

Chapter 2. Alternatives, Including the Proposed Action

Introduction

This chapter describes and compares the five alternatives considered in detail in this analysis, as well as those eliminated from detailed study.

Section 2.1 briefly describes the process used to develop a range of alternatives.

Section 2.2 lists the elements that will not vary by alternative.

Section 2.3 describes the key strategic differences among the alternatives, and is organized according to the four issue areas presented in Chapter 1:

- Watershed Health and Aquatic Ecosystems
- Terrestrial Ecosystems
- Recreation
- Access and Travel Management

Section 2.4 describes how the alternatives differ in their response to the relevant issues raised during scoping. Alternative E was developed in response to public comment received on the DEIS.

Section 2.5 describes how the management direction in the Plan would differ by alternative, and is organized according to the six plan decisions described in Chapter 1. This section also includes several tables that compare the alternatives in different ways.

Section 2.6 briefly describes the alternatives considered but not analyzed in detail, and the rationale for excluding each from detailed analysis.

Chapter 2 concludes with a table summarizing the consequences of the alternatives.

2.1. Development of Alternatives

Alternative A, the No Action alternative, is the 1988 LTBMU Land and Resources Management Plan, as amended. The plan was amended multiple times since its inception, including the 2004 Sierra Nevada Forest Plan Amendment, and the 2007 Sierra Nevada Forests Management Indicator Species Amendment, both of which amended 10 Sierra Nevada Forest Plans including the LTBMU.

Development of a Draft Forest Plan (Alternative B) was initiated with the adoption of the Pathway vision statements and broad desired conditions for ten resource areas. Additional detailed desired conditions were then developed internally for these resource areas and other resources not included in Pathway, but important to the Forest Service mission, such as Heritage and Cultural Resources, and Interpretive Services. This expanded set of desired conditions formed the basis for a Proposed Plan, which was also informed by input from the public workshops held in 2008 and 2009.

When the requirement for a plan revision EIS was reinstated, additional public meetings were held to solicit concepts we could use to construct additional alternatives. Alternatives were then developed in response to public issues, management concerns, and resource use and development opportunities. Public

comments received during the scoping phase of the process were summarized to define the relevant issues, and the issues were integrated with the revision themes (described in Chapter 1) and used as the basis for the development of four different alternatives. The range of alternatives was designed to reflect the range of public opinions expressed during scoping. Similar concepts were packaged together in alternatives where possible, but more importantly we attempted to incorporate all of the views expressed in at least one alternative.

The range of alternatives was also designed to meet the requirements of the 1982 planning regulations. The procedures of the 1982 Planning Rule require analysis of a range of reasonable alternatives, as follows:

- Distributed between the minimum and maximum resource potential
- Reflect the full range of commodity and environmental resource uses and values
- Reflect a range of outputs and expenditure levels;
- Facilitate analysis of opportunity costs and tradeoffs between benchmarks and alternatives
- Facilitate evaluation of effects of present net value, benefits and costs of nonmonetary values
- Provide different ways to address and respond to major issues, management concerns and resource opportunities

The 1982 Planning Rule also requires that “at least one alternative shall be developed which responds to and incorporates the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA) Program tentative resource objectives for each forest displayed in the regional guide.” Additionally the 1982 Rule requires that each alternative state “the relationship of expected outputs to the RPA Program tentative resource objectives for the forest displayed in the current regional guide” (Sec 219.12 (f)).

Changes in law and policy have rendered this language obsolete. The regional guide has been withdrawn. Additionally, in lieu of an RPA Program, a Forest Service Strategic Plan was completed in 2007 (USDA Forest Service 2007d) in accordance with the Government Performance and Results Act of 1993 (GPRA) and language in the Department of Interior and Related Agency Appropriations Act, 2001 (Public Law 106-321).

RPA Assessments and interim updates are being completed as scheduled. Neither the RPA Assessment nor the Forest Service Strategic Plan contains recommended output targets applicable to individual National Forests. The Assessment contains national and regional level analysis of the renewable resource situation, including long-run projections of supply and demand for the various renewable resources. The Strategic Plan contains goals, outcomes, performance measures, and strategies that apply to all Agency programs, including management of National Forest System lands, but the Strategic Plan does not establish output targets. All alternatives are consistent with the relevant goals in the Strategic Plan.

Alternative E, the new Preferred Alternative, was developed in response to public input received on the DEIS, and includes the resulting changes to the proposed Plan. Changes included additional Desired Conditions, Strategies, and Standards and Guidelines. Other changes were made to clarify the intent of Plan component language. The monitoring plan was also revised based on public comment.

2.2. Elements Common to All Alternatives

Forest Plans do not create, authorize, or execute any site-specific ground-disturbing activities. Each alternative would provide a framework to guide project selection, project design, and project

implementation to meet or maintain the desired conditions. While the alternatives would differ in the means and timeframes for achieving the desired conditions, management of specific resources and programs would not vary by alternative in several important respects. This section describes the set of management considerations that would be the same under all alternatives.

All alternatives are based on the concepts of multiple-use and ecosystem management, are designed to protect national forest resources, and comply with applicable laws, regulation, and policy. In addition, the following elements are common to all alternatives:

- Fire suppression practices would be the same for all alternatives. The acres available for managing wildfires for multiple objectives would vary by alternative.
- Existing recreation special use permits would remain in effect until their expiration date. Renewal would be governed by law and policy. Project implementation within permit areas would be required to be consistent with either the 1988 LTBMU Forest Plan or the revised Forest Plan, as specified in the transition language referenced in Section 1.3.
- Existing special use permits for communication sites, utility corridors, transportation corridors and other special uses designated in the 1988 LTBMU Forest Plan would remain in effect until their expiration date. Renewal would be governed by law and policy.
- BMP upgrades to enhance water quality and Universal Accessibility upgrades would continue at recreation sites.
- The current Motor Vehicle Use Map (MVUM) and Over Snow Vehicle Use Map (Snowmobile Guide) would remain in effect in all alternatives unless wilderness designation is proposed and adopted by Congress.
- No programmatic expansion of the road system is proposed.
- Where opportunities are present, transit use would be promoted by development of multi-modal transit stops that would provide convenient access among various transit modes such as busses, bicycles, walking, and boats.
- Grazing management would not vary by alternative.
- Minerals management would not vary by alternative.
- Current designations of wilderness areas, national scenic and recreational trails, and scenic byways would not be reduced or eliminated.
- Current designations of Inventoried Roadless Areas (IRA) would not be reduced or eliminated unless wilderness designation of an IRA, or portion of an IRA, is proposed and adopted by Congress.
- The current recommendation to add a segment of the Upper Truckee to the Wild and Scenic River System (USDA Forest Service Tahoe National NF and LTBMU 1999) is retained, and the area would be managed to maintain or enhance the free-flowing status and Outstanding Remarkable Values listed for this river. No other segments or rivers are recommended. Eligible segments of Taylor Creek, Eagle Creek and Glen Alpine Creek, plus 3 Eligible segments of tributaries of the Upper Truckee are described in Appendix B – Wild and Scenic River Evaluation and in the Land Management Plan.
- All currently designated special areas and the Grass Lake RNA would be retained and their management would not vary by alternative. Special areas are listed in Part 2: Strategies of the Land Management Plan.
- Management and use of Santini-Burton parcels would be consistent with the provisions of the Act for all alternatives.
- Selection and monitoring of Management Indicator Species (MIS) are described in the 2007 Sierra Nevada Forests Management Indicator Species (SNFMIS) Amendment Final Environmental Impact Statement (FEIS) (USDA Forest Service 2007a) and SNFMIS Amendment

Record of Decision (ROD) (USDA Forest Service 2007b), which are hereby incorporated by reference.

- Decisions listed in Appendix K would remain in place.

2.3. Alternatives Considered in Detail

Five alternatives are analyzed in detail. Alternatives B, C, D and E provide choices for revising the existing Plan:

Alternative A is the no action alternative; if this alternative were selected, management would continue as described in the 1988 LTBMU Land and Resource Management Plan, as amended.

Alternative B does not significantly change the overall goals and management course set by the existing LRMP as currently implemented. It does, however, respond to present natural resource management concerns such as climate change, provides management direction that reflects current science, and provides direction that will better respond to contemporary recreation demands. Management Areas are reduced from 21 to 4, providing more uniform direction. Developed recreation emphasizes retirement of deferred maintenance and allows for a small increase in capacity.

Alternative C proposes a more aggressive approach that would achieve fuels and forest health desired conditions more rapidly than other alternatives. This alternative allows for a modest expansion of developed recreation facilities, more than other alternatives. The Dardanelles Inventoried Roadless Area for Wilderness designation. No major changes are proposed to the road and trail inventory, but a greater percentage of roads and trails would provide easier access for all vehicles and people.

Alternative D is characterized by a passive management approach to watershed restoration and forest health, relying primarily on natural processes rather than active management to achieve the desired conditions. This alternative emphasizes dispersed recreation opportunities, limits expansion of developed facilities, and recommends both the Dardanelles and Freel Inventoried Roadless Areas for Wilderness designation and additional Backcountry Management Areas primarily adjacent to the Freel IRA and Granite Chief Wilderness. No major changes are proposed to the road and trail inventory, but they would be managed to emphasize more primitive routes with more challenge.

Alternative E (Preferred Alternative) is similar to Alternative B in that it does not significantly change the overall goals and management course set by the existing LRMP as currently implemented. However, in response to comments, about 3,800 acres are added as the Stanford Rock Backcountry Management Area, recreation expansion is at a level between alternatives A and B, would provide the opportunity for more campsites than Alternative B. Additional clarifications to the management direction found in the Forest Plan have been made.

Of the alternatives under consideration at this stage, Alternative E is preferred by the responsible official. The detailed management direction associated with Alternative E is presented in the Land Management Plan, a companion document to this FEIS. Desired Conditions remain the same for Alternatives B, C and D, while a few additional Desired Conditions were added to

Alternative E. Management Strategies and Objectives differ among the action alternatives and are presented in Appendices H and I. Standards and Guidelines that differ by alternative are discussed in this Chapter, in the section titled “How Plan Decisions Change By Alternative.”

2.3.1. Alternative A: No Action (1988 Plan, as amended)

Watershed Health and Aquatic Ecosystems

Alternative A emphasizes water quality and SEZ protection. This alternative would continue the current program of watershed restoration to promote healthy watersheds, stable stream channels, and the biological and physical health and function of Stream Environmental Zones (SEZs). Prevention of sediment delivery to stream channels would continue to be a priority for management activities adjacent to SEZs. The primary goal of stream and watershed process restoration of streams and related watershed processes would be the decrease or elimination of sediment sources (stream banks, roads, and other infrastructure) and other non-point pollution sources.

Improvement of aquatic habitat conditions would be a secondary goal. Alternative A does not provide well-organized planning direction that addresses the complex linkages between species and habitat in aquatic ecosystems. While adequate measures are provided for habitat protection, there is no strong direction for active restoration of impacted habitats.

Terrestrial Ecosystems

Alternative A continues current vegetation management using direction from the 1988 LTBMU Forest Plan as amended. A Wildland Urban Intermix (WUI) fuels treatment strategy is defined, and WUI fuels treatments are the first priority for vegetation management. Community wildfire safety concerns are also addressed by an aggressive fire suppression strategy.

Removal and sale of trees following disturbances (fire, insects, disease, and wind) is actively promoted to recover commercial value. Although wildland fire is recognized as an essential ecosystem process, wildland fire management for resource objectives is allowed only in the Desolation Wilderness.

The forest health strategy emphasizes early and late seral forest stand structure and late seral dependent wildlife species habitat, including a series of land allocations (e.g., Protected Activity Centers [PACs], Home Range Core Areas [HRCAs], and Old Forest Emphasis Areas [OFEAs]) restricting vegetation management in old forest ecosystems. Forest-wide canopy closure requirements are included, and removal of trees greater than 30 inches DBH is prohibited except for removal of hazard trees and to enable equipment operation.

Standards for managing terrestrial invasive plant species are included.

Recreation

Alternative A includes future expansion of recreation infrastructure, and development of new sites by up to 10% is described in the 1988 Plan. This alternative responds to future recreation demands through PAOT (persons at one time) allocation. A gradual increase in developed recreation opportunities would be accommodated by encouraging development over time to meet predicted future demands by allowing for the creation and expansion of developed recreation sites, alpine skiing facilities, and improvements to existing sites.

This alternative would provide a balanced mix of recreation settings as defined by ROS and would conform to a Lake Tahoe Basin strategy based on the “Fair Share Concept” for publicly provided developed recreation facilities.

Management of existing wilderness and inventoried roadless areas would continue in accordance with current plans and policy direction.

Access and Travel Management

Current management direction allows expansion of the non-motorized trail system and construction of trailhead parking facilities. Existing trails and trailhead facilities would be maintained and reconstructed as needed to comply with health and environmental standards.

Areas open to motorized access to NFS lands are shown on the Motor Vehicle Use Map (MVUM) for the summer season and on the published Snowmobile Guide map for the winter season.

The road and OHV trail system would be maintained and managed to meet current standards with available funding and the MVUM would be updated as needed. Current non-motorized trails would be maintained and managed to meet standards with available funding.

Approximately 30 miles of hiking/equestrian trails and approximately 10 miles of mechanized trails would be added to the trail system. Of this, approximately 30 of those miles would come from currently unauthorized trails that would be upgraded and added to the system. No additional miles of OHV trails would be added.

Use of transit is promoted where possible.

Projects are prioritized based upon public safety first, resource impacts second and public access third.

2.3.2. Alternative B: DEIS Preferred Alternative

Watershed Health and Aquatic Ecosystems

Alternative B proposes a coherent, updated set of desired conditions and strategies to maintain, protect, and restore overall watershed health. This alternative would continue the emphasis on water quality and SEZ protection, while adding increased emphasis on integrated SEZ restoration, and retaining most of the Riparian Conservation Strategy elements from the SNFPA ROD (2004). Additional desired conditions and strategies increase emphasis on aquatic habitat improvement such that this alternative provides equal emphasis on the stream process, water quality, and aquatic habitat components of watershed restoration.

This alternative recognizes the need for building resilience into watershed systems and associated habitats to better enable them to adapt to changing climate conditions. Restoration goals include creating conditions that will enable stream systems and associated habitats to adapt to altered flow regimes and disturbances that may result from a changing climate.

Species Refuge Areas (SRAs) are included in Alternative B and defined as areas of quality habitat for Federal Threatened (T), Endangered (E), Candidate (C), and Proposed (P) species (FSH 1909.12, Ch. 40, Sec. 43.22a). These areas either currently provide habitat for Federal TEPC species or may provide habitat needed for future recovery. Species included are Lahontan cutthroat trout, Sierra Nevada yellow

legged frog, whitebark pine, and Tahoe yellow cress. This list is subject to change when species are added or removed.

Alternative B provides mitigation and restoration strategies to ensure sufficient quality habitat is available for special status species populations.

Alternative B includes a proactive approach to the prevention and eradication of unwanted species, such as Quagga mussel, and the active treatment (control and or eradication) of the full spectrum of aquatic invasive species (AIS) populations.

Terrestrial Ecosystems

This alternative addresses safety concerns of communities by focusing fuels treatments in the WUI while emphasizing an active ecological restoration approach that restores and protects natural resources inside the WUI as well as throughout the broader landscape. This alternative includes management direction specifically intended to promote resilience to fire, changing climate, disease, and insect outbreaks.

