c. Support community engagement and outreach regarding forest management and prescribed fire.
- 5. Forest management is efficient, collaborative, and supports a strong economy.** Strategies to achieve this goal include:
- a. Build capacity to support all phases of the forest landscape management cycle, including planning, permitting, field preparation, implementation, restoration byproduct utilization, and monitoring.
  - b. Continue engaging with the Washoe Tribe of Nevada and California and tribal members in stewardship, including the application of tribal traditional knowledge and practices.
  - c. Support the expansion of the restoration workforce to provide local employment opportunities while promoting healthy and resilient forested landscapes.

### III. PROJECT DEVELOPMENT

Forestry Program staff manages forests on Conservancy and partner lands by directly implementing forest health treatments. Program staff further mitigates hazards including removal of hazard trees to protect infrastructure such as powerlines.

The Conservancy supports capacity building and provides grants or subgrants to Basin partners to implement projects on partners' (non-Conservancy) lands. The most-recently adopted Conservancy Grant Guidelines identify the Conservancy's grant funding priorities, and the considerations the Conservancy will use to evaluate whether to fund specific activities. Individual funding sources may identify additional requirements and considerations. Program staff also provides technical assistance to partners such as Registered Professional Forester support.

Project development generally includes four elements: 1) project design, where the need is identified and the scope of a project is established; 2) environmental review, where CEQA requirements are completed; 3) approval, where required internal and Board approvals are obtained; and 4) implementation and monitoring, where the work is completed and monitored for effectiveness.

#### A. Community Notification

For all forestry projects, staff endeavors to respond to all public inquiries, and if requested, will meet on site when feasible, to discuss the project in greater detail with the requesting party.

Prior to implementing prescribed burning activities, staff provides notice to Lake Tahoe media sources, including burning location and estimated smoke duration. Staff also distributes informational material related to prescribed burning and smoke exposure to the public upon request.

Prior to implementing forestry projects greater than three acres in size, staff notifies adjacent property owners. The notification describes the proposed project area, summarizes the type of treatment (e.g., mechanical, hand, pile/burn, etc.), and provides instructions for contacting Conservancy staff.

These community notification procedures generally do not apply to the removal of hazard trees.

#### B. Project Effectiveness Monitoring

Forest and biological monitoring reveal the short- and long-term effects of various forest management techniques and how effectively a project met its objectives, program targets, and grant goals. It also enables managers to adaptively manage by modifying prescriptions or techniques to best meet a project's goals. At a minimum, Conservancy staff will monitor projects by collecting the following data before and after implementation:

- Plot center established and GPS location recorded
- Aspect
- Basal area
- Species proportion and canopy position (i.e., dominant, co-dominant, intermediate, suppressed)
- Overall health (including insect, disease, and structural defects)
- Canopy cover
- Understory brush/vegetation cover percentage
- Site index (on approximately 10 percent of plots)

Conservancy staff may also undertake biological monitoring to help inform forestry treatments by identifying areas occupied by sensitive species, informing treatment prescriptions and limited operating periods, and gauging project effectiveness in meeting biodiversity objectives.

Other forms of monitoring will occur as necessary to comply with environmental and regulatory requirements, to comply with grantor requirements, or to meet the needs of multi-agency collaboratives such as the Lake Tahoe West Restoration Partnership or the Greater Upper Truckee River Watershed Partnership.

## IV. FORESTRY BEST PRACTICES

The following sections set forth the Conservancy's best practices for forestry prescriptions, treatment methods, and water quality practices.

### A. Environmental Setting

The Basin is a unique environmental setting that requires tailored best practices, prescriptions, and treatment methods. The 501-square-mile Lake Tahoe Basin spans spectacular waters, mountains, and forests, along with five counties, 20 communities and one incorporated city. The Basin is bounded by the Sierra Nevada crest on the west and the Carson Range on the east.

The Conservancy currently owns and manages nearly 4,700 parcels of land, totaling around 6,500 acres, of which 5,500 acres are forested. About 210 acres are meadow, 930 acres are riparian trees or vegetation, and 580 acres consist of various shrub species, including flammable chaparral species. Parcel sizes range from as small as 0.0036 acres (156 square feet) to 548 acres. 4,200 of these parcels are under one acre in size; however, many parcels adjoin each other creating contiguous units as large as 987 acres. These parcels span the California side of the Basin.

The majority of Conservancy lands, 5,500 acres (86 percent), are located within the WUI—forested areas within and adjacent to developed communities. The WUI is divided into defense and threat zones. The WUI defense zone is the area that includes developed communities and extends into the wildland for at least 0.25 mile. This zone is where more intensive vegetation management is needed to protect abutting and nearby communities and includes 4,121 acres of Conservancy land. The WUI threat zone consists of those wildland areas outside of the WUI defense zone where it may be desirable to reduce the vertical and horizontal continuity of vegetation to modify wildland fire behavior to protect adjacent communities. 1,414 acres of Conservancy lands are located in the threat zone.

The Basin has a high diversity of plant and wildlife species. As of 2021, there are currently 27 sensitive plants that have the potential to occur on Conservancy lands (Appendix A). Sixteen special-status wildlife species are known or assumed to occur on Conservancy lands. A further 15 species are listed by the Tahoe Regional Planning Agency (TRPA) and the USDA Forest Service, Lake Tahoe Basin Management Unit (LTBMU) as special-interest wildlife species, management indicator species, or sensitive species. All waterfowl species and aquatic macroinvertebrates are also special interest or management indicator species (Appendix B).

The Basin has a rich cultural heritage and is the present and ancestral home for the Washoe Tribe of Nevada and California. Tahoe was also a thriving hub of commerce between the silver mines of Virginia City and the Central Pacific Railroad near Truckee. As a result, the Basin contains cultural resources

including districts, sites, building, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Conservancy lands have known and potentially unidentified historic and pre-historic cultural sites and artifacts.

### C. Residual Densities

Residual densities refer to the density of trees and other vegetation that intentionally remain after completing a treatment. To meet forest health goals, Conservancy parcels often require thinning to reduce stocking levels and achieve diameter distribution objectives to more resilient and sustainable levels. Thinning operations, which include initial treatments and re-treatments, use a prescription in which small trees are removed to allow larger, healthier trees room to grow, reducing competition for limited water and nutrients. Larger trees may also be removed on a limited basis to meet the project objectives such as in the creation of openings, reduction of conifer encroachment in meadows or riparian areas, or to achieve species composition goals.

Residual densities will be variable taking into consideration factors such as the forest type and site capacity characteristics, such as water table, aspect, topographic position, and soil type. Stocking densities based on historical stand conditions and fire-dependent reference stands with intact fire regimes have large ranges. Basal area densities for resilient forests range from 0-492 ft<sup>2</sup>/acre with a median of 150 ft<sup>2</sup>/acre. Tree density range is 2.5-130 trees/acre, median 43 trees/acre. Xeric sites and ridgelines have lower basal areas and tree densities, smaller tree clumps, more open space and are dominated by large pines and cedar. Mesic sites, north slopes, and canyons will have higher basal areas and tree densities, greater canopy cover, with increased dominance of fir.

Residual densities will also vary based on project objectives. Projects closer to communities and infrastructure will be prioritized for treatment and will have a greater focus on fire protection with lower tree densities, fewer snags, and greatly reduced vertical and horizontal continuity of fuels. Projects farther from communities will have a greater focus on forest health and wildlife habitat while still reducing fuels in target areas where fires are known to start or where a fire start is likely to grow and threaten communities. However, all projects can be designed to meet multiple goals and restore heterogeneous conditions at the stand and landscape scale.

Finally, residual densities are also dependent on the type of treatment used for thinning (manual or mechanical) given the limitations of tree removal with manual thinning crews. As the desired condition for stocking levels is approached, sustainability can be accomplished through limited thinning and reintroduction of fire, or both. In limited circumstances, prescribed fire can be used as an initial treatment when fuel loading and conditions allow.

### D. Prescriptions

Forestry prescriptions provide planned targets for project managers to change current stand structure or conditions to meet management goals. These prescriptions are consistent with the PTEIR and the California Forest Practice Rules, and will be incorporated into project design, as applicable. Prescriptions are arranged into general prescriptions which apply to most projects, and special prescriptions which address unique locations or ecosystem types.



These prescriptions generally do not apply to hazard trees, which pose a threat to adjacent people, property, or infrastructure. Typically, hazard trees are identified as part of the hazard tree inspection program or when a concerned neighbor notifies staff. If the hazard trees are identified during a fuel reduction inspection, then the project manager will coordinate with the hazard tree inspector to assure the hazard trees are addressed. Hazard tree risk analysis is conducted by a certified hazard tree inspector or registered professional forester. Most hazard trees are mitigated by removal, however some hazard trees may be mitigated by limbing or topping the tree.

All forested environments provide wildlife habitat, and projects will be designed to meet multiple goals which include maintaining or improving habitat and diversity. Many of the prescriptions below are designed to maintain or improve habitat. Furthermore, the Conservancy's biological procedures provide additional guidance for completing biological reviews and surveys, and incorporating habitat enhancement and protection into project designs.

## 1. General Prescriptions

1. Thinning will improve tree species composition with a shift to fewer shade-tolerant trees and increased fire adapted/resistant trees, while maintaining overall species diversity.
2. Prefer the retention of sugar pine, Jeffrey pine, and incense cedar at low- to mid-elevations.
3. Prefer the retention of Whitebark pine, Jeffrey pine, western white pine, incense cedar, and red fir at higher elevations.
4. Retain late seral and old growth candidate trees.
5. Remove small trees which live in the understory and larger trees as necessary to allow larger, healthier trees room to grow.
6. In uniform stands dominated by a single species or trees with similar diameter structure, create forest openings to allow new tree growth, forest structure diversity, and age diversity favoring shade-intolerant species such as Jeffrey pine.
7. Separate tree canopies from chaparral plant communities.
8. Retain clumps of dense understory vegetation and pockets of coarse woody debris.
9. Retain two-to-eight of the largest non-hazardous snags per acre, all snags greater than 30" diameter at breast height (DBH) and all those greater than 24" DBH in decay Class 6 or higher unless the snags are a hazard or so numerous as to pose an unacceptable fire risk.
10. Retain snags in various stages of decay, from multiple species, and with cracks or split tops.
11. Snags should be well distributed across the landscape, including along forest edges, in openings, in drainages and along ridgelines.
12. Retain at least two to six of the largest logs per acre in decay Classes 1-3 (meaning newly fallen to limbless).
13. Coarse woody debris may be created by leaving the boles of cut trees.
14. Promote use of prescribed fire as either the primary or secondary restoration tool where feasible.