The Old Forest Emphasis Area land allocation is eliminated; instead, the old growth condition is preserved and perpetuated wherever it occurs, and selected mid-seral forest is promoted for future late-seral conditions. Additional treatments would emphasize regeneration of early seral stage in the major mid seral forested vegetation types; this would be achieved by creating openings. The majority of openings would be less than 5 acres and would range in size from less than one acre to ten acres. In Jeffrey pine, treatments would also focus on reducing mid-seral closed canopy stands to proportions closer to reference conditions; this would mean thinning to create mid-seral open canopy stands and facilitating their succession to late seral.

The desired conditions include a range of forest stand density conditions. Thinning treatments under this alternative would vary within the range of desired tree stocking densities. The low end of the range (less dense stands) provides greater resiliency to insect outbreaks, especially during drought; however, density would vary because other objectives would be considered. For example, where forest health and nesting habitat desired conditions are considered in the same area, a higher density would likely be prescribed.

The above two paragraphs describe the structural heterogeneity which is the desired condition, and which is prescribed to create resilience by mimicking the landscape patterns created by natural disturbance regimes. This degree of heterogeneity is not consistent with the absolute canopy closure limits in Alternative A, so these limits have been abandoned in Alternative B, except within PACs and HRCAs. Trees greater than 30 inches DBH may be removed under certain specified conditions described in the Standards and Guidelines of the Land Management Plan published with the FEIS.

The SRAs would include Whitebark Pine, a recently listed Candidate species. PAC/HRCA management direction is included in this alternative to protect and restore habitat for northern goshawk and California spotted owls. PAC management direction allows PAC restoration activities in this alternative.

Wildland fire is recognized as an essential ecosystem process in need of restoration and this alternative utilizes planned and unplanned ignitions to meet the need. Wildland fire management for resource objectives is allowed in all Fire Management Units except the WUI Defense Zone. After wildfires and

other disturbances, sale of dead and dying trees would be considered once concerns for safety, habitat, soils, and water resources are met, to offset the costs of restoration and to meet restoration goals.

Recreation

The mix of recreation settings as defined by ROS is similar to Alternative A (see ROS Map 9 in the Revised Forest Plan).

Management of developed recreation sites would focus on deferred maintenance (i.e., a need to address deferred maintenance has been recognized but funds are not yet available to perform the maintenance) and/or modification of existing facilities to achieve ecological, social, and economic sustainability of the recreation setting before constructing new facilities to maintain existing opportunities.

Small increases in the number of overnight accommodation units (e.g., campsites and cabins), parking spaces at day use sites and trailheads, and developed acres would be allowed over the life of the plan and new sites could be developed. Recreation infrastructure could increase by 5%. Recreation infrastructure modified or displaced by ecological restoration, financial constraints, or conflicts with other resources would be replaced. The 5% future expansion does not include parking that is relocated from unmanaged parking to managed parking.

Management of existing wilderness and inventoried roadless areas would continue in accordance with current plans and policy direction.

Access and Travel Management

Management of the road and trail system would remain largely unchanged in this alternative, except as described below.

The access and travel management (ATM) planning process would be formalized/acknowledged in the Plan. ATM planning is used to identify needed routes, crossing upgrade and BMP needs, and restoration and reroute opportunities that will protect and enhance natural resources.

Roadside parking would be relocated to managed parking areas, and could include fee parking. Use of transit would be encouraged.

Approximately 30 miles of hiking/equestrian trails and approximately 10 miles of mechanized trails would be added to the trail system. Of this, approximately 30 of those miles would come from currently unauthorized trails that would be upgraded and added to the system and some would be new trail. No additional miles of OHV trails would be added.

2.3.3. Alternative C

Watershed Health and Aquatic Ecosystems

Alternative B and C do not differ. Management direction for watershed and aquatic habitat and species diversity is the same for both alternatives.

Terrestrial Ecosystems

This alternative is similar to Alternative B, with the exceptions that follow.

Vegetation treatments would be designed to reduce the number of entries needed to meet desired conditions by thinning to the lower range of desired tree stocking levels. The reduction in stand densities would be greatest in this alternative.

Wildland fire management for resource objectives is allowed all in all Fire Management Units except WUI Defense and Threat Zones. Wildland fire is recognized as an essential ecosystem process in need of restoration and this alternative utilizes planned and unplanned ignitions to meet the need. Removal and sale of trees following disturbances (fire, insects, disease, wind) is actively promoted to recover commercial value.

Recreation

This alternative would allow the greatest number of overnight accommodation units (e.g., campsites and cabins), the greatest number of day use parking spaces, and the greatest number of developed acres. Future expansion of recreation infrastructure would be allowed up to 15%. The 15% future expansion does not include relocating parking from unmanaged to managed sites. The mix of recreation settings as defined by ROS is similar to that in Alternatives A and B.

Dardanelles Roadless Area is recommended for addition to the National Wilderness Preservation System.

Access and Travel Management

Alternative C would be the same as alternative B in almost all respects, except more intensive management is proposed as it relates to expanding and enhancing recreational access.

Vehicle access to the forest and developed parking would increase. In addition to the ATM goals in Alternative B, reroutes to provide for greater access by reducing grade and increasing road and trail widths would also be included. A greater percentage of roads and trails would be maintained to a higher access standard, enabling more access for passenger vehicles. Challenging trails and roads would be retained in the system, but the percentage of those routes would decrease.

Managed parking, which could include fee parking, and reduction of roadside parking would encourage use of transit. Alternative C would provide for the most managed parking of all the alternatives. Parking capacity could be increased when converting unmanaged parking to managed parking, as described above in Recreation.

Approximately 23 miles of hiking/equestrian trails, approximately 1 mile of mechanized trail and 5 miles of OHV trails would be added to the trail system. Of these, some miles would come from currently unauthorized trails that would be upgraded and added to the system, and some would be new trails.

2.3.4. Alternative D

Watershed Health and Aquatic Ecosystems

A passive management strategy for watershed and aquatic habitat management characterizes this alternative. This strategy would take effect after currently planned restoration projects are completed. Watershed restoration goals would be met by allowing natural processes to control the rate of recovery; restoration actions would be limited to removal of stressors. Terrestrial and aquatic species habitat

objectives would be met by allowing natural processes to control the rate of recovery; restoration would be limited to actions required by law or removal of high priority invasive species.

Watershed condition and aquatic species sustainability would be addressed primarily by reducing and preventing causes of degradation where identified, (i.e. BMP upgrades or decommissioning of facilities, roads and trails, aquatic invasive species prevention, etc.), rather than by active restoration.

No active management beyond currently planned projects would be implemented to stabilize or restore stream channels and associated riparian areas that are out of equilibrium or degraded due to past land use or climate change. Natural processes would be allowed to set the pace to achieve equilibrium with the changing climate and other existing and future stressors.

Terrestrial Ecosystems

Management of natural ignitions and under-burning would be the preferred tools for vegetation and fuels management. There would be a decreased emphasis on mechanical thinning as a surrogate for the natural processes outside the defense zone. Vegetation management outside the WUI would be limited, and natural processes would be allowed to operate within natural range of variability to restore ecosystems and promote resilience. This strategy would take effect after projects identified in the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy have been completed.

This alternative emphasizes late seral forest stand structure and late seral dependent wildlife species habitat protection. Removal of trees greater than 30 inches DBH is prohibited with the exception of hazard trees and to enable equipment operability. Once the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy is complete, the WUI would not include a threat zone, and the diameter limit for tree removal outside the defense zone would be 12 inches. Canopy closure restrictions would be retained. PAC management standards are the same as in Alternative A, and do not allow for restoration activities in PACs. Old Forest Emphasis Areas are retained. Creation of early seral and mid-seral open conditions would depend on high and mixed-severity fire or other mortality agents; this alternative would not include cutting trees to manipulate stand structure for forest health objectives.

Wildland fire is recognized as an essential ecosystem process in need of restoration and this alternative utilizes planned and unplanned ignitions to meet the need. Wildland fire management for resource objectives is allowed all in all Fire Management Units except WUI Defense Zone. After wildfires and other disturbances, sale of dead and dying trees would not be allowed.

Recreation

Recreation infrastructure lost due to ecological restoration, financial constraints or conflicts with other resources would not be replaced. This would account for a reduction of up to 15% of recreation infrastructure. Recreation facilities and developed acres would not be expanded to accommodate increased demand. Permit boundaries may be decreased where development has not yet occurred.

This alternative includes recommendation of the Dardanelles and Freel Roadless Areas for Wilderness designation. Designation of the Freel Roadless Area would alter the mix of recreation opportunities as defined by the ROS.

In addition to the wilderness recommendations, this alternative also shifts roughly 12,000 acres from the General Conservation to the Backcountry Management Emphasis Area. These acres are primarily adjacent to the Freel IRA and Granite Chief Wilderness. These 12,000 acres of Citizen's Inventoried Roadless Area (CIRA) were not analyzed for wilderness potential or considered for wilderness recommendation under this Alternative.

Access and Travel Management

Transportation infrastructure would be considered for decommissioning based upon ecological restoration goals and financial constraints. Maintenance level of roads and trails would be reduced compared to the current maintenance levels. Non-motorized access to the forest would increase. Parking and road access would decrease over time.

A spectrum of opportunities for recreation would be maintained so that challenging trails and roads would be kept in the system, and the percentage of primitive and challenging routes would increase.

Fee parking and reduction of roadside parking would encourage use of transit. Emphasis in this alternative includes a reduction of roadside parking while providing the least amount of managed parking of all the alternatives.

Approximately 30 miles of hiking/equestrian trails would be added to the trail system. Most of these miles would come from currently unauthorized trails that would be upgraded and added to the system. If Freel and Dardanelles IRAs were designated as Wilderness, approximately 17 miles of mechanized trails and 5 miles of OHV trails would be closed to those uses and converted to other allowable uses.

2.3.5. Alternative E: FEIS Preferred Alternative

Alternative E is similar to Alternative B, but differs in these respects:

- Adds approximately 3,600 acres to the Backcountry Management Area. This area is called "Stanford Rock" and is located between Ward and Blackwood Creeks (Maps 15 and 16). It is similar to part of the Backcountry proposed in Alt D, but the boundaries were drawn to exclude lands within the WUI. OSV use is currently allowed in this area and would continue to be allowed. A number of factors, other than solely recreation use, are considered when designating lands as Backcountry. This area was proposed because it only has one road, the need for more roads is not expected at this time for future management, it contains PACs, boundaries were drawn to exclude the WUI, and it is immediately adjacent to wilderness and roadless areas.
- Plan components (Desired Conditions, Objectives, and Standards and Guidelines) were adjusted in response to the comments received on the DEIS. Additional adjustments were made based on internal review.

Watershed Health and Aquatic Ecosystems

Alternative E is similar to Alternative B except more detailed direction was added to address aquatic invasives.

Terrestrial Ecosystems

Alternative E is similar to Alternative B. Fire and fuel treatments remain the same, however, standards and guidelines to protect late seral forest habitats were further clarified, guidance for forest openings was clarified, how to apply the exceptions to the 30 inch diameter limit on tree cutting was clarified, and guidelines for the treatment of post fire habitat were added.

Recreation

Alternative E prescribes limits for developed recreation expansion that are between the limits in Alternatives A and B.

- Developed site acres - approximately 5% increase
- Overnight accommodation units - approximately 10% increase
- Day use parking – approximately 5% increase
- Ski Areas footprint acres – approximately 5% increase
- Developed recreation expansion is defined in the Recreation Program Strategy section of the Revised Forest Plan, and would be tracked through the forest plan consistency process as projects are approved. Expansion limits are defined specifically in a Forest Plan Standard; these are hard numbers and constitute a “bank” of potential recreation development. If we reach the allowed limit, a forest plan amendment would be required to exceed numbers.

Access and Travel Management

Alternative E is similar to Alternative B.

2.4 How the Alternatives Address Relevant Issues

2.4.1. Watershed Health and Aquatic Ecosystems

Degraded Watersheds

Under Alternative A, the primary goal for watershed restoration projects is sediment reduction, with habitat restoration as a secondary goal. Under Alternatives B, C and E, sediment reduction and habitat restoration goals would be given more equal weight overall, though on an individual project, one might be given more weight than the other based on site needs. Under Alternative D, habitat restoration objectives would be met by allowing natural processes to control the rate of recovery; restoration would be limited to actions required by law or removal of high priority invasive species.

Under Alternatives A, B, C and E, new funding would be sought for additional projects after completion of currently planned projects. Under Alternative D, new watershed restoration projects would be limited to removal of stressors, and the rate of watershed recovery would be governed by natural processes. Watershed restoration projects for which planning and implementation funding has been secured would continue under all alternatives.

Public Use Impacts to Aquatic Habitats

Alternative A allows outdoor recreation facilities in SEZs under limited circumstances, including where the nature of the activity is dependent on the location, where there is no feasible alternative, and where it is fully mitigated. Under Alternative B, C and E, facilities removed from SEZs would be replaced elsewhere, while in Alternative D, facilities may be removed without replacement.

Vegetation Management Impacts to Stream Environment Zones

Fuels treatments in SEZs would be similar under Alternatives A, B, C and E. LTBMU would continue on the current course with treatments that reduce the hazard of catastrophic wildfire while protecting natural resource values in SEZs.

Under Alternative D, SEZ fuels reduction treatments outside the WUI defense zone would limit tree removal to trees 12 inches in diameter or less after hazardous fuels treatments identified in the Lake Tahoe Basin Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy are completed. In addition, under Alternative D, the treatment tools in order of preference would be (1) management of natural ignitions (2) prescribed fire (3) hand thinning (4) mechanical thinning. This strategy would limit mechanical treatments in SEZs under Alternative D.

Vegetation management undertaken purely for ecosystem restoration objectives would involve more intensive treatments under alternatives A, B, C and E, than under Alternative D. Fuels reduction and vegetation restoration treatments for which planning and implementation funding has been secured would continue under all alternatives.

Special Status Aquatic Species

Protection and conservation measures for threatened and endangered species, and Region 5 sensitive species, would meet all requirements of law and Forest Service policy in all alternatives. Recovery actions mandated by law would be implemented in all alternatives. Alternatives B, C and E would promote species recovery through active management, while Alternative D would allow natural processes to control the rate of recovery.

Aquatic Invasive Species

Alternative A allows for management of AIS, but provides little specific direction. Alternatives B, C and E add an aquatic invasive species management strategy. Alternative D would limit AIS management to actions required by law or removal of high priority invasive species.

Climate Change

Alternative A allows for watershed and aquatic habitat management actions to increase resiliency to changing climate conditions, but does not provide any specific guidance. Alternatives B, C, and E include strategies aimed at increasing resiliency, while Alternative D employs a strategy of relying on natural processes to achieve equilibrium with a changing climate.

2.4.2. Terrestrial Ecosystems

Forest Health, Hazardous Fuels, and Terrestrial Wildlife Habitat

Forest health management in Alternative A is primarily focused on early and late seral, and does not differentiate between vegetation types, an approach not supported by current science. While this alternative does not prohibit management for other seral types and specific vegetation types, it fails to provide guidance. Alternatives B, C, D and E, provide detailed desired conditions designed to shift the LTBMU forests onto a sustainable trajectory. The desired conditions are supported by strategies and standards and guidelines which provide guidance to achieve heterogeneity and associated benefits.

While Alternatives A, B, C, and E are similar in many respects, they differ in several important areas. Unlike Alternative A, Alternatives B, C, and E recognize that different vegetation types should have different distributions of seral stages, and provide management direction specific to four different forest types. Alternatives B, C, and E prescribe management for old growth conditions wherever they occur on the landscape, as opposed to the site-specific Old Forest Emphasis Areas in Alternative A. Alternative B includes six exceptions to the 30 inch diameter limit, to achieve forest health, restoration and safety goals and Alternative E further clarifies how those exceptions would be applied. Canopy closure limits are retained only for PACs and HRCAs in Alternative B. Alternative E adds guidance for retaining habitat connectivity between PACs, and includes canopy removal restrictions for late seral closed canopy stands.

While in Alternative A, only the LTBMU portion of the Desolation Wilderness is available for managing wildfire for multiple objectives, in Alternatives B, D, and E, the only area not available is the defense zone. Alternative C excludes the WUI threat and defense zones.

Alternative C prescribes thinning to the lower range of desired tree stocking levels, reducing stand densities more than in Alternatives B and E. Old growth conditions would be managed as in Alternative B and exceptions to the 30 inch diameter limit and canopy closure limits are the same as in Alternative B.

Under Alternative D, the WUI would not include a threat zone. A 12-inch diameter limit outside the defense zone would be employed. Prescribed fire would be used to restore ecological processes and create resilience. Vegetation management outside the WUI would be limited, and natural processes would be allowed to operate within the natural range of variability to restore ecosystems and promote resilience. Management of wildfire for multiple objectives would be the same as in Alternative B.

Under Alternatives A and D, California Spotted Owl and Northern Goshawk PACs would be managed as currently described in the 2004 SNFPA Record of Decision. Under Alternatives B, C, and E, PAC management standards would be expanded to allow PAC restoration activities to enhance habitat while meeting hazardous fuels reduction objectives.

Climate Change

Alternative A does not address climate change. Alternatives B and C use a suite of silvicultural tools to manipulate stand structure and stand density with the goal of making stands more resilient to wildfire, drought, insect outbreaks and other disturbances that may accompany a changing climate. Alternatives B and C also provide the heterogeneity needed for habitat diversity which would better enable wildlife species to adapt to change. Alternative D uses a more passive approach, in which nature is allowed to provide most of the needed change. Manipulation of stand structure and density would primarily be used to protect communities from wildfire in Alternative D. Alternative E further recognizes climate change by providing desired conditions and strategies in the forest plan.

2.4.3 Recreation

Balance of Recreation Opportunities

Alternatives A, and B continue the current mix of settings and activities with approximately 45% of the NFS lands providing a relatively primitive environment (Backcountry and Wilderness Management Areas) and 46% providing a more developed environment (General Conservation). Alternative C maintains this balance while shifting 9% of the Backcountry acres to Recommended Wilderness.

Alternative D includes 52% of NFS lands in Wilderness, Recommended Wilderness and Backcountry; this alternative both adds Backcountry acres and shifts existing Backcountry acres to Recommended Wilderness. Alternative E would slightly shift the current mix towards more primitive opportunities through the addition of the Stanford Rock Backcountry MA (approximately 3,600 acres) for a total of 43% General Conservation and 46% in Wilderness and Backcountry (see Figure 2-1).

Management of a range of opportunities is emphasized in all alternatives. While management for shared use is a current emphasis, and would be continued under all alternatives, a strategy for management of user interactions is specifically described in Alternative E.

OSV use would not vary by alternative. Approximately 52% of LTBMU lands would remain open to OSV use and 48% would remain closed to OSV use. Non-motorized winter recreation would continue to be allowed on 100% of LTBMU lands.

Recreation Development and Economic Opportunities

Alternatives B and E would provide fewer opportunities for expansion and new development of recreation infrastructure than Alternative A. Alternative C would provide the most opportunities. Alternative D would provide the fewest opportunities for development and expansion. Under Alternative D, recreational infrastructure lost due to ecological restoration, financial constraints, or where conflicts exist with other resources would not be replaced.

Alternative A prescribes development or expansion of specific sites and allows for development and expansion elsewhere. Alternatives B, C, D, and E do not prescribe any site-specific development or expansion. Alternatives B and E focus on maintaining existing sites while allowing for expansion and development to maintain capacity and in some cases, to respond to future trends in recreation demand.

Wilderness

Alternatives A, B, and E retain current designated Wilderness areas. Alternative C recommends the Dardanelles IRA for wilderness designation, and Alternative D recommends both the Dardanelles and Freel IRAs for wilderness designation.

2.4.4. Access and Travel Management

Access to National Forests via Facilities, Roads and Trails

The maintenance level (use type) of roads and trails changes by alternative. Implementation of these changes would be dependent on funding availability, and opportunities to coordinate with other transportation agencies.

Roads and trails may be added to the managed system by the adoption of unauthorized routes, and/or the construction of new roads and trails (on a project-specific basis), but no programmatic expansion of the road system is proposed in any of the alternatives.

Alternatives B and E would provide a slight increase in the total miles of road open to passenger vehicles by opening currently closed routes. Alternative C would provide the greatest increase in mile of road open to passenger vehicles, and Alternative D would provide a decrease through closing additional routes currently open.

Under Alternative D, the miles of road available for OHV use would increase.

Miles of trails open to motorized use would be the same under Alternatives A, B, and E, would increase slightly under Alternative C, and would decrease slightly under Alternative D.

Miles of trails open to mechanized (mountain bike) use would be the same under Alternatives A, B, and E, would decrease slightly under Alternative C, and would decrease the most under Alternative D, largely due to wilderness recommendation.

Miles of trails open to non-motorized, non-mechanized use would remain the same under Alternatives A, B, D, and E, and would decrease slightly under Alternative C.

Parking and Multi-Modal Transit

Differences among alternatives are primarily differences in strategy; implementation would be dependent on funding availability and opportunities to coordinate with other transportation agencies.

Current parking capacity (outside of day use and trailhead parking) would be maintained in Alternatives B and E by adoption of unmanaged sites (hardening, BMPS), and eliminating unmanaged roadside parking. Parking capacity would be increased in Alternative C while converting unmanaged parking to managed parking. Alternative D would decrease total parking capacity as compared to Alternative A. Fewer unmanaged sites would be adopted than in Alternatives B and C and E, and unmanaged roadside parking not converted would be eliminated.

Parking for dispersed winter recreation would increase under Alternatives B, C and E and would remain the same in Alternatives A and D.

All alternatives include strategies to promote transit use, such as linking bicycle trails to bus stops.

Use Conflicts

While Alternatives A, B, C, and D would continue on current trends of managing use conflict by promoting shared use of the trail system and designing the trail system to minimize use conflict and

include education, layout, and maintenance, a strategy for management of use conflict is specifically described only in Alternative E.

2.5 Alternatives Considered but Eliminated from Detailed Study

2.5.1. Conduct Revision as Part of a Sierra Nevada Ecoregion Plan

In response to the NOI, some members of the public suggested that the LTBMU plan revision should be accomplished as part of a broader Sierra Nevada-wide planning effort, similar to the Sierra Nevada Forest Plan Amendment (SNFPA). This approach was considered and rejected by the Regional Forester, because the LTBMU plan revision was already well underway.

Revision started with the Pathway process in 2004. The Pathway agencies (LTBMU, TRPA, Lahontan and Nevada Division of Environmental Protection) developed a set of common vision and desired condition statements through an extensive public collaboration process which are included in all the action alternatives. Continuing the revision process will enable LTBMU to incorporate the shared vision for the Lake Tahoe Basin in our revised Plan. If the LTBMU Forest Plan were revised as part of a broader planning effort, local issues might receive a lesser degree of consideration.

2.5.2. Recommend Additional Wild and Scenic Rivers

The Record of Decision for the Eight Eastside Rivers EIS (USDA Forest Service Tahoe National NF and LTBMU 1999) made a preliminary recommendation to designate a segment of the Upper Truckee as Wild under the Wild and Scenic Rivers Act (16 U.S.C. 1271-1287, Public law 90-542 October 2, 1968). The Regional Forester approved the decision but no further action was taken to designate this segment. The management plan for the segment remains in effect, to ensure eligibility is maintained.

Prior to publication of the DEIS, a coalition of conservation groups requested that additional stream segments in the Lake Tahoe basin be recommended for designation under the Wild and Scenic Rivers Act. The Forest Service reviewed the Eight Eastside Rivers Wild and Scenic River Study, and the interdisciplinary team found no changed circumstances that would render additional rivers eligible for designation.

Numerous comments on the DEIS requested recommendation of additional stream segments, particularly all 32 miles of the Upper Truckee River and its tributaries and the 24 miles of the Truckee River below Lake Tahoe.

The eligibility and suitability findings for the Truckee River below Lake Tahoe did not change between the Draft and Final EIS, and remain as stated in Appendix B. This FEIS does not propose to recommend the Truckee River below Lake Tahoe for protection under the Wild and Scenic River Act.

In response to instructions from the objection Reviewing Official, Appendix B was revised to include an eligibility study for all LTBMU lands. However, the instructions did not require a suitability study at this time, and therefore no additional recommendations to the Wild and Scenic River System are included in the Alternatives.

2.5.3. Revise the Over-Snow Vehicle Use Designations

Some members of the public requested additional snowmobile closure areas to prohibit snowmobile use in specific areas with known use conflicts and in sensitive areas. Separating snowmobile use from other winter recreation was also advocated.

Other members of the public requested designation of additional areas for snowmobile access, and yet others think the current over-snow vehicle policy is acceptable.

National Visitor Use Monitoring (NVUM) surveys provide our major source of recreation monitoring. These surveys found that overall visitor satisfaction with recreation opportunities on the LTBMU is very high. Uses surveyed in NVUM include both motorized and non-motorized winter activities. Less than 10% of visitors surveyed identified either cross-country skiing or snowmobiling as their main activity, while 62% of visitors identified downhill skiing as their main activity.

While both OSV users and non-motorized users expressed discontent with the size and location of areas designated for their preferred activities, we received few specific suggestions for changes, and none that we thought would be acceptable to all parties. Thus, at this time we have no proposal for an alternate designation of areas that would reduce the perceived use conflict, and have not analyzed any other alternatives that would propose changes to designations of areas open or closed to OSV use.

All user groups expressed discontent with the available amount of winter parking; some stated that this lack effectively eliminated access to some of the lands open to them. While we recognize that providing more parking could increase satisfaction with the current mix of designated areas, site-specific decisions are outside the scope of this FEIS. Site-specific proposals for additional winter parking may be considered in the future as funding and/or partnership opportunities become available. Increasing winter parking is included as a strategy in Alternative E.

Although concerns about OSV effects on natural resources such as air, water, and wildlife were expressed, our analysis did not reveal any significant impacts resulting from the current mix of motorized and non-motorized winter recreation use that would drive a change in use.

To minimize conflict, separation of uses is in effect on the 48% of LTBMU lands closed to OSV. This provides the non-motorized users with the relative solitude and quiet recreation experience they value. On the remaining 52% of LTBMU lands, there is an expectation that motorized and non-motorized users will share the land in a safe and courteous manner. This expectation is consistent with the LTBMU policy for summer uses: most trails are mixed use. It is also worth noting that a small but growing number of people use snowmobiles to access back-country ski areas, so the issue is not as polarized between user groups as it has been in the past.

The 1982 planning regulations at 36 CFR Part 219.21g require planning for off-road vehicle use, which includes OSV use. These requirements were met in the 1988 Land and Resource Management Plan, which describes open and closed areas in each Management Area. We propose to carry forward the current designations as shown on the published LTBMU Snowmobile Guide map and Map 18 in the Revised Forest Plan (USDA Forest Service LTBMU 2010c). The current map, plus the current published Motor Vehicle Use Map (MVUM) show the classification of “areas and trails of National Forest System lands as to whether or not off-road vehicle use may be permitted.”

Given that no significant impacts that would drive a change in designations were revealed in the analysis, and no alternate proposals surfaced that would reduce perceived user conflicts, this FEIS has not analyzed any additional alternatives designating areas for OSV.

Future changes to open and closed areas will be accomplished in accordance with Forest Service Travel Management regulation and policy (36 CFR Part 261, FSM 7700, and FSH 7709.55 Chapter 10).

Summary:

- Cross-country skiers and snowshoers want more areas closed to snowmobile use.
- Snowmobilers want more areas open to snowmobile use.
- Current designations allow snowmobiles on 52% of LTBMU lands and provide for exclusively non-motorized winter use on 48% of LTBMU lands. Non-motorized winter use is allowed on 100% of LTBMU lands.
- These areas were designated in the 1988 Forest Plan.
- No significant impacts resulting from the current mix of uses were revealed in the analysis.
- No solutions came to light during Forest Plan revision that would reduce the perceived use conflict. Neither the public nor the interdisciplinary team proposed an alternate mix of uses that would be acceptable to all parties.
- No additional alternatives designating OSV use have been analyzed.
- This FEIS proposes to carry forward the current designations as shown on Map 18 of the Revised Forest Plan.

2.5.4. Increase the Pace and Scale of Ecosystem Restoration

The following is excerpted from a regional policy document, Ecological Restoration: Engaging Partners in an All Lands Approach (USDA Forest Service Pacific Southwest Region (R5) 2010), published in January 2010:

“While sound restoration work is being conducted throughout the Region to increase forest and watershed resilience, important indicators suggest that disturbance impacts already outpace the benefits of this work, and that we will fall further behind over time.....To counter these trends, forest managers will need to significantly increase the pace and scale of the Region's restoration work. Only an environmental restoration program of unprecedented scale can alter the direction of current trends.”

In accordance with this policy, the feasibility of increasing the pace and scale of vegetation treatments and watershed restoration projects was analyzed. We concluded that LTBMU is currently operating at capacity in restoring watersheds and vegetation. Over much of the past decade, funding obtained through the Lake Tahoe Restoration Act (LTRA) and the Southern Nevada Public Lands Management Act (SNPLMA) has provided the LTBMU with annual budgets far in excess of typical federal budget allocations, which has enabled us to accomplish more vegetation and watershed restoration work than most other forests.

The major watershed restoration needs have been identified, proposals have been funded, and some projects have been completed or are in progress. For stream channel projects, implementation is restricted to a relatively short period each year when stream flows are low enough to permit in-channel work without undue water quality impacts. Additionally, some projects must be staged (e.g. Blackwood

Creek) to allow the stream channel time to stabilize before additional work is done. Thus, it is not possible to increase the pace of restoration.

Similarly, hazardous fuels reduction needs in the wildland-urban interface (WUI) have been identified in the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy, funding has been secured, and planning and implementation are underway. Increasing the scale of these treatments does not make sense, given the relatively small size of the Lake Tahoe Basin. Initial fuels treatments in the WUI are projected to be complete during the upcoming plan period.