## 2. Special Prescriptions

### a. Residential Areas

Treatments in and near residential areas typically require special prescriptions because of fragmented land ownership and proximity to homes.

1. Treatments in open-space lots in residential areas will have a greater focus on removing understory and ladder fuels for community wildfire protection.
2. Typically, treat areas near communities to lower residual basal area and tree density.
3. Where feasible, maintain adequate canopy shading to suppress highly flammable shrub species.
4. Reduce contiguous shrub stands by up to 80 percent, retaining discontinuous patches of diverse shrub species.
5. Attempt to retain some privacy screening if it does not conflict with project goals.

*b. Wetlands, Meadows, and Riparian Areas*

Wet areas such as wetlands, meadows, and riparian areas provide critical habitat and are threatened by drying conditions and conifer encroachment. Special prescriptions are generally needed in these areas to retain and restore the wet conditions that supports these systems.

1. Identify boundaries of riparian habitat through characteristics such as soil type (e.g., changes from heavy clay soil to silt soil) and indicator species (e.g., presence of meadow grasses and sedges, willow, and alder).
2. Prioritize wetlands, meadows, and riparian areas with a high density of conifer encroachment for treatment.
3. Maintain and improve the connectivity of native riparian vegetation so that these areas may act as corridors that support unobstructed movement by wildlife species, especially terrestrial-based species, during dry, summer periods.
4. Retain all non-hazardous snags greater than 16" DBH and all snags of riparian species unless such snags are a hazard or are so numerous as to pose an unacceptable fire risk.
5. Retain snags along forest edges.
6. Retain all logs greater than 16" DBH and 20 feet long, unless so numerous as to pose an unacceptable fire risk or interfere significantly with riparian vegetation.
7. Retain some conifer trees for large woody debris recruitment.
8. Retain adequate riparian vegetation to maintain stream shading.

*c. Red Fir and Subalpine Forests*

Red fir and subalpine forests occur at high elevations and occupy cool sites with substantial and prolonged winter snow. As such, these forests and the species they support are potentially the most threatened by a warming climate. These areas typically require special prescriptions to retain high elevation characteristics and build resilience to anticipated change.

1. Prefer prescribed fire and manual thinning treatments to lessen impacts to soils and understory vegetation.
2. Reduce the density of small-diameter trees.
3. Retain western white pine and whitebark pine, thinning only as necessary to increase survival for retained individuals.
4. Generally retain an overstory canopy cover of 35 percent or greater, and a basal area of approximately 250 ft<sup>2</sup>/acre
5. Maintain/restore heterogeneous conditions with complex multistory canopy, clumps, and gaps.

#### *d. Late-Seral Habitat*

Late-seral, or old growth, forests have been greatly reduced in the Basin and Sierra-wide, and provide critical habitat for many sensitive species in decline. Special prescriptions are usually needed in these forest types to retain or improve habitat conditions and forest health.

1. Generally retain high overstory canopy cover (>50 percent) dominated by tall and large trees.
2. Thin select trees to accentuate growing space for clumps of large-diameter trees.
3. Retain pockets of shrubs and saplings.
4. Increase horizontal and vertical complexity in forest structure.
5. Generally retain trees with complex structure.
6. Retain snags and large downed wood in a variety of decay classes at the higher range of densities than listed under general prescriptions above.
7. In suitable habitat for late-seral dependent species such as Pacific marten, retain dense cover areas (DCA) to provide subnivean habitat. DCAs are areas of high understory cover where large amounts of downed woody debris are left in complex arrangements with some logs elevated above ground. DCAs will generally range from 0.1 -0.5 acre and are retained as corridors.
8. Where more snags are needed to provide wildlife habitat, recruit snags to meet desired densities by girdling or topping live trees.

#### *E. Post Fire Response*

In the event wildfire impacts Conservancy lands, a rapid assessment will be conducted by an interdisciplinary team comprised of staff from community forestry, landscape forestry, watershed, and urban land management. The team will assess the level of impact from the wildfire to the affected properties and will develop a management and monitoring plan. The plan will include erosion control, infrastructure needs, and forest restoration, if required. For low-to-moderate severity burns, immediate forest restoration may not be required, as fire is a natural ecosystem process that maintains the forest structure, composition, and resilience, and may be a restorative process. For high severity wildfires, there is a potential failure of conifer forests to regenerate. For these events, restoration may include planting appropriately sourced native trees and frequent management to thin around saplings and control invasive species.

Where vegetative cover has been burned off, erosion is a major concern. Therefore, ongoing, carefully planned restoration efforts should be included in the management and monitoring plan. As much as possible, management will minimize foot traffic, equipment, and disturbance on burned landscapes. Activity on slopes will increase the likelihood of erosion by weakening soil bonds, dislodging soil particles, and trampling newly sprouted plants. Landscape-scale salvage logging will not be implemented except to remove hazard trees or to advance forest succession (the process by which species recover and regenerate after a disturbance). Hazard trees will be identified by Conservancy's certified hazard tree assessor. Trees with significant scorch to bark and needles may recover, but in some cases, it may take years to know if a tree will survive. To assess mortality, multi-year monitoring will also be incorporated into the management and monitoring plan.

## F. Treatment Methods

The following are descriptions of the methods that will be used for projects implemented by Conservancy staff. Staff will identify the appropriate treatment method to achieve the above prescriptions. These methods are consistent with the PTEIR and California Forest Practice Rules. The method type chosen for a particular project will be determined by multiple factors including current stand condition, access, location, and sensitivity of resources.

### 1. Mechanical Treatments

With mechanical treatments, a forestry contractor or Licensed Timber Operator (LTO) would implement silvicultural prescriptions with ground-based mechanical equipment. Maintenance or improvement of roads and stream crossings may be required for equipment access. Mechanical treatments within a project area typically employ cut-to-length methods, whole-tree-yarding methods, or a combination of methods, defined below.

#### *a. Equipment*

Equipment that could be used for mechanical treatments include chain saws, harvesters, forwarders, skid steers, excavators, dozers, loaders, tow chippers, track chippers, masticators, feller/bunchers, and rubber-tired skidders. The duration and rate of these treatments vary depending on the size of the treatment area, terrain, and the vegetation being treated. Mechanical treatment of forested lands by a single treatment crew progresses at an average rate of approximately 5 acres per day. Harvesting or cutting machines can move through 5-10 acres per day depending on cutting prescription and setting (e.g., slope, tree density, tree size, etc.). After the initial disturbance of cutting, log forwarding and biomass removal could continue to occur in the area. Mechanical treatments are generally limited to the grading season (May 1 – October 15) in the Basin, however mechanical treatments could occur over snow or on frozen ground.

#### *b. Cut-to-Length Treatments*

In cut-to-length operations, a harvester would fell, limb, and buck the tree into logs directly at the stump. Through this process, the tree limbs and slash are scattered on forwarder trails or spread throughout the treatment area creating a “slash mat,” which protects the forest floor and reduces erosion and soil compaction. A forwarder would then collect the logs and bring them to the landing area, driving over this slash mat where feasible. The harvester and forwarder used in cut-to-length systems are low ground pressure machines with larger rubber tires or tracks.

#### *c. Whole-Tree Yarding*

In whole-tree yarding the entire tree would be cut and removed to the landing for processing. The feller/buncher cuts and bunches a group of trees and leaves them on a skid trail where they are retrieved by a skidder. The skidder pulls the group of trees back to the landing where they are processed and cut to market length. Whole-tree yarding is a desired mechanical treatment for upland forest areas.

Whole-tree yarding can also involve cable yarding to move material to a landing area. Cable yarding is a yarding method used to retrieve cut material from the treatment site either partially or fully suspended in the air. This system requires a yarder that uses a system of cables to pull or fly logs from the stump to the landing. Aerial yarding, which entails lifting cut vegetation from the treatment site with a helicopter or balloon, would not typically occur, although it could be used in limited circumstances in inaccessible locations.

#### *d. Grinding and Mulching*

Mechanical treatments can also involve grinding and mulching forest material instead of, or in addition to, cut-to-length or whole tree yarding methods. Mechanical mastication is a method of rearranging fuels to reduce vertical and horizontal fuel continuity. With this method, vegetation targeted for treatment would not be removed from the site, but instead masticated into smaller pieces that would be spread throughout the site. Masticators are often excavator chassis machines with a specialized grinding head attached. These machines move through the unit to masticate brush, shrubs, down woody debris concentrations, and suppressed and intermediate trees. The targeted vegetation is masticated in place, with resulting material broadcast upon the site to an average depth of 2 to 4 inches, depending on the height and density of material treated.

#### 2. Manual Treatments

In manual treatment (hand thinning) operations, a crew would fell trees using chainsaws and limb the logs onsite. Crews would target removal of understory vegetation (e.g., lower-age-class trees and shrubs). Through this process, the logs, tree limbs, and slash are piled into burn piles or chipped and removed or broadcast on site. Trees up to 14" dbh are typically removed during manual treatments as larger trees are increasingly difficult to cut, pile, and burn with manual crews. However, larger trees may be felled and left onsite as large woody debris. Manual treatments can also be combined with whole tree yarding where the topography allows. Where yarding is incorporated, manual crews will not be limited to the size and amount of material cut. Chippers may also be used to assist with manual treatments. Crews can typically treat 1 acre per day, although the rate of treatment varies depending on existing vegetation, terrain, silvicultural prescription, crew size, and other factors.