2.5.5. Citizen's Inventoried Roadless Areas

A number of areas were identified by members of the public as currently unroaded and relatively undisturbed and were shown on a map as Citizen's Inventoried Roadless Areas (CIRAs). The respondents proposed designating these as roadless areas or Wilderness. Some of these areas had been mislabeled in the DEIS maps and are actually IRAs; this mistake has been corrected in the FEIS maps. The remaining CIRAs were included in the Backcountry Management Area in Alternative D but were not analyzed for Wilderness potential or considered for Wilderness recommendation. Approximately 3,600 acres of one of the CIRAs is included in Alternative E as the Stanford Rock Backcountry Management Area; these lands would receive a level of protection similar to IRAs.

2.5.6. No Grazing Alternative

Respondents requested an analysis of the consequences of grazing and analysis of a No Grazing Alternative. Effects from grazing were analyzed in section 3.4.27 of the FEIS. The changes from the 1988 Forest Plan were analyzed and any new acquisitions in those allotments were identified. A brief analysis of the effects of the alternatives on range resources is included.

Consequences of grazing on other resources were not analyzed because all allotments are currently vacant and no applications are pending. As all three of our current allotments are vacant, there are not currently any new or ongoing consequences from grazing. Areas grazed in the past are recovering and some have undergone restoration; these trends would continue in the absence of future grazing.

Consequences of a no grazing alternative would be similar to the current condition and trends described for all potentially affected resources in the FEIS and when conducting allotment-specific NEPA, a no grazing alternative will be analyzed.

2.5.7. 2001 SNFPA Alternative

Respondents requested analysis of an alternative that corresponds to the 2001 Framework decision, which

- generally allows substantial forest thinning of trees up to 20" dbh,
- institutes an active management approach that would result in more active management than Alternatives B and C (and A)
- focuses on actively managing forests, including mature trees, to accomplish ecological goals, but by actively creating habitat structures without commercial logging.

With the alternatives presented we have analyzed a reasonable range of alternatives. The alternative requested falls between Alternatives B and D, and thus the range of effects are substantially the same as the requested alternative. In addition, the 2001 framework decision was found to not be responsive

enough to the resilience and sustainability of forests in the long-term and was supplemented by the 2004 SNFPA decision.

While it is generally not necessary to remove trees greater than 20 inches diameter to reduce fire hazard, the Declaration of Carl Skinner (Skinner, No. CIV-S-05-0205 MCE/GGH) provides an example of conditions where it may be necessary to remove trees greater than 20 inches in diameter for fire hazard purposes:

“An example of conditions where it may be necessary to remove trees greater than 20 inches in diameter for fire hazard purposes would be where a stand of relatively dense, young trees has entered, or is entering, a self-thinning or stem exclusion stage (Oliver and Larson 1990; Smith and other 1997), and many of the trees are greater than 20 inches in diameter.... Stands in this condition will likely support crown fires if the fire is crowning when it reaches the stand (Keyes and O’Hara 2002). Additionally, the density and size of the trees on the site cause sufficient competition with each other, leading to the death of the weaker trees, often from bark beetles (Oliver and Uzoh 1997). The dead trees will then accumulate as fuel when they fall, and contribute to high-intensity fire when burned. In cases like this, thinning trees larger than 20 inches in diameter and treating residual surface fuels are necessary to help reduce the fire hazard and improve the fire resilience of such a stand.”

This situation is found on the LTBMU and in the South Shore project. While there are some stands in that project where the desired stocking level of 80 to 150 sq ft basal area per acre might be reached by only removing trees up to 20” there are many stands where a 20” diameter limit would leave too many trees and the stand would be over stocked, unhealthy and vulnerable to wildfire, drought stress, and insect attack (LTBMU, 2011).

This is supported by the declaration of Christopher J. Fettig (Case No.: CIV-S-05-0205 MCE/GGH)

“...Trees 20”-30” dbh, which appear to be an important difference between the 2001 and 2004 Framework decisions, are often prime targets for bark beetles California is the highest ranked among all U.S. states for risk of bark beetle-caused tree mortality (Krist et al. 2007, p. 55; Fig. 1), the majority of which is concentrated in the Sierra Nevada.”

Similarly, the declaration of Joseph Sherlock (Case No.: CIV-S-05-0205 MCE/GGH) includes the following:

“The ability to remove competing trees that can range up to 30” in diameter allows thinning to have significant biological advantages over the common 12” or 20” limits that are common in the 2001 Framework. These 2001 Framework limitations often prevent the removal of sufficient trees to provide for a real advantage to the remaining trees since the density of the medium-sized trees remains too high. The current conditions of so many forested acres in the Sierra Nevada are such that merely removing only the smallest trees would not be enough to allow the remaining trees to thrive, especially as they face warmer temperatures and longer summers, as predicted under current climate change models.”

The declaration of Nancy Grulke (Case No.: CIV-S-05-0205 MCE/GGH) reiterates these concepts and adds wildlife habitat considerations:

“In some dense stands with a current canopy cover of 90%, almost all trees are larger than 20” in diameter. For example, 9 such stands on the east side of the Sierra Nevada are the focus of currently funded research I am conducting. Depending on the microenvironment and the density of the stand, it may be appropriate to harvest trees over 20” and/or reduce canopy cover less than 50% to allow the removal of a sufficient number of trees to reduce competition, promote tree health, reduce the level of drought stress experienced, and reduce tree mortality from both drought stress and bark beetle outbreaks. In the absence of thinning in areas where excessive tree mortality occurs due to drought and/or successful beetle attack, habitat for wildlife that depends on live trees will be lost, whether it is by drought stress, beetle outbreaks, or fire.”

In order to maintain the roadless character of IRAs, tree removal is generally limited to a 20” limit. Treatments in IRAs are generally hand treatments due to lack of road access and most hand crews are unable to cut trees greater than 20” diameter. Thus a 20” limit is effectively being utilized on about 1/3 of the LTBMU. No treatments are implemented in Wilderness, so when Wilderness lands are also considered, the 20” limit is effectively utilized on about ½ of LTBMU lands. Other treatment limitations such as slope are discussed in Section 3.4.11-Forest Vegetation, and further decrease the area where trees greater than 20” would be removed.

However, under certain conditions it is necessary to remove larger diameter trees (>30”). These conditions are described in S&Gs 33, 34, and 35, and include forest and stand health, safety, and operational constraints.

The Forest Service is reducing higher than natural fuel loads, which means that some fuels must be removed while others may be altered in place or burned. We do utilize such materials for dust abatement, mulch, slope stabilization, and control of regeneration. Although some wood is removed in the form of a sale, these treatments are generally not a commercial operation. We agree that some trees can be girdled or otherwise killed in place for use as snags by wildlife. This has been added to forest vegetation S&Gs in the Revised Forest Plan.

Re-introducing the role of fire that has been absent from many forest stands is a primary goal as well. Part of the rationale for the 2004 Framework decision was that the Forest Service found that it was not feasible to implement the amount of prescribed fire use in the 2001 Framework decision:

“The 2001 Plan prescribed technical solutions that do not produce needed results, or offered methods we often dare not attempt in the current Sierra Nevada. In particular, the directive of using fire itself to thin the forest is too risky to attempt many cases. The thinning guidelines were too meager. Forest protection against devastating fires in the time frame needed would not and could not occur” (USDA Forest Service 2004b).”

In this respect again, the 2001 Framework decision was similar to Alternative D in its reliance on prescribed fire to achieve forest health objectives. This is discussed further in Section 3.4.10 – Fire and Fuels of the FEIS.

One of the main reasons for the 2004 SNFPA decision was that the influence of drought and climatic variances throughout the range of the Sierra Nevada was overlooked. These conditions influence the resilience and sustainability of forests in the long-term, especially in forests that are overstocked with too many trees. Over the last 300 years, the climatic condition in California has been one of an extended

period of moisture surplus, punctuated by drought periods. The moisture surplus combined with fire suppression and selective logging practices in the late 1800s and early 1900s increased forest density and changed species composition. Increasingly, the land cannot supply enough moisture during drought conditions to supply all of the trees growing on it. This makes forests more susceptible to drought, insects, diseases, air pollution and, of course, catastrophic wildfire. Mortality from bark beetles is increasing exponentially in the state. The current situation in Southern California shows the type of catastrophic impact that drought and bark beetles can have on forest vegetation. Sierra Nevada forests are unhealthy today and susceptible to the same widespread dieback that is occurring in Southern California.

We believe that the respondent is equating active management with wildlife habitat management. Alternatives B, C and E prescribe active approaches for management of wildlife habitat, while Alternative A is mostly silent on active management and Alternative D incorporates a passive approach. This allows us to describe the consequences from a range of passive and active approaches to management and is a reasonable range of alternatives.

This Forest Plan would further improve our ability to respond to deteriorating forest health by allowing more latitude in the amount and type of vegetation that can be removed within treated areas.

2.5.8 Consider the Document “National Forests in the Sierra Nevada: A Conservation Strategy” As an Alternative

A group of respondents submitted a Conservation Strategy for National Forests in the Sierra Nevada with the request that it be analyzed as an alternative in detail. We appreciate the extensive work and research that went into this document and support many of the concepts and strategies proposed. The respondents will find some of these concepts are already in place under our current Plan (e.g. community fire planning through the 2007 Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy, which involved 17 agencies; completion of Travel Analysis and decommissioning of over 100 miles of roads as described in Section 3.4.1), some have been incorporated into our planning process and documents (e.g., science review), and others are largely consistent with our Revised Plan (e.g. managing Inventoried Roadless Areas as a Backcountry Management Area to maintain their roadless character in the future). In most instances where the Preferred Alternative is not in agreement with the Conservation Strategy, concepts and direction similar to those in the Conservation Strategy are included as part of an alternative that was analyzed in detail. For these and other reasons, described below, we concluded that a detailed analysis of the Conservation Strategy was not needed.

Recreation – The Multiple Use Sustained Yield Act (PL 86-517) states “it is the policy of the Congress that the national forests are established and shall be administered for outdoor recreation, range, timber, watershed, and wildlife and fish purposes.” The Conservation Strategy does not meet the requirements for multiple use management because consideration of recreation is almost exclusively limited to management of the negative impacts of recreation on natural resources. The LTBMU receives over 5.7 million visitors per year and has been found by Congress to be “one of the outstanding recreational resources of the United States, offering skiing, water sports, biking, camping, and hiking to millions of visitors each year, and contributing significantly to the economies of California, Nevada, and the United States” (Lake Tahoe Restoration Act, PL 106-506). The LTBMU requires a Plan that considers recreation as a resource and takes a more positive, pro-active approach than is offered in the Conservation Strategy.

Scale – the Conservation Strategy is regional in scale and is not site-specific enough to serve as a Forest Plan for the LTBMU. It includes direction for ecotypes and species not found in the Lake Tahoe Basin (e.g. oak woodlands, great gray owl) and does not adequately consider the unique properties of the area. For example, approximately 75% of LTBMU lands are defined as WUI through mapping done in conjunction with the 2007 Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy. The 17 agencies who developed this strategy did not consider a ¼ mile Community Zone as proposed by the Conservation Strategy to be adequate community protection given the current state of the forests. In addition to the ¼ mile Defense Zone around communities, implementation of hazardous fuel treatments in an additional ½ mile Threat Zone beyond the Defense Zone was proposed. This strategy has been adopted in Alternatives A, B, C, and E (Preferred Alternative) and is shown on Map 4. Alternative D proposes completion of the treatments proposed in the 2007 Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy in both the Threat and Defense zones; but eliminates the Threat Zone after initial treatments are completed (Map 5); in this respect, Alternative D is similar to the ¼ mile Community Zone proposed in the Conservation Strategy and so this element of the Conservation Strategy was in fact analyzed in detail.

Given the relatively small size of the LTBMU (about 155,000 acres), relatively high population, and extremely high visitor use, a Forest Plan is needed that provides robust consideration of human presence and needs, including the local recreation-based economy. With its strong focus on habitat management, the Conservation Strategy would be more appropriate for management of more remote lands.

2.6 Comparison of Alternatives

2.6.1. How Plan Decisions Change by Alternative

This section describes how the management direction in the revised Plan would vary by alternative. The section is organized according to the six plan decisions to be made in this FEIS, as described in the Decision Framework section of Chapter 1.

Multiple Use Goals and Objectives

Multiple Use Goals in Alternative A include the Forest Goals and Predicted Future Conditions in the 1988 LRMP (p. IV-1-11) and the Goals, Desired Conditions, and Objectives in the Sierra Nevada Forest Plan Amendment (ROD, Appendix A) that pertain to the LTBMU.

In Alternatives B, C, D, and E, the Multiple Use Goals are the Desired Conditions in the Vision section of the Revised Plan. These have been updated to reflect best available science and the collaborative public vision expressed in the Pathway documents and public comment. Desired conditions remain constant among alternatives B, C, and D. A few desired conditions were added or clarified in Alternative E.

Alternative A includes objectives in the 1988 LRMP, which are expressed as resource outputs (p. IV-11-13), plus a set of objectives in the SNFPA (ROD, Appendix A, p 32-33 and 42-48) which clarify goals and management intent. Objectives in Alternatives B, C, D, and E vary according to the alternative strategies, and are expressed as time-specific, measurable management accomplishments which represent milestones designed to narrow the gap between existing and desired conditions. For example, ecosystem restoration objectives are similar in Alternatives B, C, and E, but smaller areas and fewer kinds of activities are proposed in Alternative D, which emphasizes allowing natural processes to dictate the pace

and nature of restoration. Appendices H and I in the Revised Plan provide specific detail about how strategies and objectives vary among the action alternatives.

Standards and Guidelines

Most of the geographic-based Management Area standards in the 1988 LRMP were eliminated in Alternatives B, C, D, and E. Geographic-based management areas were replaced by broad Management Emphasis Areas (see Suitability of Areas discussion, below). While Alternatives B, C, D, and E include a few Management Area standards and guidelines, the vast majority of standards and guidelines apply forest-wide.

- Standards and guidelines that prescribed additional assessments or monitoring were removed in Alternatives B, C, D, and E because these are no longer considered appropriate content for standards and guidelines.
- Alternative E includes expanded terrestrial and aquatic invasive species standards and guidelines.
- Most standards for habitat management for species not present on LTBMU were removed.
- Canopy closure limits in Alternative A were eliminated in Alternatives B, C, and E, and retained in Alternative D.
- The 30-inch diameter limit for tree removal (other than hazard trees and to enable equipment operability) was removed as an absolute limit with seven exceptions in B and C, but retained in Alternative D. This standard was included and clarified in Alternative E. Alternative D would also impose a 12 inch diameter limit for tree removal outside defense zone.
- Guidelines were added in Alternative E to clarify the procedure for identifying proposed forest openings on the landscape to ensure an interdisciplinary approach.
- In response to comments, the standard for retaining burned forest habitat after wildfires was changed in Alternative E from a quantitative standard to a process-based standard to ensure greater consideration of wildlife habitat needs.
- PAC standards were revised for Alternatives B, C, and E to allow restoration of PACs; Alternative D retains the standards in Alternative A. Alternative E also includes a guideline to maintain connectivity between PACs, and limits canopy removal in late seral closed canopy stands.
- Alternative E expands guidance for management of nationally designated trails such as the Pacific Crest National Scenic Trail and the Tahoe Rim Trail.
- Recreation expansion (defined in the strategies section) is limited by a standard in Alternative E. A Forest Plan amendment would be required to exceed the standard.

Numerous standards and guidelines were added to the action alternatives to address current management concerns.