#### 3. Prescribed Burning

During prescribed burning, crews intentionally ignite fires under controlled conditions to achieve management objectives through pile burning and understory burning techniques. Pile burning is the ignition of slash piles created during manual thins. Pile size varies depending on surrounding vegetation. Pile burning is typically limited to the fall through spring months (October through May). Understory burning is low-intensity prescribed fire that takes place on the ground (the understory). Understory burning uses a controlled application of fire to remove excess vegetation under specific environmental conditions that allow fire to be confined to a predetermined area. Understory burning typically occurs in the fall (September through October), depending on weather conditions. Both forms of prescribed burning would be conducted in accordance with an approved burn plan and smoke management planning requirements established by the applicable air quality districts and TRPA, where applicable.

#### 4. Forest Biomass

Forest biomass (i.e., logs, limbs, tops, and understory vegetation) removed during treatments would be disposed in the following ways:

1. **Sawlogs:** An LTO would conduct a forest treatment and remove merchantable timber as sawlogs. Sawlogs would be hauled to a sawmill to be processed into lumber.
2. **Biomass Energy Generation:** Biomass would be chipped and loaded into chip vans or trucks, which would haul material to an off-site biomass energy generation facility.

3. **Firewood:** Logs and branches would be cut to manageable lengths and left near roads or access points. The Conservancy offers fuel wood permits to members of the public who would haul it off site for use as firewood.
4. **Onsite Decomposition:** Where it is consistent with project-specific, post-treatment fire behavior goals, some biomass would be left onsite as ground cover to eventually decompose. Onsite decomposition could occur through mastication, lop and scatter (where limbs are left on the forest floor), and onsite chipping (where chipped material is spread on the forest floor). The amount of biomass left onsite for decomposition would typically not exceed 10 tons per acre and would be consistent with post-treatment fire behavior goals. Onsite decomposition would primarily be used where it is infeasible to remove fuels from the site and for treatments where understory burning is not appropriate.
5. **Other Forest Products:** Biomass could be sold or used for other purposes, such as chipping and the use of chipped material for mulch or soil amendments. Also, state programs are defining and evaluating other feasible uses of forest biomass, such as timber for buildings.
6. **Prescribed Burning:** As described above.

## V. PTEIR PROJECT CONSISTENCY REVIEW

### A. Overview

The PTEIR is a programmatic CEQA document prepared by CAL FIRE, as lead agency, according to the requirements of CEQA (Public Resources Code [PRC] Section 21000 et seq.), CEQA Guidelines (California Code of Regulations [CCR], Title 14, Section 15000 et seq. [14 CCR Section 15000 et seq.]), the Z'berg-Nejedly Forest Practice Act (FPA) (PRC Section 4511 et seq.), and the CFPR (14 CCR Section 1092.01). The PTEIR details forest management and fuel reduction activities and associated environmental protections to reduce wildfire risks to communities and improve forest health through vegetation management activities in approximately 17,480 acres of the California side of the Basin.

As a programmatic document, the PTEIR does not authorize any specific project. Instead, the PTEIR may be used by the lead and responsible agencies, including the Conservancy, to inform decisions to approve or implement future forest treatment projects. All future projects undertaken pursuant to the Guidelines will be analyzed for consistency with the PTEIR. If a project is determined to be inconsistent with the PTEIR, it will be subject to additional environmental review.

Below, the Guidelines provide standards and a framework for ensuring future projects are consistent with the PTEIR, including the treatment methods, location, and impacts of activities on multiple resources.

Once specific future projects are developed pursuant to these Guidelines, staff will assess each project using the PTEIR Project Consistency Checklist (Section V.E, below) to ensure that it is within the PTEIR's geographic location, that the appropriate treatment methods have been selected, and that no new or more significant impacts will occur beyond those analyzed in the PTEIR. This will ensure that each future project is either consistent with the PTEIR or subject to additional CEQA review.

### B. PTEIR Treatment Methods

The Guidelines includes numerous forest treatment activities to reduce the risk of wildfire including mechanical thinning, manual/hand thinning, prescribed understory burning, pile burning, and the

transport of biomass. Each of these treatment methods are described above in detail and are consistent with the type and methodology of the treatments analyzed in the PTEIR.

### C. PTEIR Geographic Area

Under the PTEIR, projects may be located on certain private, local jurisdiction, federal, and Conservancy lands both in the WUI and select contiguous areas of forest outside of the WUI throughout the California side of the Basin. Projects may be implemented within an area that covers approximately 17,480 acres in the City of South Lake Tahoe and in unincorporated areas of El Dorado and Placer Counties.

Of the approximate 17,480 acres, approximately 5,850 acres include smaller-acreage parcels that are publicly or privately owned and are generally located within the WUI intermix. These areas include developed parcels and undeveloped urban lots within and surrounding developed neighborhoods. The remaining 11,640 acres of land consist primarily of larger-acreage parcels of public land identified for fuel reduction in the Lake Tahoe Basin Community Wildfire Protection Plan. These areas include undeveloped open space within and near developed communities and encompassing portions of the WUI defense zone and WUI threat zone. Approximately 1,315 acres are located outside of the WUI. See Attachment C for maps of the covered area.

### D. Environmental Impact on Resource Areas

This section draws the connection between the Forestry Program's treatment activities (as described above) and how they are implemented to be consistent with the PTEIR. For each resource, the treatment activity affecting that resource is identified, the associated impacts are discussed, and the relevant Standard Project Requirements (SPRs) and Mitigation Measures are identified. Within each resource, this analysis is organized by the type of impact because different treatment activities, SPRs, and Mitigation Measures will be applicable to different impacts. For ease of analysis and cross-reference with the PTEIR, the impacts, SPRs, and Mitigation Measures will use the naming and numbering conventions in the PTEIR. See Attachment B for an overview of all SPRs and Attachment C for the Mitigation and Monitoring Reporting Plan.

#### 1. Aesthetics

The analysis on aesthetics impacts broadly evaluates the potential for any forestry treatment implemented through the program to affect scenic resources. Generally, mechanical thinning, manual thinning, and prescribed fire may impact views due to the presence of people and equipment, temporary smoke, and the reduction of trees.

##### *a. Impact 3.3-1: Have a Substantial Adverse Effect on Scenic Views from Recreation Areas*

Recreation sites containing scenic vistas are scattered throughout the program area and include trails, beaches, campgrounds, and parks. There may be short-term aesthetic impacts during implementation of manual thinning, mechanical thinning, and prescribed fire because forestry equipment, materials, and smoke could be visible from scenic vistas at recreation sites.

However, these visible signs of forestry activities will be temporary and distributed throughout the program area and limited by compliance with SPR AES-2, which avoids staging of equipment within viewsheds. The program will ultimately result in the presence of fewer trees within the treatment area. This may increase viewing distances in treated areas, bringing greater visibility to distant objects or structures. Recreation sites with filtered views toward peaks and Lake Tahoe or toward existing



development may experience increased visibility of distant features, however views will remain consistent with the surrounding environments and will appear similar to existing conditions. Therefore, there will not be a substantial impact on scenic views from recreation sites.

*b. Impact 3.3-2: Have a Substantial Adverse Effect on Scenic Views from Lake Tahoe*

Manual thinning, mechanical thinning, and prescribed fire will result in the presence of fewer trees and less dense forests within the program area. This may increase viewing distances in treated areas, bringing greater visibility to distant objects or structures. Treatments located near the most visually sensitive portions of the shoreline may potentially remove vegetation that screens structures or other human-made features that would otherwise be visible from Lake Tahoe, resulting in the degradation of the quality of scenic views from Lake Tahoe. This is a potentially significant impact.

With implementation of Mitigation Measure 3.3-2, treatment activities will retain screening of existing structures and infrastructure in Visually Sensitive and Natural Dominated Shorelines to the extent feasible, which will reduce this impact to a less than significant level.

*c. Impact 3.3-3: Have a Substantial Adverse Effect on Views from Scenic Roadways*

Manual thinning, mechanical thinning, and prescribed fire will result in the presence of fewer trees and less dense vegetation within the program area. This may increase viewing distances in treated areas, bringing greater visibility to distant objects or structures. Treatments located near scenic roadways in rural areas may potentially remove vegetation that screens development resulting in greater visibility of structures and the degradation of the scenic quality. This is a potentially significant impact.

With implementation of Mitigation Measure 3.3-3, treatments will retain screening of existing structures along the most visually sensitive roadway segments. This will reduce the impact to a less than significant level.

*d. Impact 3.3-4: Substantially Degrade the Existing Visual Character or Quality of Public Views of the Site and its Surroundings*

The presence of equipment and crews or project related disturbance may create short-term impacts to visual character and quality, however these visible signs of project activities will be temporary and distributed throughout the program area. Ultimately, treatment activities implemented through the program will reduce fuel loads in treatment sites and may increase viewing distances. However, the changes in vegetation density will be typical of natural forested landscapes and will not constitute an adverse change. For these reasons, implementation of the program will result in a less than significant impact on the visual character or quality of public view of treatment sites and surrounding areas.

## 2. Agriculture/Forestry

The analysis of environmental impacts on forestry resources focuses on the potential for conversion of forest land to non-forest uses, and potential conflicts with policies or regulations intended to protect forest land. Mechanical thinning, manual thinning, and prescribed fire will not cause any conversion from forested to non-forested land.

*a. Impact 3.4-1: Potential to Result in the Loss of Forest Land or Conversion of Forest Land to a Non-Forest Use*

Manual thinning, mechanical thinning, and prescribed fire will retain sufficient vegetation within treatment areas to prevent loss of forest land. Although treatment activities will alter forest land



through vegetation removal, the treatment areas will generally support more than 10 percent of native tree cover thereby maintaining consistency with the definition of forest land as defined by PRC Section 12220(g). Additionally, project implementers will be required to obtain tree removal permits from the TRPA and comply with the minimum average residual basal area requirements of PRC Section 952.7(b) to maintain postharvest conifer stocking levels and achieve maximum sustained production. Treatment activities under the Guidelines will not result in the loss of forest land or conversion of forest land to a non-forest use. This impact is less than significant.

### 3. Air quality

The air quality analysis focuses on the potential for forestry treatments to result in substantial emissions of air pollutants that may affect regional and/or localized air quality such that human health may be adversely affected. Mechanical thinning, manual thinning, and prescribed fire may impact air quality through vehicle, equipment, and smoke emissions.

#### *a. Impact 3.5-1: Potential to Generate Emissions that Would Contribute to an Exceedance of CAAQS or NAAQS in the LTAB*

Emissions of criteria air pollutants and precursors generated by manual thinning, mechanical thinning, prescribed fire treatments, as well as associated vehicle and equipment use, will likely exceed mass emission thresholds established by the Placer County Air Pollution Control District (PCAPCD) and El Dorado County Air Quality Management District (EDCAQMD), and therefore result in, or contribute to, ambient concentrations in the Lake Tahoe Air Basin (LTAB) that exceed the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS). These exceedances may result in adverse health effects to receptors and conflict with air quality planning efforts in the Basin. This would be a significant impact.

With implementation of Mitigation Measures 3.5-1a and 3.5-1b, vehicle and equipment exhaust will be reduced, and project implementers will pursue alternatives to pile burning when feasible. While implementation of these mitigation measures will reduce emissions and the resultant exposures that may potentially contribute to adverse health effects, the amount of the reduction cannot be determined; therefore, the potential remains that emissions generated by treatment activities will exceed PCAPCD- and EDCAQMD-established mass emission thresholds and, thus, result in, or contribute to, ambient concentrations in the LTAB that exceed the NAAQS and CAAQS. Moreover, the potential remains for these emissions to result in adverse health effects to receptors and conflict with air quality planning efforts in the Basin. Therefore, this impact is significant and unavoidable, consistent with the significant and unavoidable impacts analyzed in the PTEIR.

#### *b. Impact 3.5-2: Potential to Expose Sensitive Receptors to Substantial Concentrations of Criteria Air Pollutants*

Manual thinning, mechanical thinning, prescribed fire treatments, and associated vehicle and equipment use could expose sensitive receptors to criteria air pollutants. Adherence to a smoke management plan (SPR-AQ-2), burn plan (SPR AQ-3), and standards for minimizing fugitive dust (SPR AQ-4) would prevent exposing off-site sensitive receptors to substantial localized concentrations of criteria air pollutants and associated adverse health effects. This impact is less than significant.

*c. Impact 3.5-3: Potential to Expose People to Diesel Particulate Matter Emissions and Related Health Risk*

Because of the short duration of forestry treatments and because these activities will not take place near a single group of people for an extended period. Diesel particulate matter generated by manual thinning, mechanical thinning, and prescribed fire will not expose any person to an incremental increase in cancer risk greater than ten in one million or a Hazard Index of 1.0 or greater. This impact is less than significant.

*d. Impact 3.5-4: Potential to Expose People to Toxic Air Contaminants Emitted by Prescribed Burns and Related Health Risk*

Smoke from prescribed burning generates small concentrations of toxic air contaminants. The release of these contaminants is reduced by multiple SPRs, including SPR AQ-2 which requires adherence to a smoke management plan. Smoke emitted by the increase in prescribed burn activity under the program will not result in the short- or long-term exposure of residential areas or other places where people spend time to levels of acute or chronic, noncarcinogenic risk that exceeds a Hazard Index greater than 1.0 or to an incremental increase in cancer risk that exceeds ten in one million. This impact is less than significant.

*e. Impact 3.5-5: Expose People to Objectionable Odors from Diesel Exhaust*

Diesel-powered equipment during forestry treatments would result in temporary emissions of odorous diesel exhaust. The program will not introduce any new permanent sources of odors to the program area or any new locations where people spend time that may be exposed to existing odor sources. Diesel exhaust emissions will be temporary, will not be generated at any one location for an extended period, and will dissipate rapidly from the source with an increase in distance. Furthermore, SPR HAZ-1 requires that all diesel and gasoline-powered equipment be properly maintained to comply with all state and federal emissions requirements, which will prevent the occurrence of higher emissions of diesel exhaust because of poorly functioning equipment. Accordingly, treatment activities will not create objectionable odors affecting a substantial number of people. This impact is less than significant.

*f. Impact 3.5-6: Expose People to Objectionable Odors from Smoke During Prescribed Burning*

Prescribed burns and pile burning conducted under the program may result in temporary odorous smoke emissions, which may be perceived as objectionable depending on the frequency and intensity of the resultant smoke, wind speed and direction, and the proximity and sensitivity of exposed individuals. However, adherence to SPR AQ-1 and SPR AQ-2, which require prescribed burning to be conducted in accordance with PCAPCD and EDCAQMD regulations regarding open burning and in accordance with a smoke management plan, would ensure the exposure would be minimized. This impact is less than significant.

*g. Impact 3.5-7: Stationary-Source Emissions from a Biomass Energy Generation Facility*

Some product from forestry treatments may be hauled to biomass energy generation facilities. Combustion or gasification of biomass will generate emissions of criteria air pollutants and precursors. However, because emissions from energy generation facilities will be nominal under the program, and because these stationary sources are subject to mandatory and enforceable emission limits set forth in permits administered by the air district these emissions will not result in, or contribute to, ambient concentrations that exceed the NAAQS and CAAQS. This impact is less than significant.

#### 4. Biological Resources

The analysis on biological resource impacts evaluates the potential impacts of manual thinning, mechanical thinning, and prescribed fire on biological resources; the types, extent, and quality of biological resources that may be directly or indirectly affected; and any policies and programs related to the protection of biological resources. Generally, mechanical thinning, manual thinning, and prescribed fire may impact biological resources through habitat modification or disturbance of reproducing species.

##### *a. Impact 3.6-1: Potential to Substantially Affect Special-Status Plant Species Either Directly or Through Habitat Modifications*

Manual thinning, mechanical thinning, and prescribed fire may result in direct removal or destruction, indirect death, or reduced vigor of special-status plants through habitat modifications. Implementation of SPRs BIO-1, BIO-2, BIO-6, and BIO-7 requires special-status plants to be identified prior to treatment activities, Worker Environmental Awareness Program (WEAP) training for workers, and actions to prevent the spread of invasive plants that may threaten special-status plant populations. While SPRs will minimize impacts, forestry treatments may inadvertently damage or destroy special-status plants. Forestry treatments may also adversely modify the habitat of special-status plants, resulting in reduced growth and reproduction or death, potentially leading to the loss of that species' occurrences. This would be a potentially significant impact.

Implementing Mitigation Measures 3.6-1a and 3.6-1b will reduce potentially significant impacts on special-status plants by requiring avoidance of special-status plant occurrences, with physical buffers or seasonal restrictions, and compensation for unavoidable losses of special-status plants. With implementation of these mitigations, impacts will be less than significant.

##### *b. Impact 3.6-2: Substantially Affect Special-Status Wildlife Species Either Directly or Through Habitat Modifications*

Manual thinning, mechanical thinning, and prescribed fire may result in direct or indirect adverse effects to special-status wildlife species. SPRs require pre-treatment surveys to identify special-status wildlife and habitats and avoidance and protection of certain sensitive habitats. While implementation of SPRs will minimize impacts, later treatment activities may still remove vegetation and disturb the ground surface, which may result in the disturbance to or loss of individuals, reduced breeding productivity of affected species, or loss of habitat function. The loss of special-status wildlife species and habitat function would be a potentially significant impact.

Mitigation Measures 3.6-2a, 3.6-2b, and 3.6-2c will reduce potential impacts on special-status wildlife species by requiring avoidance and protection of these species from injury, mortality, and other disturbance; maintenance of habitat function through retention of important habitat features such that there will be no substantial long-term loss or degradation of habitat; and compensation for impacts if these impacts cannot be avoided. Implementing these mitigation measures will reduce impacts to special-status wildlife species such that no populations of these species will be reduced below self-sustaining levels. Treatments will not contribute to a trend toward a species not already listed becoming listed as threatened or endangered, or substantially reduce the number or restrict the range of a species that is already listed as endangered, rare, or threatened. Additionally, the TRPA's non-degradation standard for wildlife disturbance zones will be maintained. Impacts will be reduced to less than significant.

*c. Impact 3.6-3: Potential to Substantially Affect Riparian Habitat or Other Sensitive Habitats Through Direct Loss or Degradation that Leads to Loss of Habitat Function*

Manual thinning, mechanical thinning, and prescribed fire may potentially result in loss or degradation of montane riparian, wet meadow, and other sensitive habitats. Implementation of SPRs BIO-1, BIO-2, BIO-3, BIO-5, BIO-7, HYD-3, and HYD-4, require that potential sensitive natural communities and other sensitive habitats be identified via research and surveys, and protected via avoidance strategies or project design elements prior to implementing treatments. With implementation of applicable SPRs and compliance with existing CFPRs and TRPA, federal, and state regulations and permitting requirements that protect stream environment zones (SEZ), wetlands, and other sensitive habitats, the potential loss or degradation of montane riparian, wet meadow, or other sensitive habitats from later treatment activities will be less than significant.

*d. Impact 3.6-4: Potential to Substantially Affect State or Federally Protected Wetlands*

Limited treatments, including aspen and meadow restoration (i.e., removal of conifers in these areas) and watercourse crossings to provide equipment access, may occur on lands that contain state or federally protected wetlands. These activities have the potential to remove wetland vegetation and alter wetland hydrology or topography resulting in loss or degradation of wetland function. Implementation of SPRs BIO-1 and HYD-4 require that potential wetlands be identified and protected via avoidance or project design elements prior to implementing treatments. Compliance with the CFPRs would require the site-specific mapping and identification of protection measures, which will avoid substantial effects on state and federal wetlands. This will be a less than significant impact.