The Identification of the Suitable Uses for Each Management Area

Alternative A

Management areas and their suitable uses in Alternative A are defined by a set of discrete geographic Management Areas (e.g. Emerald Bay Management Area) with associated prescriptions, practices, and standards in the 1988 LRMP. Urban Lots are also a management area. In Alternative A, the allocations

and delineations from the SNFPA ROD are then overlain on the Management Areas. The result is a set of relatively complex Forest Plan direction.

In the 1988 LRMP, each management area has a set of prescriptions which in turn are composed of a set of practices. Each practice has forest-wide standards associated with it. In addition, each management area has specific standards.

The SNFPA land allocations and delineations are overlain on top of the management areas; these allocations are:

- California spotted owl and northern goshawk PACs
- Home Range Core Areas
- WUI Defense Zones
- WUI Threat Zones
- Old Forest Emphasis Areas
- General Forest

Additional delineations include Riparian Conservation Areas and Critical Aquatic Refuges. Specific standards are applied to each land allocation and delineation.

Alternatives B, C, D and E

Alternatives B, C, D and E do not include the geographic-based Management Areas in the 1988 LRMP.

Alternatives B, C, D, and E include four Management Areas:

- Wilderness (congressionally designated)
- Backcountry (includes but is not limited to Inventoried Roadless Areas)
- General Conservation
- Urban Forest Parcels/Santini-Burton Lands

Within each of these management emphasis areas, activities are described as generally suitable or not suitable (Revised Forest Plan, Chapter 2.3 Management Areas and Suitable Uses; Revised Forest Plan, Table 5).

Suitable uses in Backcountry management areas recommended for Wilderness designation would not change until the area is designated by Congress.

While suitability in Wilderness is defined by the Wilderness Act and the Desolation Wilderness Management Plan, the suitability of many activities and uses in General Conservation lands is dependent on the desired conditions, objectives, and standards and guidelines that apply to a specific project location. These are often tied to the resource overlays:

- WUI Defense Zone
- WUI Threat Zone
- PACs and HRCAs
- Species Refuge Areas (SRAs)
- Stream Environment Zones
- Ski Area Development
- Fire Management Units
- Recreation Opportunity Spectrum
- Snowmobile Area Map

- Minimum Scenic Integrity
- Minimum Scenic Stability
- Communications Sites
- Recreation Special Use Permit Areas
- Lands Special Use (Non-recreation) Easements

In addition to management direction associated with the resource overlays, projects would need to be consistent with specific management direction for designated Special Areas (e.g. historic sites, scenic byways). A list of designated Special Areas is found in Part 2 of the Revised Forest Plan.

The proposal to change from 21 geographic-based management areas to the system described above is more consistent with our current approach to project planning. Much of the geographically specific management area guidance has become irrelevant or is better described on the resource overlay maps, which can be updated as needed. At the start of project planning, we would look first at the management area(s) in the proposed project area and the table of suitable uses to determine initial suitability for the project or activity. If it appears suitable, we would then use the resource overlays to gain an understanding of potential constraints (desired conditions, objectives, standards and guidelines). Locations of any identified resource concerns would later need to be field-verified.

Alternatives B, C, D, and E vary in the way the SNFPA land allocations and delineations are retained:

- CAR boundaries were revised and expanded to include habitat for terrestrial and aquatic threatened, endangered, and proposed and candidate species and were renamed as Species Refuge Areas. Alternatives B, C, D, and E add Species Refuge Areas for Lahontan cutthroat trout (threatened), Sierra Nevada yellow-legged frog (proposed endangered), whitebark pine (candidate), and Tahoe yellow cress (candidate). The delineations would be revised as the species list changes.
- PACs and HRCAs are retained in alternatives B, C, D, and E but the standards and guidelines are revised in Alternatives B, C, and E, as described above.
- The RCA delineation is replaced by site-specific project-level SEZ delineation with most of the standards retained and applied to SEZs in Alternatives B, C, D, and E.
- WUI (Defense and Threat Zones) is now a resource overlay, not a land allocation. Alternatives B, C, and E retain the WUI as in Alternative A, but Alternative D omits the Threat Zone.
- Similarly, Old Forest Emphasis Areas (OFEAs) are dropped in Alternatives B, C, and E, and replaced by desired conditions and objectives for seral stages. OFEAs are retained in Alternative D.

In Alternatives B, C, and D, the Backcountry Management Area includes all current Inventoried Roadless Areas. Alternative D proposes the addition of roughly 12,000 acres to the Backcountry Management Area; Alternative D includes the least number of Backcountry acres (due to Wilderness recommendations). Alternative E would add the Stanford Rock Backcountry MA (approximately 3,600 acres).

Alternative A includes several management prescriptions for developed recreation that describe the kinds of activities allowed within the prescription area boundaries; developed recreation is limited outside these boundaries. For Alternatives B, C, D, and E, developed recreation is governed by the proposed system of Management Areas, resource overlays, and Standards and Guidelines.

The Establishment of the Monitoring and Evaluation Requirements

Alternative A includes the monitoring plan in the 1988 LRMP and Appendix E of the SNFPA (USDA Forest Service 2004a), which was designed to provide comprehensive information on status and trends, ecosystem condition, and the effectiveness of management activities at the Sierra Nevada-wide scale. The Forest monitoring plan is supplemented by additional regional and other broad-scale monitoring. The revised monitoring plan (Appendix A – Forest Plan Monitoring and Evaluation Plan) is the same for all action alternatives. The monitoring plan has been updated in the FEIS to reflect current needs and budget constraints. This plan is based on needs for resource status and trend information to support future management decisions that will maintain or contribute to achieving the desired conditions. It will continue to be supplemented by regional and other broad-scale monitoring.

Recommendations to Congress of areas eligible for wilderness designation (as required by 36 CFR 219.17(a) and rivers recommended for inclusion in the Wild and Scenic River System)

The existing recommendation to add a segment of the Upper Truckee to the Wild and Scenic River System (USDA Forest Service 1998) is retained in all alternatives.

Alternatives A, B, and E would retain current Wilderness and Inventoried Roadless Area designations. Alternative C recommends the Dardanelles Roadless Area for addition to the Wilderness System. Alternative D recommends the Dardanelles and Freel Roadless Areas for wilderness designation.

Determination of suitability and potential capability of lands for resource production

This determination is found in the timber suitability analysis (Appendix G).

2.6.2. Comparison Tables

Table 2-1 displays the key differences between the alternatives. Those plan components related to Strategies (Land Allocation, designation of special areas, acres available for certain activities) are shown in this table as opposed to desired conditions or standards and guidelines. Many programs strategies will stay the same between the alternatives such as the amount of congressionally designated wilderness or fire suppression policies. Those strategies that do not vary between alternatives are not shown in this table. The numbers associated with the units of measure fall into three categories explained below:

- 1) Numbers represent anticipated or estimated annual accomplishments as a strategic difference between alternatives.
- 2) Numbers represent upper and lower limits to resources as strategic difference between alternatives.
- 3) Numbers represent land allocation acreage differences between alternatives.

Table 2-1. Summary of Key Strategic Differences among Alternatives

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Access and Travel Management (ATM)	Roads and Trails Strategy	Continue to implement current management objectives.	Management objectives closely reflect current management.	Allow increased access for passenger vehicles for recreation and administrative use by improving road surfaces and opening some currently closed routes.	Decrease access for passenger for recreation and administrative use vehicles through management objectives that favor high- clearance vehicles.	Management objectives closely reflect current management.
	Roads open to passenger vehicles (miles) Existing – 84 miles	84	89	106	77	89
	Roads open to high- clearance vehicles and OHV (miles) ¹ Existing – 115 miles	115	115	115	130	115
	Trails open to OHV motorized use (miles) Existing –15 miles	15	15	20	10	15
	Trails open for hiking and equestrian use (miles) Existing – 337miles	367	367	360	367	367
	Trails open to mechanized use (miles) Existing – 217 miles	227	227	218	200	227

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
ATM, Cont.	Transit Opportunities	Collaborate with Tahoe Basin transportation partners to identify opportunities for additional transit infrastructure.	Collaborate with Tahoe Basin transportation partners to identify opportunities for additional transit infrastructure.	Collaborate with Tahoe Basin transportation partners to identify opportunities for additional transit infrastructure.	Collaborate with Tahoe Basin transportation partners to identify opportunities for additional transit infrastructure.	Collaborate with Tahoe Basin transportation partners to identify opportunities for additional transit infrastructure.
	Transit	Promote transit by providing infrastructure to promote convenient alternatives to the private automobile that connect with bike paths. Informational signs would inform users of alternatives to private automobiles.	Same as Alternative A.			
	Parking Management	Provide the same amount of parking as current condition.	Provide the same amount of parking as current condition.	Provide an overall increase in parking.	Reducing overall parking.	Provide the same amount of parking as current condition.

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
ATM, Cont.	Transit, Parking management (summer) Vehicle parking & managed parking volume	Implement BMPs in current parking areas. Apply BMPs to adopted parking areas	This alternative would promote transit opportunities where feasible while moving unmanaged parking to managed parking with no increase in the amount of parking for private automobiles.	This alternative would promote transit opportunities where feasible and Add additional parking while converting unmanaged parking to managed parking. Eliminate roadside parking and increase parking capacity and amenities where feasible. Apply BMPs to all adopted parking areas.	This alternative would promote transit opportunities where feasible but would Convert less unmanaged parking to managed parking and eliminate unmanaged parking that is not converted. Eliminate roadside parking; adopt some managed parking with overall reduction in parking. Apply BMPs to all adopted parking areas. Note: where parking would be reduced other access modes, such as transit or trail access, would be considered.	Promote transit opportunities where feasible while moving unmanaged parking to managed parking with no increase in the amount of parking for private automobiles.
	Dispersed winter parking	Same	Increase	Increase	Same	Increase

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Aquatic and Terrestrial Invasive Species Management	Strategy	Current level	Increase from current level and incorporate AIS	Increase from Current Level and incorporate AIS	Focus on High Priority Species	Increase from current level and incorporate AIS
	Aquatic Invasives	No direction in current 1988 Forest Plan.	Added direction to monitor, prevent and eradicate.	Added direction to monitor, prevent and eradicate.	Added direction to monitor and prevent. Eradication would only occur for high priority species.	Added direction to monitor, prevent and eradicate.
	Terrestrial Invasives	Continue to follow current direction in 1988 Forest Plan.	Similar to current direction in 1988 Forest Plan.	Similar to current direction in 1988 Forest Plan.	Eradication would only occur on high priority species.	Similar to current direction in 1988 Forest Plan.
Managed Wildfire	Strategy	Current direction	Greatest expansion of allowable area	Expands allowable area	Greatest expansion of allowable area	Greatest expansion of allowable area
	Allowable area for wildfire managed for multiple objectives	Desolation Wilderness only	All NFS lands except Defense Zone	All NFS lands except WUI (Defense and Threat Zones)	All NFS lands except Defense Zone	All NFS lands except Defense Zone

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Forest Vegetation Management: Wildland Urban Interface (WUI)	Strategy (Acres are estimated initial treatment acres)	Collaborative Fuels Strategy per 2004 SNFPA ROD	Collaborative Fuels Strategy w/ exceptions to diameter limits and canopy cover requirements	Collaborative Fuels Strategy w/ exceptions to diameter limits and canopy cover requirements	Collaborative Fuels Strategy per 2004 SNFPA ROD	Collaborative Fuels Strategy w/ exceptions to diameter limits and canopy cover requirements
	Thinning & Fuel Reduction (Acres/year)	Mech. 500 Hand 1,500 Total 2,000	Mech. 500 Hand 1,500 Total 2,000	Mech. 500 Hand 1,500 Total 2,000	Mech. 250 Hand 1,750 Total 2,000	Mech. 500 Hand 1,500 Total 2,000
	Prescribed Burning (Acres/year in the WUI)	Underburn 300 Pile burn 1,500 Total 1,800	Underburn 300 Pile burn 1,500 Total 1,800	Underburn 600 Pile burn 1,500 Total 2,100	Underburn 600 Pile burn 1,500 Total 2,100	Underburn 300 Pile burn 1,500 Total 1,800
Forest Vegetation Management: General Conservation, Santini-Burton, & Backcountry	Strategy	Treatments as currently planned under SNFPA	Treatments as proposed w/ exceptions to diameter limits and canopy cover requirements	Similar to Alt. B with more acres treated at greater reduction in stand density	Similar to Alt. A with emphasis on use of fire (prescribed & unplanned).	Treatments as proposed w/ exceptions to diameter limits and canopy cover requirements
	Forest Structure Restoration (acres/year) establish new age classes in the form of openings from 1-10 acres w/in existing mid-seral forest stands (estimates are based on current capacity and funding)	Mech. 75 Hand 25 Total 100	Mech. 75 Hand 25 Total 100	Mech. 175 Hand 25 Total 100	Hand & Rx Fire Total 100	Mech. 75 Hand 25 Total 100

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Forest Vegetation Management: General Conservation, Santini-Burton, & Backcountry, Cont.	Forest Type Conversion (acres/year) Generally, converting white Fir to Jeffrey pine or Mixed Conifer in the form of openings in mid-seral stages, also results in forest structure change	Mech. 40 Hand 10 Total 50	Mech. 40 Hand 10 Total 50	Mech. 75 Hand 25 Total 100	Hand & Rx Fire Total 50	Mech. 40 Hand 10 Total 50
	Forest Stand Resiliency (acres/year) Generally thinning w/in existing forest type	Mech. 100 Hand 400 Total 500	Mech. 100 Hand 400 Total 500	Mech. 200 Hand 800 Total 1,000	Hand & Rx Fire 300	Mech. 100 Hand 400 Total 500
	Prescribed Burning (Acres/year) in addition to WUI	100 acres/year	100 acres/year	200 acres/year	Acres included in the above treatments.	100 acres/year
Developed Recreation	Strategy	Maintains existing & allows expansion up to PAOT capacity as described in the developed recreation prescriptions (estimated 10% expansion above current).	Maintains existing & allows expansion of existing facilities in recreation sites before building new ones in General Conservation MA (estimated 5% above of current) on higher capability lands.	Maintains existing & allows expanding existing facilities in existing permit areas and in General Conservation MA (estimated 15% above current) on higher capability lands.	Maintains existing & allows reduction and relocation of facilities (estimated -15% of current) within permit area; forest plan amendment required in expansion general conservation areas.	Maintains existing & allows expanding existing facilities in permit areas before building new ones in General Conservation MA (estimated 5% above of current) on higher capability lands.

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Developed Rec, Cont.	Recreation Sites such as resorts, campgrounds, beaches (acres) Existing acres 1,163	Potential Increase 116 Up to 1,279	Potential Increase 58 Up to 1,221	Potential Increase 174 Up to 1,337	Potential Decrease 174 Down to 989	Potential Increase 58 Up to 1,221
	Overnight Accommodation Units (lodging and campsites) Existing units 1,192	Potential Increase 119 Up to 1,311	Potential Increase 60 Up to 1,252	Potential Increase 178 Up to 1,370	Potential decrease 178 Down to 1,014	Potential Increase 110 Up to 1,302
	Day Use (day use site and trailhead parking spaces) Existing spaces 2,875	Potential Increase 288 Up to 3,163	Potential Increase 144 Up to 3,019	Potential Increase 431 Up to 3,306	Potential decrease 431 Down to 2,444	Potential Increase 144 Up to 3,019
	Ski Areas and Slopes (operational footprint acres) Existing acres 3,997	Potential Increase 4,064 Up to 8,061	Potential Increase 200 Up to 4,197	Potential Increase 597 Up to 4,600	Potential Decrease 600 Down to 3,397	Potential Increase 200 Up to 4,197
Recreation Setting	Strategy (acres by ROS class)	Mix of Recreation Opportunity Spectrum Classes, based on 1982 land status (138,700 acres)	Proposed updates to reflect current conditions and land acquisitions (154,784 acres)	Proposed updates to reflect current conditions & additional SPNM for proposed wilderness	Proposed updates to reflect current conditions & additional SPNM for proposed wilderness & backcountry additions	Proposed updates to reflect current conditions and land acquisitions (154,784 acres)
	Urban	0	0	0	0	0
	Rural	11,900	16,081	16,081	15,966	16,081

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Rec Setting, Cont.	Roaded Natural	55,700	39,812	39,812	36,430	39,812
	Semi-Primitive Motorized	17,600	20,370	20,370	16,457	20,370
	Semi-Primitive Non-Motorized	53,500	78,521	78,521	85,931	78,521
Special Status Species Habitat Areas	Strategy	Active restoration	Increased active restoration	Increased active restoration	Manage existing populations	Increased active restoration
	Populations or sub-populations maintained or restored					
	Lahontan Cutthroat Trout (number)	Maintain 2 LCT subpopulations, restore 2 sub-populations.	Maintain 2 LCT subpopulations, restore 2 sub-populations.	Maintain 2 LCT subpopulations, restore 2 sub-populations.	Maintain 2 LCT subpopulations, restore 2 sub-populations.	Maintain 2 LCT subpopulations, restore 2 sub-populations.
	Sierra Nevada Yellow-Legged Frog (number)	Maintain 1 SNYLF sub-population, restore 4	Maintain 1 SNYLF sub-population, restore 4	Maintain 1 SNYLF sub-population, restore 4	Maintain 1 SNYLF sub-population, restore 4	Maintain 1 SNYLF sub-population, restore 4
Tahoe Yellow Cress (stem counts)	Maintain 3 TYC core, 3 high priority, 2 medium populations	Maintain 3 TYC core, 3 high priority populations, 2 medium priority. Restore/enhance 2	Maintain 3 TYC core, 3 high priority populations, 2 medium priority. Restore/enhance 2	Maintain 3 TYC core, 3 high priority populations, 2 medium priority. Restore/enhance 2	Maintain 3 TYC core, 3 high priority, 2 medium populations	Maintain 3 TYC core, 3 high priority populations, 2 medium priority. Restore/enhance 2

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
	Strategy	Management direction per 2004 SNFPA ROD	Active management in PACs and HRCAs	Active management in PACs and HRCAs	Management direction per 2004 SNFPA ROD	Active management in PACs and HRCAs
California Spotted Owl and Northern Goshawk PACs and HRCAs	Protected PACs & HRCAs (acres; includes acreage of entire PAC, even on adjacent Forests)	24,000	24,000	24,000	24,000	24,000
	Owl PACs	6,763	6,763	6,763	6,763	6,763
	Goshawk PACs	8,110	8,110	8,110	8,110	8,110
	Owl HRCAs	21,368	21,368	21,368	21,368	21,368
	Total acres (sum is not additive because of overlap on the landscape)	25,590	25,590	25,590	25,590	25,590
	Restored PACs (acres)	0	6 owl PACs, 7 Goshawk PACs	6 owl PACs, 7 Goshawk PACs	0	6 owl PACs, 7 Goshawk PACs
Watershed and Aquatic Habitat Restoration	Strategy	Continued active restoration of currently planned projects plus additional potential	Continued active restoration of currently planned project plus additional potential	Continued active restoration of currently planned projects plus additional potential	After currently planned projects completed, rely on natural processes for recovery; no active restoration	Continued active restoration of currently planned project plus additional potential
	Stream restored (miles)	82	82	82	70	82
	SEZ restored (acres)	3,338	3,338	3,338	3,087	3,338

Program Strategy	Strategy (& Unit of Measure)	Alternative A No Action	Alternative B: DEIS Preferred Alternative	Alternative C	Alternative D	Alternative E: FEIS Preferred Alternative
Management Areas						
Backcountry Management Area	Strategy	Retain Current Inventoried Roadless Areas (IRA) in Backcountry	Retain Current Inventoried Roadless Areas in Backcountry	Retain Current Inventoried Roadless Areas in Backcountry minus Dardanelles	Retain Current Inventoried Roadless Areas in Backcountry minus Dardanelles and Freel Peak. Recommend additional areas to Backcountry (motorized use ok on existing roads and trails only)	Retain Current Inventoried Roadless Areas in Backcountry; add Stanford Rock Backcountry Area (between Ward and Blackwood Creeks).
	(acres)	45,372	45,372	31,294	26,613	49,172
Recommended Wilderness Area	Strategy	No new Recommendations	No new Recommendations	Recommend Dardanelles IRA	Recommend Dardanelles IRA & Freel IRA	No new recommendations
	(recommended acres)	0	0	14,229	29,581	0

¹ Miles of roads open to passenger vehicles and open to high clearance vehicles and OHV do not reflect the total road system, only miles open to the public.

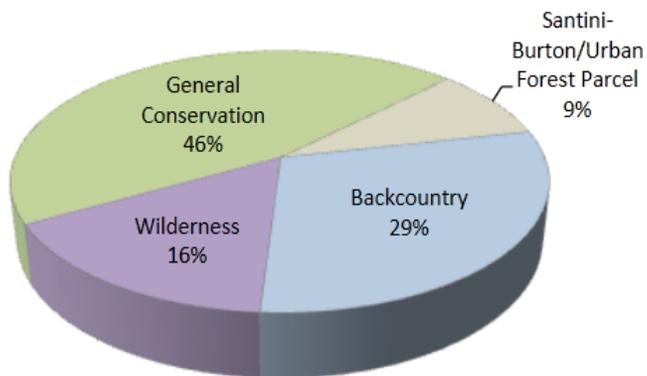
Table 2-2 displays the number of acres in each Management Area for each of the alternatives. Alternative A has 21 management areas plus multiple SNFPA land allocations that function as management areas. In order to compare Alternative A with the action alternatives, we applied the four proposed management areas; Alternatives A and B have the same distribution of lands among the management areas. Figure 2-1 presents the proportion of lands in each management area as a pie chart for all four action alternatives.

Table 2-2. Comparison of Alternatives by Management Area

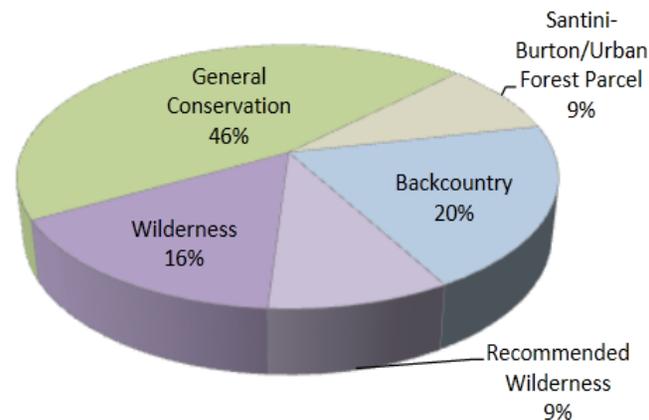
Management Areas	Alternatives				
	A*	B	C	D	E
GC General Conservation	70,727	70,727	70,727	60,026	67,078
SB Santini-Burton/Urban Forest Parcels	13,935	13,935	13,935	13,935	13,935
BC Backcountry	45,523	45,523	31,294	26,643	49,172
W Wilderness	24,665	24,665	24,665	24,665	24,665
RW Recommended Wilderness	0	0	14,229	29,581	0
NFS Lands Total Acres	154,850	154,850	154,850	154,850	154,850

*These are equivalents representing how the geographic management areas in the 1988 Plan would be divided into these MA categories.

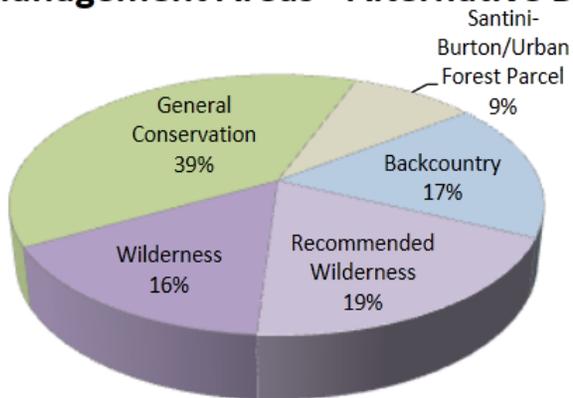
Management Areas - Alternative B



Management Areas - Alternative C



Management Areas - Alternative D



Management Areas - Alternative E

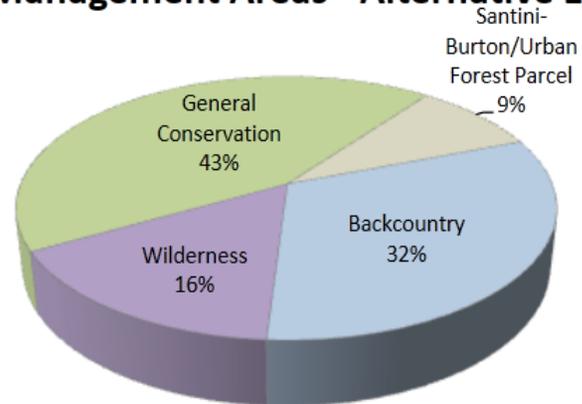


Figure 2-1. Proportion of Lands in each Management Area, Alternatives B, C, D, and E

Detailed analysis for each resource follows in Chapter 3.

Table 2-3. Comparison of Alternatives by Environmental Consequences on Resources

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Access & Travel Management (ATM)	Parking	Managed parking (winter)	Current (few managed)	Comparable to current availability but managed	Greater than current but managed	Less than current but managed	Same as Alternative B.	---
		Managed parking (summer)	Current (few managed)	Comparable to current availability but managed	Greater than current but managed	Less than current but managed	Same as Alternative B.	---
	Trails	Miles open to mechanized use	217 - Provides for the most mechanized use trails. Includes 10 miles of unauthorized trails that are suitable for adoption.	217 - Same as Alternative A.	207 - Less than Alternative A, and more than Alternative D. Note trails would be shared with motorized and non-motorized uses outside of wilderness areas and include developed bike paths	207 - Least amount of mechanized trails.	Same as Alternative A.	While more overall miles of trail would be open to mechanized use in Alt. C, those trails would be fully or highly developed trails. Alt. B would support the most single track mountain bike trails.

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
ATM, Cont.	Trails, Cont.	Miles of hiking trails	388 - Provides for the most hiking trails. This includes an additional 30 miles of unauthorized trails that are eligible for adoption	378 - Same as Alternative A.	370 - Less hiking trails would be available due to use-specific trails such as mountain bike or motorcycle trails.	388 - Same as Alternative A.	Same as Alternative A.	Adoption of existing unauthorized trails is dependent upon project specific analysis.
	Roads Maintenance Level	Miles Unclassified Special Uses	Overall increase in total mileage of roads due to utility corridors and permittee access.	0 - Same as Alternative A.	Increase in Maintenance Level 3's 4's & 5's. Greater access to passenger vehicles.	Increase in Maintenance Level 1's & 2's. Greater access to high clearance vehicles.	Same as Alternative A.	---
	Decommissioned	miles	TBD	10 - Increase in decommissioned miles.	More decommissioned miles than Alternative B.	20 - Same as Alternative C.	Same as Alternative B.	---
	Maintenance Level (ML) 1 – closed	miles	30 – Fewest miles of ML 1 roads.	More ML 1 roads than Alternative A.	30 - Same as Alternative A.	50 - Most miles of ML 1 roads.	Same as Alternative B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
ATM, Cont.	ML2 – high clearance vehicles	miles	148 - Maintain existing level of ML 2 roads.	150 - Increase in ML 2 roads.	138 - Decrease in ML 2 roads.	148 - Same as Alternative A.	Same as Alternative B.	Note: some roads are not open to public motor vehicle use. Open miles are reflected in Miles Open to OHV and High Clearance Vehicles.
	ML3 – passenger car	miles	64 - Maintain existing level of ML 3 roads.	69 - Increase in level of ML 3 roads.	76 - Greatest increase in ML 3 roads.	64 - Same as Alternative A.	Same as Alternative B.	---
	ML4 – moderate degree of user comfort	miles	20 - Maintain existing level of ML 4 roads.	20 - Same as Alternative A.	30 - Increase in ML 4 roads.	10 - Decrease in ML 4 roads.	Same as Alternative A.	---
	ML5- high degree of user comfort	miles	0 - None on LTBMU.	0 - Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	---
	Total	miles	294	294	294	294	294	---
OHV and OSV	Miles of Roads open to OHV and High Clearance Vehicles	miles	115 - Maintain exiting level of roads open to OHV.	115 - Same as Alternative A.	110 - Less than Alternative A.	130 - Same as Alternative A.	Same as Alternative A.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
OHV and OSV	Miles of Trails open to OHV	miles	15 - Maintain existing level of trails open to OHV.	15 - Same as Alternative A.	20 - More than Alternative A.	10 - Less than Alternative A.	Same as Alternative A.	---
	OSV Open to OSV	acres	Current Open Areas	No Change	No Change	Open Areas in Freel Peak Roadless Closed	Same as Alternative A.	---
Air Quality	Human Health	Wildfire emissions	Pollution emissions would be similar to recent years and produce negligible short term impacts; long term impacts would be moderate because the potential for large and intense wildland fire events would continue to increase.	Negligible short term impacts due to decreased acres burned; long term moderate beneficial impacts due to higher probability of maintaining carbon in forest biomass.	Negligible short term impacts due to increased ability to control fire emission timing and quantity; long term beneficial impacts.	Minor short term and long term adverse impacts due to increased emissions from increased use of prescribed fire.	Similar to B	---
	Forest Health	Forest resilience	Anthropogenic emission sources would be the primary air pollutant stressor to forest Health.	Negligible long term beneficial impacts by promoting forest resiliency to fire.	Minor adverse impacts from increased tree removal.	Moderate beneficial impacts from increased use of prescribed fire.	Similar to B	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Air Quality, Cont.	Visibility	Wildfire emissions	No short term impacts but moderate long term due to decreased control of emissions during wildfire events.	Both short and long term minor beneficial impacts due to increased ability to control fire emissions.	Both short and long term minor beneficial impacts due to increased ability to control fire emissions.	Both short and long term minor beneficial impacts due to increased ability to control fire emissions.	Both short and long term minor beneficial impacts due to increased ability to control fire emissions.	---
	Climate Change	Strategies to reduce GHGs and sequester carbon	Lack of management strategies to respond to a changing climate, reducing GHGs and enhancing carbon sequestration lead to moderate long term impacts.	Includes management strategies to adapt to climate change and would have minor beneficial impacts.	Includes management strategies to adapt to climate change and would have minor beneficial impacts.	Includes management strategies to adapt to climate change and would have minor beneficial impacts.	Includes management strategies to adapt to climate change and would have minor beneficial impacts.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Aquatic Habitat & Species	Streams, Lakes, Wetlands and Meadows	Trend in habitat condition	Condition and function a) improve as result of restoration and enhancement, b) stays at baseline in roadless, wilderness and other areas where grazing has been removed, or c) decreases where impacted by land uses, especially where expansion of recreation increases potential for AIS transference.	Condition and function a) improve as result of restoration and enhancement, b) stays at baseline in backcountry, wilderness and other areas where grazing has been removed, or c) decreases where impacted by land uses, especially recreation, roads and trails and permitted livestock grazing. Impacts on aquatic habitat are less than Alt. A.	Condition and function a) improve as result of restoration and enhancement, b) stays at baseline in backcountry, wilderness and other areas where grazing has been removed, or c) decreases where impacted by land uses, especially recreation, roads and trails and permitted livestock grazing. Impacts on aquatic habitat are the more than Alt. A.	Condition and function will both improve as a result of restoration and enhancement and is expected to decline where legacy impacts are allowed to persist. Effects are compounded where impacted by land uses, especially recreation, roads and trails and permitted livestock grazing. Impacts on aquatic habitat are less than A but potentially more than B (due to AIS threats).	Increased overnight accommodations could contribute to increase threat of AIS; however, increased management direction should mitigate. Impacts less than A and C, similar to B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Aquatic Habitat & Species	Lahontan Cutthroat Trout	Trend in abundance	The species distribution is expected to increase as recovery/restoration strategies progress. LCT may face increased threats with expansion of recreation facilities, trails and subsequent human interaction on occupied habitat.	The species distribution is expected to increase as recovery strategies progress. LCT may face increased threats with expansion of recreation facilities, trails and subsequent human interaction on occupied habitat at levels less than Alt. A.	The species distribution is expected to increase as recovery strategies progress. LCT may face increased threats with expansion of recreation facilities, trails and subsequent human interaction on occupied habitat at levels comparable to Alt. A and more than Alt. B.	The species distribution is expected to increase as recovery strategies progress. LCT may face increased threats with expansion of recreation facilities, trails and subsequent human interaction on occupied habitat at levels less than Alts A, and C.	The species distribution is expected to increase as recovery strategies progress. LCT may face increased threats with expansion of recreation facilities, trails and subsequent human interaction on occupied habitat at levels less than Alt. A and similar to B.	---
		Trend in habitat condition						