*e. Impact 3.6-5: Potential to Substantially Affect Distribution, Abundance, or Viability of Special-Status Fish, Other Native Fish, or Game Fish Species Either Directly or Through Habitat Modifications*

Manual thinning, mechanical thinning, and prescribed fire may cause short-term indirect impacts to fish through temporary disturbance or degradation of stream and riparian habitat. Direct impacts are also possible if heavy equipment or toxic substances enter waterbodies and cause injury or mortality of fish eggs or larvae or if fish are harmed during water drafting activities. SPRs BIO-1, BIO-2, BIO-3, BIO-4, BIO-5, HYD-1, HYD-3, GEO-1, GEO-3, GEO-4, GEO-5, and GEO-7 require identifying and protecting sensitive habitats, and provide other practices for protecting water quality:

- BIO-1 review and survey project-specific biological resources,
- BIO-2 require biological resource training for workers,
- BIO-3 survey sensitive natural communities and other sensitive habitats,
- BIO-4 design treatment to avoid loss or degradation of riparian habitat function,
- BIO-5 water drafting,
- HYD-1 comply with water quality regulations,
- HYD-3 identify and protect watercourse and lake protection zones,
- GEO-1 suspend disturbance during heavy precipitation,
- GEO-3 stabilize disturbed soil areas,
- GEO-4 erosion monitoring,
- GEO-5 drain stormwater via water breaks, and
- GEO-7 minimize erosion on steep slopes.

Incorporating these SPRs, adhering to the CFPRs, and taking other applicable measures would protect riparian and aquatic habitats in watercourse and lake protection zones (WLPZs) and SEZs, minimize erosion, limit stream crossings, protect water quality, and minimize the risk of harm to fish, thus avoiding or minimizing the impacts to vulnerable fish life stages or sensitive fish habitat. As a result, habitat disturbance and the risk of harm to fish will be minor; impacts to fish distribution, abundance, and viability will be substantially reduced. Impacts are therefore considered less than significant.

*f. Impact 3.6-6: Potential to Interfere Substantially with Fish and Wildlife Movement Corridors or Impede Use of Nurseries*

Manual thinning, mechanical thinning, and prescribed fire may be located in areas used as fish and wildlife movement corridors or nurseries. Treatment-related noise and disturbance may lead to temporary changes in migration or movement patterns. Wildlife nursery sites may be disturbed, or essential nursery habitat could be degraded by later treatment activities. SPRs BIO-1, BIO-3, BIO-4, BIO-8, HYD-1, HYD-3, and HYD-4 require identifying nursery sites prior to treatment activities and preventing degradation of aquatic and riparian corridors. Temporary shifts in wildlife movements to avoid or navigate around active treatment sites and associated disturbances will not substantially interfere with movement or migration patterns. Program implementation will not create long-term barriers to local or landscape-level movements. While implementing SPRs will minimize impacts, nursery sites may still be removed, degraded, or disturbed during treatment activities. This would be a potentially significant impact.

Implementation of Mitigation Measure 3.6-6, which requires retaining nursery habitat and avoiding nursery sites, will reduce potentially significant impacts to wildlife nursery sites because it will avoid removing important habitat features, and avoid or minimize disturbance from noise and human presence. This will retain the value and function of the nursery site such that its use by native wildlife will not be substantially impeded, thereby reducing this impact to less than significant.

*g. Impact 3.6-7: Cause the Introduction or Spread of New or Invasive Species of Animals*

Forestry treatments have the potential to introduce or spread aquatic invasive species (AIS) to waterbodies in the program area as well as elsewhere within and outside the Basin if contaminated equipment comes into contact with waterbodies in which habitat conditions are suitable for AIS. The use of equipment and vehicles for manual thinning, mechanical thinning, and prescribed fire has the potential to introduce or spread terrestrial invasive plant species (TIS) by creating soil disturbance that is conducive to TIS recruitment and by introducing or spreading TIS seeds or propagules. Incorporating SPRs requiring the removal of existing TIS infestations and proper inspection and decontamination of all equipment will minimize the risk of AIS and TIS introduction or spread. With these requirements, this impact is less than significant.

*h. Impact 3.6-8: Substantially Reduce Habitat or Abundance of Common Wildlife, Including Nesting Birds*

Manual thinning, mechanical thinning, and prescribed fire will occur in habitats that support common native bird, mammal, reptile, amphibian, and invertebrate species. Treatments may disturb breeding; remove or damage active nests, dens, and other breeding sites; kill or injure individuals; and temporarily reduce breeding productivity of these species. Because treatments will be implemented within relatively small proportions of the extensive ranges of common species, and suitable habitat will remain available

to these species across the broader landscape surrounding treatment areas, the magnitude of these potential losses will not substantially reduce the overall abundance of any common wildlife species. Additionally, implementation of SPRs BIO-1, BIO-2, BIO-3, and BIO-4 will limit the loss or degradation of high-quality breeding habitats for special-status wildlife that also benefit common species, and implementation of SPR BIO-9 will protect common nesting birds, including raptors. Therefore, treatment activities will not substantially reduce the population size of any common wildlife species, or the availability of breeding habitat for such species, including nesting birds. This impact is less than significant.

#### 5. Archeological/Historical/Tribal/Cultural

The analysis broadly evaluates the potential for any forestry treatment implemented through the program to affect archaeological, historical, tribal, or cultural resources. Mechanical thinning, manual thinning, and prescribed fire treatments may cause adverse change to the resource setting or unintentional disturbance of resources.

##### *a. Impact 3.7-1: Cause a Substantial Adverse Change in the Significance of Historical Resources*

Manual thinning, mechanical thinning, and prescribed fire may occur in areas that contain known historic resources or currently unrecorded historic-era features, or result in adverse physical or aesthetic effects to a significant historical site, structure, object, or building. Implementing SPRs CUL-1, CUL-6, and CUL-7, which require conducting record searches, avoiding resources, and cultural resource training for workers, will avoid any substantial adverse change to any built historical resources. This impact is less than significant.

##### *b. Impact 3.7-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources*

Manual thinning, mechanical thinning, and prescribed fire may occur on lands that contain resources that qualify as unique archaeological resources. It is possible that unique archaeological resources may be disturbed during treatment activities. SPRs CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, and CUL-7 require a records search, pre-field research, an archaeological survey, coordination with Native American tribes, worker training to recognize sensitive cultural resources, and avoiding or protecting known resources. Despite implementing these SPRs, unknown unique archaeological resources may be inadvertently damaged during treatment activities. This would be a potentially significant impact.

Implementing Mitigation Measure 3.7-2 will reduce potentially significant impacts to archaeological resources to less than significant because the resource will be avoided, moved, recorded, or treated in coordination with the appropriate state, and/or local agencies. Therefore, the program's impacts are less than significant.

##### *c. Impact 3.7-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource*

Tribal cultural resources may be affected by mechanical thinning, manual thinning, and prescribed treatments. SPR CUL-1 and CUL-2 requires a records search and coordination with Native American tribes which could identify tribal cultural resources within project areas. This is a potentially significant impact.

Implementing Mitigation Measure 3.7-3 will reduce impacts to tribal cultural resources because it will require completion of tribal consultation and identification of measures to protect identified resources.

Through implementation of SPRs, mitigation measures, and completion of the tribal consultation process, all impacts to tribal cultural resources will be reduced to a less than significant level. Further, compliance with PRC Section 21080.3.2 and Section 21084.3 requires public agencies to consult with Native American tribes and avoid damaging effects to any tribal culture resource, provide an opportunity to avoid or minimize the disturbance of tribal cultural resources, and appropriately treat any remains that are discovered. Therefore, this impact is less than significant.

*d. Impact 3.7-4: Disturb Human Remains*

Based on documentary research, several portions of the program area are considered to be culturally sensitive, and therefore, it is possible that prehistoric or historic-era marked or unmarked human interments are present within the program area. Manual thinning, mechanical thinning, and prescribed fire could uncover previously unknown human remains. Compliance with California Health and Safety Code Sections 7050.5 and 7052, which prohibit disturbing human remains without authority of law, and California Public Resources Code Section 5097, which requires consultation with Native American tribes when Native American human remains are discovered, will make this impact less than significant.

6. Energy

The analysis of environmental impacts associated with energy consumption focuses on the potential to result in the wasteful, inefficient, or unnecessary consumption of energy or conflict with or obstruct a state or local plan for energy efficiency. Energy consumption by equipment and vehicles is required to implement mechanical, manual, and prescribed fire treatments.

*a. Impact 3.8-1: Potential to Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy*

Under the program, diesel will be consumed by the off-road equipment used in treatment activities, heavy trucks hauling equipment to and from the site, logging trucks hauling timber to sawmills, and chip vans hauling woody biomass to biomass power facilities. Gasoline will be consumed by passenger vehicles used to transport workers and for worker commute trips. However, because implementing the treatments will decrease the intensity of wildfires, the treatment activities will also reduce the level of energy consumption associated with fire response activity. Impacts related to consumption of energy resources will be less than significant.

*b. Impact 3.8-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency*

Forest treatments implemented under the program will result in the availability of woody organic materials that may be used as fuel in the production of renewable electricity at biomass power generation facilities. This will support the goal of increasing the use of biomass-based electricity, as advocated by Executive Order S-06-06, the Bioenergy Action Plan, the Renewables Portfolio Standard Program, and the Short-Lived Climate Pollutant Strategy. In addition, treatments will help prevent wildfires that may otherwise be disruptive to power transmission throughout the state, thereby supporting the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources, as advocated by the Integrated Energy Policy Report. For these reasons, implementing the program will not conflict with or obstruct any state or local plans for renewable energy or energy efficiency. This impact is less than significant.



## 7. Geology/Soils

Analysis of soil conservation, landslide impacts, and paleontological resources was based on a review of documents pertaining to the geology and soils of the Basin, including the geologic map of the Basin, Natural Resources Conservation Service soil survey of the Basin, scientific studies, and TRPA regulations and planning documents. The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the thresholds of significance. Mechanical thinning, manual thinning, and prescribed fire treatments may disrupt soil stability and increase erosion through equipment use and vegetation removal.

### *a. Impact 3.9-1: Substantially Increase Soil Erosion or Lose Topsoil, Degrade Soil Condition, or Cause Sediment Deposition Downslope or Downstream of Project Sites*

Manual thinning, mechanical thinning, and prescribed fire treatments have the potential to increase soil loss and erosion. Treatment activities may increase erosion through soil disturbance or loss of vegetative cover, prescribed burning, road maintenance, and off-road equipment use. The Program's treatment activities will be subject to the erosion control and avoidance measures contained in the CFPRs and will implement SPR GEO-1 through GEO-11, HYD-3, and HYD-4 to provide additional protections in erosion prone areas and monitor soil and erosion conditions. Any widening or maintenance of existing forest roads will implement the best management practices (BMP) required in Lahontan Regional Water Quality Control Board (Lahontan Water Board) or TRPA approvals to limit soil compaction in compliance with TRPA land coverage standards. As described above, water quality BMPs will also limit erosion affecting water quality. With implementation of the mandatory requirements of the CFPRs, SPRs, and BMPs, implementing the program will have a less than significant impact related to soil erosion, loss of topsoil, soil degradation, and soil deposition.

### *b. Impact 3.9-2: Increase in Landslide Hazards, Debris Flows, and Avalanches Associated with Treatment Activities and Direct or Indirect Substantial Adverse Effects, Including Risk of Loss, Injury, or Death Involving Landslides, Debris Flows, and Avalanches*

Removal of vegetation from mechanical thinning, manual thinning, and prescribed fire, can reduce the strength of hillslope soils, potentially increasing the likelihood of shallow landslides on steep hillslopes. Landslides would be more common where disturbed areas are larger. These shallow landslides could cause debris flows, posing hazards to infrastructure and populations downslope. In addition, reducing the biomass of trees would reduce the uptake of shallow groundwater, which may lead to increased water retention in the soil and increase the potential for landslides. The potential to increase landslides is higher on steeper slopes, particularly those where the soil strength is dependent on vegetation, and on recently active or dormant landslides. Because treatments focus on selective vegetation removal and not clearcutting, trees will remain on avalanche-prone slopes following vegetation removal and treatment activities will be unlikely to increase avalanche risk and associated adverse impacts including risk of loss, injury, or death. Incorporating SPR GEO-2, GEO-5, GEO-7, and GEO-8 will minimize soil disturbance on steep slopes. Applicable CFPR measures will minimize new road construction; avoid steep and unstable slopes; and minimize changes that might alter subsurface flow. Therefore, activity-related landslide hazards and associated adverse impacts, including risk of loss, injury, or death are unlikely. This impact is less than significant.



## 8. Greenhouse Gas Emissions and Climate Change

This analysis assesses the program's consistency with state regulatory programs designed to reduce GHG emissions, especially regarding the statewide GHG goals mandated by Assembly Bill 32 of 2006 and Senate Bill 32 of 2016. Implementing mechanical thinning, manual thinning, and prescribed fire treatments will emit greenhouse gases through combustion of fossil fuels by equipment and vehicles, and from vegetation during burns.

### *a. Impact 3.10-1: Potential to Conflict with Applicable Plan, Policy, or Regulation of an Agency Adopted for the Purpose of Reducing the Emissions of GHGs*

The program will be consistent with applicable plans, policies, and regulations aimed at reducing GHG emissions, including 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. The purpose of the program is to reduce wildfire risk, which could reduce GHG emissions and increase carbon sequestration over the long term. This impact will be less than significant.

### *b. Impact 3.10-2: Potential to Generate GHG Emissions through Treatment Activities*

Direct GHG emissions from the increase in forestry treatments conducted under the program will be substantial, recognizing planned levels of treatment would increase to 1,250 acres per year. At the full target rate of 1,250 acres per year, GHG emissions from treatments will be an estimated 23,298 MTCO<sub>2e</sub> annually. Consistent with the goals of the fuel treatments to decrease the occurrence of high-severity wildfires and increase the potential rates of carbon sequestration, there will be a cumulative net carbon benefit over the long term, which is the most relevant timeframe and global context of GHG-caused, climate change-related environmental effects. However, there is uncertainty in predicting future wildfire occurrence, related emissions, and carbon sequestration rates, which are highly variable and depend on many factors. Future wildfire intensities and carbon sequestration in treated areas are the subjects of continued scientific research and debate. To meet CEQA's mandate of good faith disclosure and acknowledge potential future impacts in light of uncertainties, this impact is considered potentially significant, recognizing the reliability of estimates for direct GHG emissions and the uncertainty of the intended net carbon benefits of reduced wildfire intensity and increased carbon sequestration in treated areas.

Implementing Mitigation Measure 3.10-2 requires project proponents conducting prescribed burns to implement GHG emission reduction techniques, as feasible. These techniques involve reducing the total area and amount of vegetation burned while still meeting project objectives. Given the potential infeasibility of implementing specific emission reduction techniques and the uncertainties associated with all the parameters and objectives of prescribed burning, it is not feasible to precisely quantify the GHG reductions that will be achieved by implementing Mitigation Measure 3.10-2 in this evaluation. This impact is potentially significant.

## 9. Hazards and Hazardous Materials

The analysis evaluates forestry treatments in the program against the hazardous materials information to determine whether any risks to public health and safety or other conflicts would occur. Mechanical thinning, manual thinning, and prescribed fire treatments have the potential to spread hazardous materials through spills or equipment leaks.

*a. Impact 3.11-1: Create a Significant Health Hazard from the Routine Transport, Use, or Disposal of Hazardous Materials or Accidental Release Into the Environment*

Mechanical thinning, manual thinning, prescribed fire, and biomass transportation require using equipment and vehicles that require fuels, oils, and lubricants to operate. The routine use, transport, and disposal of these substances may result in an accidental upset or health hazard if released into the environment. SPR HAZ-1 will be implemented during treatment activities, which requires that all equipment be properly maintained per manufacturer's specifications, requires regular inspection of all equipment for leaks, and requires that any equipment found leaking be promptly repaired or removed from a treatment site. This SPR will minimize leaks and the potential for resultant contamination to enter the environment. Additionally, the program will also comply with federal, state, county, and local laws that regulate the use, transport, storage, and disposal of hazardous materials. Although treatment activities will increase the pace and scale of vegetation treatments and thus increase the use of hazardous materials in the program area, no new or more severe significant hazards to the public would be created. This impact will be less than significant.

*b. Impact 3.11-2: Emit Hazardous Emissions or Handle Hazardous or Acutely Hazardous Materials, Substances, or Wastes Within One-quarter Mile of an Existing or Proposed School or Other Sensitive Receptor*

There are ten schools, one hospital, and many daycare centers within 0.25 miles of the program area. Manual thinning, mechanical thinning, and prescribed fire that could occur within 0.25 miles of a school would involve limited use of hazardous materials, such as fuels, oils, and lubricants. There are no known hazardous or acutely hazardous materials, substances, or waste that could be disturbed by treatment activities within 0.25 mile of the sensitive receptors and schools. Treatment activities, including any equipment and vehicles used to implement them, will comply with applicable regulations to minimize impacts to sensitive receptors and schools. Therefore, this impact will be less than significant.

*c. Impact 3.11-3: Expose the Public or Environment to Significant Hazards from Disturbance to Known Hazardous Material Sites*

Soil disturbance by mechanical treatments and prescribed burning have the potential to expose workers, the public, and the environment to risks associated with existing hazardous materials if present within treatment areas. There are two known, leaking underground storage tanks of gasoline within the program area that do not have documentation of remediation. No other hazardous material sites without documentation of remediation are known within the program area. Treatment activities will typically occur on undeveloped sites, which are unlikely to contain hazardous material due to their lack of development. Because of the lack of known hazardous material sites within the program area and the treatment activities occurring primarily in undeveloped areas, the impact will be less than significant.

## 10. Hydrology and Water Quality

Analysis of potential impacts of manual thinning, mechanical thinning, and prescribed fire on hydrology and water quality is based on a review of documents and modeling results pertaining to the Basin, including previous studies of hydrology and water quality in Lake Tahoe and tributaries, the Lake Tahoe West Restoration Partnership (Lake Tahoe West) Water Erosion Prediction Project (WEPP), LANDIS-II modeling results, previous environmental impact statements and reports, and existing regulations and

ordinances. The information obtained from these sources was reviewed and summarized to understand existing conditions and to identify potential environmental effects, based on the significance criteria.

Mechanical thinning, manual thinning, and prescribed fire activities may degrade water quality by increasing erosion through vegetation removal and equipment use, and may increase surface or subsurface drainage or water flow.

*a. Impact 3.12-1: Substantially Degrade Water Quality Through the Implementation of Manual or Mechanical Treatment Activities*

All manual and mechanical treatments will integrate SPRs into treatment design to protect water bodies, limit equipment use on wet soils and steep slopes, stabilize highly disturbed areas, and prevent spills or leaks from equipment. SPR GEO-1 through GEO-11, HYD-3, and HYD-4 provide protections in erosion prone areas and require monitoring of soil and erosion conditions that could harm water quality. Additionally, SPR HAZ-1 requires that all equipment be maintained and regularly inspected for leaks. Implementing SPRs will minimize the risk of substantial degradation to water quality from manual or mechanical treatment activities. Therefore, this impact is less than significant.

*b. Impact 3.12-2: Substantially Degrade Water Quality Through the Implementation of Prescribed Burning*

All prescribed burn treatments will integrate SPR GEO-6, GEO-10, HYD-1, HYD-3, and HYD-4 into treatment design to protect water bodies, reduce the size and placement of burn piles, limit intensity of prescribed burns, and maintain the overstory and understory canopy. Therefore, this impact is less than significant.