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Aquatic Habitat & Species	Sierra Nevada Yellow Legged Frog	Trend in abundance	The species distribution is expected to increase as recovery/restoration strategies progress. SNYLF may face increased threats with expansion of recreation facilities, trails and human interaction and potential for increase AIS in subsequent human interaction in occupied habitat.	The species distribution is expected to increase as recovery strategies progress. SNYLF may face increased threats with expansion of recreation facilities, trails and subsequent human interaction and potential for increase AIS in occupied habitat at levels less than Alt. A.	The species distribution is expected to increase as recovery strategies progress. SNYLF may face increased threats with expansion of recreation facilities, trails and subsequent human interaction and potential for increase AIS in occupied habitat at levels less than Alt. A.	The species distribution is expected to increase as recovery strategies progress. SNYLF may face less threat than in Alt.'s A, B and C with a decrease of recreation facilities and trails. AIS in occupied habitat at levels comparable to Alt. A and more than Alt. B.	The species distribution is expected to increase as recovery strategies progress. SNYLF may face increased threats with expansion of recreation facilities, trails and subsequent human interaction and potential for an increase in AIS as human interaction in occupied habitat increases. This potential threat is less when compared to Alt. A and similar to B.	---
		Trend in habitat condition						

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Aquatic Habitat & Species	Tui Chub and Rams-horn	Trend in abundance	The species distribution is expected to stay at baseline conditions or decrease with a potential increased distribution of existing and new AIS. Otherwise, the species will be susceptible to potential impacts on sensitive shore zone and lake-stream interface habitats.	The species distribution is expected to stay at baseline conditions or increase with continued emphasis on AIS prevention, control and eradication. Potential impacts to sensitive habitat are expected to be less than Alt. A.	The species distribution is expected to stay at baseline conditions or increase with continued emphasis on AIS prevention, control and eradication. Potential impacts to sensitive habitat are expected to be more than Alt. A.	The species distribution is expected to stay at baseline conditions or increase with continued emphasis on AIS prevention, control and eradication. Potential impacts to sensitive habitat are expected to be less than Alt.'s A and C.	The species distribution is expected to stay at baseline conditions or increase with continued emphasis on AIS prevention, control and eradication and restoration and enhancement efforts. Potential impacts to sensitive habitat are expected to be less than Alt. A and similar to B.	---
		Trend in habitat condition						

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Botanical Resources	Threatened or Endangered Species	Trend in abundance (TYC only)	Stable or increasing abundance and stable or improving habitat condition due to active management of occurrences and habitat (restoration, invasive plant treatment).	Potentially greater abundance and better habitat condition due to less recreation development than A.	Stable or decreasing due to the most amount of recreation development of all alternatives. Stable or decreasing abundance and similar or decreasing habitat condition due to the most amount of recreation development of all alternatives (higher risk of trampling and/or, habitat degradation; increased vectors for invasive plants).	Stable or decreasing abundance and stable or decreasing habitat condition due to no active habitat restoration and less invasive plant treatment.	Similar to Alternative B.	TYC and Whitebark pine
		Trend in habitat condition						

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Botanical Resources, Cont.	Sensitive Species	Trend in abundance	Stable to increasing due to active management of occurrences and habitat (restoration, invasive plant treatment).	Stable or Increasing due to active habitat restoration and less recreation development than Alternative C. Similar to Alternative A. Compared to Alternative C, potentially greater abundance due to less recreation development.	Stable or decreasing due to the most amount of recreation development of all alternatives (higher risk of trampling and/or, habitat degradation; increased vectors for invasive plants).	Stable or decreasing due to no active habitat restoration and less invasive plant treatment.	Similar to B.	Sensitive Species

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Botanical Resources, Cont.	Terrestrial Invasives	Trend in abundance Risk of establishment and spread	Reduced risk due to active prevention. Reduced abundance due to active invasive plant treatment.	Similar to A, but risk may be greater due to more recreation development (more habitat alteration, more vectors) or lower due to less mechanical fuels treatment (less habitat alteration).	Increasing abundance and slightly more risk than Alternative A (though still moderate) due to more mechanical fuels treatment (more habitat alteration) and more recreation development (more habitat alteration, more vectors for spread).	Increased abundance due to less invasive plant treatment than other alternatives. Slightly less risk than other alternatives due to less mechanical treatment (less habitat alteration).	Similar to B, but risk may be greater due to more recreation development (more habitat alteration, more vectors)	Terrestrial
Built Environment	Amount of Built Environment	Trend in deferred maintenance and building	Trending towards meeting desired conditions.	Would meet the desired conditions in a relatively short time frame.	Would meet the desired conditions for the built environment the quickest..	Would meet desired conditions but would result in the least amount of built environment.	Would meet the desired conditions in a relatively short time frame.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Climate Change	Ability to implement adaptation and mitigation strategies		Allows for addressing adaptation and mitigation strategies for climate change but not as well as C, B, and E.	Alternatives C, B, and E are best prepared to address adaptation and mitigation strategies in response to climate change.	Alternatives C, B, and E are best prepared to address adaptation and mitigation strategies in response to climate change.	Reliance on natural processes does not allow managers flexibility to implement strategies in addressing climate change.	Alternatives C, B, and E are best prepared to address adaptation and mitigation strategies in response to climate change.	---
Climate Change	Carbon Storage	Strategies to reduce GHGs and sequester carbon	While there are not specific management strategies for GHG and carbon storage, management actions focused on carbon storage in the WUI.	While there are not specific management strategies for GHG and carbon storage, alternatives B, C and E will retain the highest level of forest carbon over the coming century due to a reduction in stand replacing fires.	While there are not specific management strategies for GHG and carbon storage, alternatives B, C and E will retain the highest level of forest carbon over the coming century due to a reduction in stand replacing fires. In addition, this Alt will further reduce GHG emissions during project implementation due to reduced project entries.	Retains greatest amount of carbon short term, however no management strategies to sequester carbon during large wildfire. Management strategies will slow carbon accumulation following large disturbance events.	While there are not specific management strategies for GHG and carbon storage, alternatives B, C and E will retain the highest level of forest carbon over the coming century due to a reduction in stand replacing fires.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Cultural Resources	Sites protected and maintained	sites	Fuels reduction treatments could have impacts on cultural sites.	Same as Alternative A.	Less sites protected and maintained than A and B because historic structures in recommended wilderness may not be maintained. Less entries required for fuels treatments would reduce the risk of impacts.	Less sites protected and maintained than A and B because historic structures in recommended wilderness may not be maintained. Underburning and the management of natural ignitions would have the most risk of impacting cultural sites.	Same as Alternative A and B.	

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Fire & Fuels	Fire behavior	Acres	<p>All five alternatives meet fuels reduction objectives as proposed in the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy</p> <p>Non-WUI treatments also contribute, but likely will not be implemented until completion of the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy (about 10 years).</p>	<p>All five alternatives meet fuels reduction objectives as proposed in the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy</p> <p>Non-WUI treatments very similar to Alt. A, but with more flexibility to meet objectives.</p>	<p>All five alternatives meet fuels reduction objectives as proposed in the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy</p> <p>Treats more acres outside the WUI than the other alternatives, with same flexibility as Alt. B.</p> <p>Thinning is to lower residual densities so treatment longevity is greatest in this alternative.</p>	<p>All five alternatives meet fuels reduction objectives as proposed in the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy</p> <p>Once the Multi-Jurisdictional Fuels Reduction and Wildfire Prevention Strategy is completed (about 10 years), the Threat Zone is removed from the WUI. A 12' diameter limit goes into effect outside the Defense Zone.</p> <p>Probability of success depends heavily on uncertain factors such as future weather.</p>	Same as B.	<p>WUI Zones include Urban-SB, DZ & TZ</p> <p>Restoration treatments outside WUI zones also contribute</p>

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Fire & Fuels, Cont.	Reducing Fire Return Interval Departure (FRID)	Acres	Prescribed burning at current levels (~1,900 acres/year). Managed wildfire allowed only in Desolation Wilderness. Estimated (modeled) maximum managed wildfire potential ~290 acres/year	Prescribed burning same as Alt. A. Managed wildfire allowed all areas except WUI Defense Zone. Estimated (modeled) maximum managed wildfire potential ~1,100 acres/year	Prescribed burning at greater levels than Alts. A and B (~2,300 acres/year). Managed wildfire allowed all areas except WUI (Threat and Defense Zones). Estimated (modeled) maximum managed wildfire potential ~720 acres/year	Prescribed burning at current levels (~1,900 acres/year). Managed wildfire area allowed and maximum potential same as Alt. B but with reduced probability of success.	Same as B.	Not specific to any zone.
Forest Vegetation	Forest Structure	Ability to achieve Desired Conditions	Low-Moderate	Moderate	Moderate-High	Low	Moderate	Excludes Wilderness
	Forest Composition	Ability to achieve Desired Conditions	Moderate	Moderate	High	Low	Moderate	Excludes Wilderness
	Forest Resilience	Ability to achieve Desired Conditions	Low-Moderate	Moderate	High	Low	Moderate	Excludes Wilderness

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Interpretive Education / Partnerships and Volunteers			The overall program capacity and delivery fluctuates with annual budgets. The program will interpret direction and emphasis reflected in the final Forest Plan, regardless of alternative selection.	Same for all alternatives. There are no programmatic differences between the alternatives.	Same for all alternatives. There are no programmatic differences between the alternatives.	Same for all alternatives. There are no programmatic differences between the alternatives.	Same for all alternatives. There are no programmatic differences between the alternatives.	---
Lands	Land Acquisition and Land Adjustment Program.		The objectives and accomplishments of the land acquisition and land adjustment program will remain the same under all five alternatives and will not be affected by the alternatives.	The objectives and accomplishments of the land acquisition and land adjustment program will remain the same under all five alternatives and will not be affected by the alternatives.	The objectives and accomplishments of the land acquisition and land adjustment program will remain the same under all five alternatives and will not be affected by the alternatives.	The objectives and accomplishments of the land acquisition and land adjustment program will remain the same under all five alternatives and will not be affected by the alternatives.	The objectives and accomplishments of the land acquisition and land adjustment program will remain the same under all five alternatives and will not be affected by the alternatives.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
	Land Special Uses Program.		There are no programmatic differences among the alternatives for the number and type of lands uses authorized.	There are no programmatic differences among the alternatives for the number and type of lands uses authorized.	There are no programmatic differences among the alternatives for the number and type of lands uses authorized.	There are no programmatic differences among the alternatives for the number and type of lands uses authorized.	There are no programmatic differences among the alternatives for the number and type of lands uses authorized.	---
Lands cont.	Land Boundary and Title Program.		Assuming an equal level of funding for all alternatives, Alternatives A would result in a similar level of accomplishments in maintaining land boundaries and preventing and resolving encroachments.	Same as Alternative A.	Alternative C with a more active forest management approach would result in an increase in accomplishments with the most proactive boundary and title program.	Alternative D with a lower level of active forest management would result in a lower level of boundary and title accomplishments.	Same as A and B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Lands cont.	Land Withdrawals.		None of the alternatives would affect the goal of retaining existing administrative withdrawals as long as they are needed.	Same as Alternative A.	Alternative C could result in additional acres under statutory withdrawal if the recommendation for wilderness designation for the Dardanelles Roadless Area is implemented.	Alternative D could result in the most acres under statutory withdrawal if the recommendation for wilderness designation for both the Dardanelles and Freel Roadless Areas is implemented.	Same as Alternative A.	---
Management Indicator Species			This alternative will not alter the existing bioregional trend in habitats and ecosystem components, nor will it lead to a change in the distribution of MIS across the Sierra Nevada Region.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	---
Natural Hazards			No differences among the alternatives.	No differences among the alternatives.	No differences among the alternatives.	No differences among the alternatives.	No differences among the alternatives.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Noise			With noise mitigations, such as allowed uses and time of day there would be no effect from noise.	Same as Alternative A.	Same as A. However, Alternative C would result in the highest overall noise generation because it has the highest amount of mechanical treatment and passenger vehicle access.	Same as A. However, Alternative D would result in the lowest overall noise generation because it allows the least mechanical treatment and is the most restrictive on motorized use.	Same as Alternative A.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Range			Range resources would a) improve as result of restoration and enhancement or areas treated in forest vegetation actions near vacant allotment boundaries or b) decrease where impacted by land uses, especially where expansion of dispersed recreation increases potential user conflicts.	Range resources would a) improve as result of restoration and enhancement or areas treated in forest vegetation actions near vacant allotment boundaries or b) decrease where impacted by land uses, especially where expansion of dispersed recreation increases potential user conflicts. Impacts on Range resources are same as Alt. A.	Range resources would a) improve as result of restoration and enhancement or areas treated in forest vegetation actions near vacant allotment boundaries or b) decrease where impacted by land uses, especially where expansion (wilderness) of dispersed recreation increases potential user conflicts. Impacts on Range resources are greater than Alt. A.	Range resources would: a) improve as a result of currently planned restoration and enhancement b) decrease where restoration (including forest vegetation treatments) or enhancement is needed but not permitted, c) decrease where impacted by land uses, especially where expansion of dispersed recreation (wilderness) increases potential user conflicts. Impacts on Range resources greater than A, B, C, and E	Range resources would a) improve as result of restoration and enhancement or areas treated in forest vegetation actions near vacant allotment boundaries or b) decrease where impacted by land uses, especially where expansion of dispersed recreation increases potential user conflicts. Impacts on Range resources are same as Alt. A.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Recreation	Visitor Demand	Ability to meet projected demand.	Some recreation sites full during peak season, some unmet demand.	Some recreation sites full during peak season, more unmet demand than Alternative A.	Fewer recreation sites full during peak season, least unmet demand of all alternatives.	Most recreation sites full in peak season, most unmet demand of all Alternatives.	Would meet visitor demand more than Alternative B and less than Alternative C due to an increase in overnight accommodation units.	---
	Developed Recreation Site Acres	Acres	Maintains existing acreage and allows expansion up to PAOT capacity as described in the developed recreation prescriptions (estimated 10% increase in acreage).	Allows up to a 5% increase in acreage to accommodate recreation demand. Recreation sites in sensitive areas may be moved to higher capability lands.	Allows up to a 10% increase in acreage to accommodate recreation demand. Recreation sites in sensitive areas may be moved to higher capability lands.	Allows reduction in acreage up to 15%. Recreation sites in sensitive areas may be removed and not replaced.	Same as Alternative B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Recreation, Cont.	Developed Overnight Accommodation Units	Accommodation Units Lodging and Campsites	Maintains existing inventory of overnight units and allows expansion up to PAOT capacity as described in the developed recreation prescriptions (estimated 10% expansion in overnight units).	Allows up to a 5% increase in overnight units to accommodate recreation demand.	Allows up to a 10% increase in overnight units to accommodate recreation demand.	Allows reduction in overnight units up to 15%.	Allows up to approximately a 10% increase in overnight units to accommodate recreation demand.	---
	Developed Day Use	Parking Spaces	Maintains existing parking spaces and allows expansion up to PAOT capacity as described in the developed recreation prescriptions (estimated 10% expansion in day use parking spaces).	Allows up to a 5% increase in parking spaces to accommodate recreation demand.	Allows up to a 10% increase in day use parking spaces to accommodate recreation demand.	Allows reduction in day use parking spaces up to 15%.	Same as Alternative B.	---
	Developed Ski Areas and Slopes	Operational Footprint Acres	Would allow for the greatest expansion of Operational footprint acres based on ski area management prescriptions.	Would allow up to 5% expansion of operational footprint acres.	Would allow up to 15% expansion of operational footprint acres.	Would allow up to a 15% reduction of operational footprint acres.	Would allow for an expansion of operational footprint acres that is slightly more than 5%.	Alternative A represents existing Alpine Skiing Prescription