*c. Impact 3.12-3: Substantially Alter the Existing Drainage Pattern of a Treatment Site or Area*

Mechanical treatment activities will involve ground-disturbing activities, including the construction of skid trails and compaction of the ground by heavy equipment, which may temporarily alter surface water runoff. To avoid or minimize these effects, later treatment activities would incorporate SPRs to protect the soil and vegetation in WLPZs and SEZs, stabilize exposed soil near water bodies prior to the beginning of rain, and maintain existing drainage systems. With inclusion of the SPRs, treatments may result in minor, temporary disturbance to surface drainage but will not substantially alter the existing drainage pattern of a treatment site or area. This impact is less than significant.

*d. Impact 3.12-4: Substantially Change the Amount of Surface Water in Any Water Body or Substantially Reduce the Amount of Water Otherwise Available for Public Water Supplies*

Mechanical treatments may include water drafting for dust abatement during dry season projects. While water drafting will alter the amount of water in a water body, implementing SPR BIO-5 will require that water drafting operations follow requirements, including minimum flow requirements of the stream, maximum diversion rates, and maximum pool volume reduction. Therefore, treatment activities that involve water drafting will not substantially change the amount of surface water in any water body or reduce the amount of water available for public water supply. This impact is less than significant.

*e. Impact 3.12-5: Discharge Pollutants into Surface Waters, or Any Substantial Alteration of Surface Water Quality, Including but Not Limited to Nutrients, Temperature, Dissolved Oxygen, or Turbidity*

Mechanical and manual thinning treatments will have no direct discharge into surface waters and treatments would retain 75 percent surface cover within riparian areas and restore degraded aspen, meadow, and riparian areas (i.e., conifer removal in these areas) that would intercept and filter surface runoff that may contain sediment and nutrients following treatments, so there will not be a substantial alteration of surface water quality. Retention of 75 percent surface cover and preservation of overstory and understory canopy will minimize changes in solar radiation that would alter temperature conditions in water bodies. The retention of surface cover and preservation of canopy will also minimize and filter surface runoff that may potentially transport sediment or nutrients from treatment areas and provide more time for runoff to infiltrate. While there is potential for surface runoff from treatment areas to contain concentrations of pollutants greater than background conditions and alter surface water quality, treatments under the program will implement SPR GEO-1 through GEO-11, HYD-3, and HYD-4 to provide additional protections in erosion-prone areas, monitor soil and erosion conditions, and will minimize the surface runoff and transport of these pollutants into water bodies. Additionally, incorporating SPRs into all treatments will further minimize the risk of detrimental water quality alterations, including nutrients, temperature, dissolved oxygen, and turbidity. This impact is less than significant.

*f. Impact 3.12-6: Discharge Contaminants to Groundwater or Any Alteration of Groundwater Quality*  
Forestry treatments will integrate SPRs into treatment design to prevent discharge of contaminants into groundwater and protect groundwater quality. Treatments will avoid or minimize the potential risks of spills and leaks of equipment through application of SPRs HYD-3 and HAZ-1, preventing the risk of groundwater contamination.

*g. Impact 3.12-7: Result in an Effect on Drinking Water Sources*  
Forestry treatments will integrate effective SPRs into treatment design to protect drinking water sources, including SPR GEO-1 through GEO-11, HAZ-1, HYD-3, and HYD-4, which protect water quality from potential impacts of erosion and contamination. Therefore, this impact is less than significant.

## 11. Noise and Vibration

The analysis of noise impacts focuses on the potential for nearby noise-sensitive receptors to experience a substantial temporary or permanent increase in ambient noise levels as a result of treatment implementation. The use of equipment for mechanical thinning, manual thinning, and prescribed fire will create noise during treatment activities.

*a. Impact 3.13-1: Result in a Substantial Short-Term Increase in Exterior Ambient Noise Levels During Treatment Implementation*

Manual thinning, mechanical thinning, and prescribed fire will adhere to local noise policies and ordinances to the extent that treatment activity is subject to them, limit 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 design helicopter flight patterns to avoid and minimize flights over residential areas and wilderness areas. Additionally, any increase in noise exposure at nearby receptors will be temporary and periodic. Therefore, implementation of the program will not result in the exposure of noise-sensitive receptors to a substantial temporary increase in ambient noise levels. This impact is less than significant.

*b. Impact 3.13-2: Result in a Substantial Short-Term Increase in Truck-Generated SENLs During Treatment Activities*

Because mechanical and manual treatments will be required to adhere to SPR NOI-1, which limits treatment activities to daytime hours, Single Event Noise Level (SENLs) generated by associated haul-truck trips will not have the potential to result in sleep disturbance during noise-sensitive evening and nighttime hours. For this reason, implementing the program will not result in a substantial temporary increase in SENLs during treatment activities. This impact is less than significant.

## 12. Recreation

The following analysis assesses the environmental effects of the program with respect to the existing recreation uses and facilities in the program area and changes in public access to these recreation resources. This analysis is based on review of existing documents, policies, ordinances, and other regulations pertinent to recreation. Implementing mechanical, manual, and prescribed fire may create short-term impacts to recreation through closure of project areas that are frequented by recreational users of public lands.

*a. Impact 3.14-1: Increase Demand For and Use of Recreation Facilities That Results In Physical Deterioration of Recreation Facilities*

Implementing the program may result in short-term, temporary closures of trails, which could cause trail users (e.g., hikers and mountain bicyclists) to increase recreation demand on other nearby trails within the program area and surrounding Tahoe region. Because of the amount of recreation resources and trails available in the program area and Tahoe region, a short-term, temporary shift in demand for hiking and biking trails will not result in the concentration of recreation users on any single recreation facility such that new or expanded facilities will be required. Furthermore, this short-term increase in use of trails in other areas will not result in substantial physical deterioration or acceleration of physical deterioration of those resources. In compliance with SPR REC-4, project implementers will be required to repair or rehabilitate trails from any damage caused by treatment activities. Thus, implementing the program will not have substantial physical deterioration or acceleration of physical deterioration of existing trails or other recreation facilities. This impact is less than significant.

*b. Impact 3.14-2: Result In Adverse Physical Effects On the Environment From New or Expanded Recreation Facilities*

No new recreation facilities will be constructed. Forestry treatments could remove vegetation that currently serves as a barrier to vehicular access or could include construction of features such as landings, skid trails, or improvements to existing roads that may create new access points for recreational use of motor vehicles and off-highway vehicles (OHVs). These new access points could increase the long-term unmanaged use of motor vehicles and OHVs in the program area. This increase in OHV use and recreation user motor vehicle access could result in adverse physical effects on the environment. This impact is potentially significant.

With implementation of Mitigation Measure 3.14-2, the project implementer will install physical barriers to restrict new access by motor vehicles or OHVs, which will reduce this impact to less than significant.

*c. Impact 3.14-3: Change the Availability of Recreation Opportunities and Quality of Recreation User Experience*

Forestry treatments within the program area may result in reducing access to recreation opportunities and the quality of recreation user experience. Factors affecting the availability of recreation opportunities and quality of recreation user experience include short-term, temporary closures of recreation resources; displacement of special events and other temporary uses; degradation of recreation resources; and nuisance impacts related to aesthetics, air quality, noise, and transportation. The number and variety of recreation resources available within and near the program area that may provide recreation opportunities while treatment activities temporarily close some recreation resources would provide ample opportunities for recreation activities while some areas may be closed. Additionally, implementing SPR REC-1 through REC-5, which require notifying recreation users, and repairing and maintaining trails, roads, and access points, will avoid and minimize disruption to recreation activities. As discussed above, SPRs, compliance with regulatory requirements, and mitigation measures will minimize nuisance effects associated with aesthetics, air quality, noise, and transportation impacts. For these reasons, there is a less than significant impact related to adverse effects on the change in availability of recreation opportunities and quality of recreation user experience.

13. Transportation

The analysis of transportation impacts related to manual thinning, mechanical thinning, and prescribed fire treatments includes qualitative analysis of bicycle, pedestrian, and transit facilities, hazards, emergency access, and vehicle miles traveled (VMT). The analysis is based on details of typical treatment activities, the equipment used for treatments, and methods for transporting the equipment, materials, and byproducts. Mechanical thinning, manual thinning, and prescribed fire treatments may create short-term impacts to roads and trails by temporarily increasing traffic during treatments, increasing equipment use, and hauling forest material offsite. As determined below, the impacts to transportation are less than significant and potentially significant, which were analyzed in the PTEIR.

*a. Impact 3.15-1: Substantially Increase Hazards due to a Design Feature or Incompatible Uses*

There will not be any construction or alteration of any public roadway. Per SPR TRAN-1, the project proponent will prepare and implement a traffic management plan (TMP) to avoid and minimize temporary transportation hazards due to incompatible uses operating along program area roadways. SPR TRAN-2 requires managing prescribed fire smoke and considering effects on traffic in the TMP. Therefore, there is no substantial increase in hazards because of design features or incompatible uses. This impact is less than significant.

*b. Impact 3.15-2: Conflict or be Inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) Regarding VMT*

The scale of treatment activities will increase to treat approximately 1,250 acres per year within the program area. With the increase in treatment acreage, the daily VMT generated by vehicles and equipment in comparison to existing conditions is anticipated to increase by approximately 8,061 VMT because more individual treatment projects will be implemented. A key goal of the program is to reduce the risk of catastrophic wildfires. Reducing the risk of catastrophic wildfires will result in a reduction in fire suppression activity and trips, which may be reasonably expected to decrease VMT over the long term, compared to conditions without the program. However, it is not feasible to predict changes in wildfire occurrence sufficiently to quantify potential changes in fire response VMT. Thus, to meet

CEQA's mandate of good faith disclosure and to not risk understating potential future impacts in light of the uncertainties, this impact may be potentially significant, because VMT generated by later treatment activities under the program will increase in comparison to existing conditions, notwithstanding the potential VMT-reducing effects of reduced wildfire response.

Even though the probability of a net VMT reduction may be reasonably expected to occur in the long term with the intended reduction in wildfire occurrence and severity, and individual later treatment activities under the program will likely be less than significant pursuant to the thresholds identified the California Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts. Even though the intended outcome will be less than significant, the "potentially significant and unavoidable" determination is necessary under CEQA to disclose in good faith the potential effects related to VMT generated by the program as a whole.

#### 14. Wildfire

The analysis of environmental impacts on wildfire risk focuses on the potential for a substantial increase in short-term or long-term wildfire acreage or severity as a result of implementing the program. Mechanical thinning, manual thinning, and prescribed fire treatments, and the associated use of vehicles and machinery, have a risk of ignition or escape beyond the treatment area, which may increase the short-term fire risk.

##### *a. Impact 3.2-1 - Potential to Substantially Exacerbate Short-term Wildfire Risks*

Prescribed burning, as well as the use of vehicles and heavy machinery in a project area, could result in temporary fire risks because these situations can increase the risk of an accidental ignition.

Several SPRs will be implemented to reduce the risk of uncontrolled spread of fire from treatment activities. Machine-powered hand tools will have federal- or state-approved spark arrestors (SPR HAZ-2; vegetation treatment crews will carry one fire extinguisher per chainsaw and one long-handle shovel and one axe or pulaski (SPR HAZ-3); and smoking will only be permitted in designated smoking areas (SPR HAZ-4). Safety guidance based on current climate and fuel conditions will guide daily operation of mechanical equipment to reduce risk of wildfire ignition (SPR HAZ-5). In addition, there is extensive preparation and planning before a prescribed burn (e.g., preparation of a smoke management plan and burn plan), active monitoring and maintenance during a prescribed burn, and implementation of stringent safety protocols. Therefore, the treatment activities will not substantially exacerbate short-term wildfire risks and there are no new or more significant short-term risks not analyzed in the PTEIR.

##### *b. Impact 3.2-2: Potential to Exacerbate Long-term Wildfire Risks*

One of the primary purposes of implementing the Guidelines is to reduce wildfire risk in the long term. The Guidelines include vegetation treatment activities to reduce the risk of wildfire including mechanical thinning, manual thinning, and using prescribed fire. Implementing the Guidelines will not increase the total acres of wildfire over the long term and will not exacerbate fire risk. In addition, the program is expected to have a beneficial effect related to reducing high-severity wildfires in the program area in the long term. Therefore, the treatment activities will not exacerbate long-term wildfire risks.



## E. Using the PTEIR Checklist

Once an individual project is designed and developed in accordance with these Guidelines, staff will confirm that the project is consistent with the PTEIR by using the PTEIR Project Consistency Checklist (Checklist) (Attachment A).

Staff will assess each specific project treatment, geographic location, and specific circumstances of the project to determine whether the project is consistent with the PTEIR. Consistency with the Checklist requires substantial evidence. Staff will maintain a record of project maps, GIS data, surveys, or other information to support a determination that the project is consistent with the PTEIR. A completed Checklist will also be saved to the project file.

To complete the Checklist staff will:

1. Review the full Project Consistency Checklist Outline.
2. Provide a project description and location, including the proposed activities.
3. For each resource, describe the impact and summarize whether the impact is covered in the PTEIR.
4. For each resource, identify the SPRs and Mitigation Measures that are applicable.
5. For each resource, explain why any Mitigation Measures from the PTEIR do not apply (if applicable for a potentially significant impact).
6. For each resource, answer the Checklist questions. Indicate on the Checklist whether there are new significant impacts, substantially more severe impacts, or the impacts are within the scope of the PTEIR. Provide supporting evidence specific to the project (maps, GIS, other factual information pertinent to the project and the resource). Staff must show substantial evidence to support these determinations.

If, based on substantial evidence, staff determines that the project is consistent with the Guidelines and PTEIR, as documented in the Checklist and supporting documentation, the project may be implemented. If, after analyzing the project, staff determines the project does not meet the standards in the Guidelines and is not consistent with the PTEIR, then additional CEQA review will be necessary. The project will not be implemented until such review is completed.

## VI. REFERENCES

1. California Department of Forestry and Fire Protection, 2020. Final Tahoe Program Timberland Environmental Impact Report.
2. California Department of Forestry and Fire Protection, 2020. California Forest Practice Rules.
3. California Tahoe Conservancy, 2020. Integrated Vulnerability Assessment of Climate Change in the Lake Tahoe Basin.
4. Tahoe Fire and Fuels Team, 2019. Lake Tahoe Basin Forest Action Plan.
5. California Tahoe Conservancy, 2018. Strategic Plan 2018-2023.
6. Tahoe Fire and Fuels Team, 2015. Lake Tahoe Basin Community Wildfire Protection Plan.
7. Tahoe Fire and Fuels Team, 2014. Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy.



## VII. APPENDICES

### Appendix A. Sensitive plant species list.

1. Galena Creek rockcress (*Arabis rigidissima* var. *demote*)
2. threetip sagebrush (*Artemisia tripartita* ssp. *Tripartite*)
3. Austin's astragalus (*Astragalus austiniae*)
4. Tulare rockcress (*Boechea tularensis*)
5. upswept moonwort (*Botrychium ascendens*)
6. scalloped moonwort (*Botrychium crenulatum*)
7. Mingan moonwort (*Botrychium minganense*)
8. western goblin (*Botrychium montanum*)
9. watershield (*Brasenia schreberi*)
10. Bolander's bruchia (*Bruchia bolanderi*)
11. Davy's sedge (*Carex davyi*)
12. woolly-fruited sedge (*Carex lasiocarpa*)
13. mud sedge (*Carex limosa*)
14. fell-fields claytonia (*Claytonia megarhiza*)
15. Tahoe draba (*Draba asterophora* var. *asterophora*)
16. starved daisy (*Erigeron miser*)
17. Donner Pass buckwheat (*Eriogonum umbellatum* var. *torreyanum*)
18. American manna grass (*Glyceria grandis*)
19. broad-nerved hump moss (*Meesia uliginosa*)
20. Stebbins' phacelia (*Phacelia stebbinsii*)
21. Nuttall's ribbon-leaved pondweed (*Potamogeton epihydrus*)
22. alder buckthorn (*Rhamnus alnifolia*)
23. Tahoe yellow cress (*Rorippa subumbellata*)
24. marsh skullcap (*Scutellaria galericulata*)
25. Munro's desert mallow (*Sphaeralcea munroana*)
26. slender-leaved pondweed (*Stuckenia filiformis* ssp. *Alpine*)
27. flat-leaved bladderwort (*Utricularia intermedia*)

### Appendix B. Sensitive wildlife species list.

Sixteen special-status wildlife species are known or assumed to occur in the California side of the Basin area:

1. northern goshawk (*Accipiter gentilis*)
2. California spotted owl (*Strix occidentalis*)
3. osprey (*Pandion haliaetus*)
4. bald eagle (*Haliaeetus leucocephalus*)
5. willow flycatcher (*Empidonax trailii*)
6. yellow-headed blackbird (*Xanthocephalus xanthocephalus*)
7. olive-sided flycatcher (*Contopus cooperi*)
8. yellow warbler (*Dendroica petechia*)
9. Sierra Nevada mountain beaver (*Aplodontia rufa*)
10. Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*)

11. mule deer (*Odocoileus hemionus*)
12. southern long-toed salamander (*Ambystoma macrodactylum*)
13. western red bat (*Lasiurus blossevillii*)
14. pallid bat (*Antrozous pallidus*)
15. peregrine falcon (*Falco peregrinus anatum*)
16. Sierra Nevada yellow-legged frog (*Rana sierrae*)

TRPA and LTBMU further identify the following species as special-interest wildlife species, management indicator species, or sensitive species:

1. golden eagle (*Aquila chrysaetos*)
2. waterfowl species
3. aquatic macroinvertebrates
4. Pacific tree frog (*Pseudacris regilla*)
5. mountain quail (*Oreortyx pictus*)
6. sooty (blue) grouse (*Dendragapus obscurus*)
7. Pacific marten (*Martes caurina*)
8. northern flying squirrel (*Glaucomys sabrinus*)
9. hairy woodpecker (*Picoides villosus*)
10. black-backed woodpecker (*Picoides arcticus*)
11. western bumble bee (*Bombus occidentalis*)
12. Townsend's big-eared bat (*Corynorhinus townsendii*)
13. Lahontan Lake tui chub (*Gila bicolor pectinifer*)
14. California wolverine (*Gulo gulo luteus*)
15. Great Basin rams-horn (snail) (*Helisoma newberryi newberryi*)
16. fringed Myotis (*Myotis thysanodes*)
17. great gray owl (*Strix nebulosi*)

#### Appendix C. Permit list for forestry activities.

1. TRPA Qualified Exempt Activity Declaration - all activities.
2. TRPA substantial tree removal permit.
3. Program Timber Harvest Plan
4. Notice of Determination for PTEIR
5. Timber Harvest Plan
6. FPA 1038 Exemptions
7. California Department of Fish and Wildlife (CDFW) - 1603 streambed alteration permit.
8. Public Utility District/other approval for any water use requirements.
9. U.S. Army Corps of Engineers permit for navigable waterways.
10. Lahontan Water Board – non-pollution control permit if project falls outside of existing Timber Waiver. Monitoring may be required.
11. Lahontan Water Board - SEZ burn restriction waiver
12. Placer County Air Pollution Control District or El Dorado County Air Quality Management District smoke permit- pile and understory burns only.
13. Assembly Bill 52 Tribal Consultation - for CEQA documents above an NOE.
14. CDFW - Incidental Take Permit

15. U.S. Fish and Wildlife Service - Incidental Take Permit
16. County encroachment permit
17. Official approval for encroachment onto other agency lands.

## VIII. ATTACHMENTS

- A. PTEIR Project Consistency Checklist
- B. PTEIR Standard Project Requirements
- C. Board Documents (To be attached upon Board adoption of the Guidelines)
  - a. Staff Recommendation
  - b. Attachment 1 – Resolution
    - i. Exhibit A – CEQA Findings
    - ii. Exhibit B – Statement of Overriding Considerations
    - iii. Exhibit C – Mitigation and Monitoring Reporting Plan