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Scenic Quality	Minimum Scenic Integrity Objective	Acres	<p>Current Conditions and Adopted Visual Quality Objectives met or exceeded.</p> <p>Short term decrease in foreground scenic integrity due to management activities.</p>	<p>Current Conditions and Minimum Scenic Integrity Objective met or exceeded.</p> <p>24,674 Very High MSIO acres, 104,245 High acres, 25,905 Moderate MSIO acres.</p> <p>Short term decrease in foreground scenic integrity due to management activities.</p> <p>Higher Integrity than A.</p>	<p>Current Conditions and MSIO met or exceeded.</p> <p>24,674 Very High MSIO acres, 104,245 High acres, 25,905 Moderate MSIO acres.</p> <p>Short term decrease in foreground scenic integrity due to management activities.</p> <p>Higher Integrity than A or B.</p>	<p>Current Conditions and MSIO met or exceeded.</p> <p>24,674 Very High MSIO acres, 104,245 High acres, 25,905 Moderate MSIO acres.</p> <p>Short term decrease in foreground scenic integrity due to management activities.</p> <p>Highest Levels of Integrity expected.</p>	<p>Would change from B – map, acres</p> <p>Change in distribution and acres by MSIO.</p> <p>24,675 Very High MSIO acres, 104,633 High acres, 25,516 Moderate MSIO acres.</p> <p>Developed ski areas assigned Moderate MSIO</p> <p>Higher integrity than A and B, less than C</p>	<p>Scenic integrity: effects related to vegetation management, developed recreation expansion, Special Area designation.</p>

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Scenic Quality cont.	Minimum Scenic Stability	Acres	Currently unstable and loss of key attributes.	Stability is maintained or improved compared to Alternative A. Key attributes are maintained or restored.	Same as B, but stability and key attributes improve more rapidly.	Least amount of stability due to lower overall resilience. Higher susceptibility of valued forest views to insect, disease and fire threats.	Same as B	Restoration of valued scenic attributes in terrestrial vegetation (Big trees by veg.type, aspen restoration, & meadow restoration).
Social and Economic	Labor Income	\$1,000	\$143,722	\$149,473	\$160,974	\$126,471	\$143,722	---
	Employment	# Jobs	3,593	3,755	4,081	3,105	3,593	---
	NF Expenditures	\$1,000	\$33,570	\$33,570	\$33,570	\$33,570	\$33,570	Based on 2008 LTBMU Budget
	Payments to Counties/States	\$1,000	\$2,313	\$2,313	\$2,313	\$2,313	\$2,313	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Soil Quality	Compaction Erosion Soil organic matter and forest floor Severe burning	Acres	Soil quality maintained at sustainable level. Alternatives A , B, and E would have similar risk of impacts due to wildfire	Soil quality slightly improved over Alternative A. Alternatives A , B, and E would have similar risk of impacts due to wildfire.	Soil quality slightly decreased as compared to Alternative A, but still at sustainable level. Alternative C would have the least risk of impacts due to wildfire.	Soil quality slightly increased as compared to Alternatives A and B. Alternative D would have the greatest potential for soil impacts due to wildfire.	Soil quality slightly improved over Alternative A. Alternatives A , B, and E would have similar risk of impacts due to wildfire.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species	Wet meadows, Montane riparian, Lakeside marsh and shore habitat, Aspen	Trend in Condition	Condition maintained with potential for positive trend from restoration and enhancement; potential risk from developed recreation expansion and limits on diameter of trees that can be removed (e.g., encroaching conifers).	Condition maintained with potential for positive trend more than Alternatives A and A from restoration and enhancement and vegetation treatments (including prescribed and managed fire) to improve structure and resiliency; potential risk from developed recreation expansion.	Similar to Alternative B but greater potential risk from recreation expansion and increase access to NFS lands.	Condition maintained with potential for positive trend from reduced recreation areas and access, and greatest use of fire; potentially greatest risk from wildfire, shifting or continued unmanaged recreation use, increased OHV access, and limits on diameter of trees that can be removed (e.g., encroaching conifers).	Similar to Alternative B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species Cont.	Jeffrey pine, white fir-mixed conifer, red fir, Lodgepole pine, subalpine conifer	Trend in Condition	Condition maintained; potential for decreasing trend in condition of mid and late seral stage; greatest potential risk from ski area expansion.	Condition maintained; potential for positive trend in condition of late seral stage and resiliency to stand-replacing fire and beetles more than Alternatives A and D.	Similar to Alternative B but potential risk from ski area expansion greater than Alternatives B, D, and E.	Condition maintained; potential benefit from reduced recreation sites and ski area operational boundaries; potential risk to resiliency from restricted restoration and risk of wildfire.	Similar to Alternative B but with added positive benefit from new and revised standards and guidelines for late seral closed canopy forest.	---
	Montane chaparral	Trend in Condition	Potential for decreasing trend in condition where vegetation treatments aren't targeting creation/maintenance and habitat is becoming converted to forest.	Potential for increasing trend in condition more than Alternatives A and D where approach may create/maintain habitat.	Similar to Alternative B.	Potential for increasing trend in condition more than any other alternative where fire is allowed to burn and create this habitat.	Similar to Alternative B.	---
	Cliff and Cave Habitat	Trend in Condition	Condition maintained; potential for decreasing trend without protection measures.	Condition maintained; potential for positive trend from measures to protect and restore one site.	Similar to Alternative B.	Similar to Alternative A.	Similar to Alternative B but with improved standard and guideline for LTBMU conditions.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	PACs and HRCAs	Trend in condition	Condition maintained; potential for decreasing trend in mid and late seral habitat condition and wildfire risk; potential risk from developed recreation expansion and greatest potential risk from ski area expansion.	Condition maintained; potential for positive trend in late seral habitat condition and resiliency from restoration more than Alternatives A and D; risk from removal of large trees and canopy reduction less than Alternative C and more than Alternatives A and D.	Similar to Alternative B but greater potential risk from more intense and rapid vegetation management approach, expansion of developed recreation, and increased access to NFS lands.	Condition maintained; potential benefit from use of prescribed fire, and reduced recreation sites and ski area operational boundaries; potential risk from restricted restoration and risk of wildfire.	Similar to Alternative B but with stronger and more relevant desired conditions and standards and guidelines.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	Western bumblebee and willow flycatcher	Trend in productivity	Potential for positive trend from meadow restoration; risk from grazing, developed recreation expansion, treatments to treat invasive species, and limits on diameter of trees that can be removed (e.g., encroaching conifers).	Similar to Alternative A but with less risk from developed recreation expansion (less than A and C); greater benefit from ability to remove larger encroaching conifers, greater use of prescribed fire, and objectives to improve meadow condition.	Similar to Alternative B but with greater potential risk from developed recreation expansion and more roads/trails; greater benefit from ability to remove larger encroaching conifers, more prescribed and managed wildfire, and objectives to improve meadow condition for willow flycatcher.	Potential for positive trend from meadow restoration, reduced recreation areas, and greatest use of prescribed and managed wildfire; risk from lack of restoration, greatest risk of wildfire, potential shifting recreation use, grazing, and limits on diameter of trees that can be removed (e.g., encroaching conifers).	Similar to Alternative B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	Bald eagle	Trend in Productivity	Potential for positive trend from habitat restoration and predicted increase in late seral open canopy habitat (5S & 5P) and CWHR type 5D and 5M in white fir/mixed conifer and Jeffrey pine; risk from predicted loss of CWHR type 6 and from developed recreation expansion.	Similar to Alternative A but risk from developed recreation expansion less than Alternatives A and C and CWHR type 5M is predicted to increase only in Jeffrey pine.	Similar to Alternative A but with potentially greater risk from developed recreation expansion and CWHR type 5M is predicted to increase only in Jeffrey pine.	Potential for positive trend from increase in late seral open canopy habitat , and reduced access and developed recreation sites; potential risk from lack of restoration and increased wildfire potential, and potential shifting recreation use from inability to meet demand.	Similar to Alternative B.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
<p>Terrestrial Habitat & Species, Cont.</p> <p>2-72</p>	<p>California spotted owl and northern goshawk</p>	<p>Trend in Productivity</p>	<p>Potential benefit from predicted increase in late seral closed canopy habitat (5M & 5D); risk from predicted decrease in CWHR types 6, 4M and 4D; risk from potential post fire habitat restoration, decreasing trend in condition of PAC habitat (and increased risk of wildfire) due to lack of restoration, and expansion of developed recreation, especially ski area operational boundaries greater than all other Alternatives.</p>	<p>Potential benefit from restoration of degraded PAC habitat, overall static amount of late seral closed canopy habitat, and predicted increase in CWHR 5D; risk from predicted decrease in CWHR, 6, 4M, & 4D, and predicted slight decrease in red fir 5M; risk from lower desired condition canopy cover for PACs and HRCAs, post fire habitat restoration less than A but more than D and E, loss of large trees, reduction in canopy cover, and early seral openings, and expansion of developed recreation less than Alternatives A and C.</p>	<p>Similar to Alternative B but greater potential risk from predicted slight decrease in late seral closed canopy habitat (especially red fir 5M), accelerated pace of forest vegetation treatments, and expansion of developed recreation (especially ski areas), and access to NFS lands.</p>	<p>Similar to Alternative A except potential benefit from reduced recreation areas, especially ski resorts and less emphasis on fuel reduction in burned forest habitat; risk from predicted decrease in red fir 5M and greatest risk of wildfire.</p>	<p>Similar to Alternative B but with added benefit from more stringent desired conditions and standards and guidelines for canopy cover, late seral habitat and key elements, and retention of burned forest habitat.</p>	<p>---</p>

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	Pacific fisher and great gray owl	Trend in Productivity	Species not expected to occur	Same as Alternative A	Same as Alternative A	Same as Alternative A	Same as Alternative A	---
	Wolverine	Trend in Productivity	If present, potential benefit from predicted increase in late seral closed canopy habitat (5M & 5D); potential risk where habitat deteriorates and is at risk to catastrophic disturbance (e.g., fire) and expansion of developed recreation, especially ski area operational boundaries greater than all other Alternatives.	If present, potential benefit from treatments that improve resiliency of habitat and predicted increase in red fir 5D; risk from predicted slight decrease in red fir 5M, and expansion of developed recreation less than Alternatives A and C.	If present, potential benefit from increase in red fir 5D; risk from predicted decrease in red fir 5M and overall late seral closed canopy habitat, expansion of developed recreation, especially ski area operational boundaries, and access to NFS lands.	If present, potential benefit from predicted increase in overall late seral closed canopy habitat (5M & 5D) and reduced ski areas; potential risk from moderate decrease in red fir 5M and where habitat deteriorates and is at risk to catastrophic disturbance (e.g., fire), and increased OHV access.	Similar to Alternative B but with added benefit from strategies and standards and guidelines to protect late seral close canopy habitat.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	Pacific marten	Trend in Productivity	Potential benefit from predicted increase in late seral closed canopy habitat (5M &5D); risk from predicted decrease in CWHR types 6, 4M and 4D; risk from potentially diminishing quality of habitat and risk of wildfire (at level less than Alternative D); risk from inapplicability of LOPs at recreation areas, expansion of developed recreation areas, especially ski area operational boundaries greater than all other alternatives.	Potential benefit from predicted increase in CWHR type 5D; risk from predicted decrease in CWHR types 6, 4M, &4D and predicted slight decrease in 5M in red fir; risk from loss of large trees, early seral openings, and reduction in canopy cover; risk from expansion of developed recreation especially ski areas and no LOP but at level less than Alternatives A and C.	Similar to Alternative B but greater potential risk from predicted slight decrease in late seral closed canopy habitat (especially red fir 5M), accelerated pace of forest vegetation treatments, greatest expansion of developed recreation (especially ski areas) and access to NFS lands.	Similar to Alternative A except potential benefit from reduced recreation areas, especially ski areas and less emphasis on fuel reduction in burned forest habitat and predicted increase in late seral closed canopy habitat; risk from predicted decrease in red fir 5M and greatest risk of wildfire.	Similar to Alternative B but with added benefit from more stringent desired conditions and standards and guidelines for late seral habitat and key elements, and retention of burned forest habitat.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Terrestrial Habitat & Species, Cont.	Townsend's big-eared bat, Fringed myotis, and pallid bat	Trend in Productivity	Potential for positive trend where restoration improves foraging habitat and prohibits removal of large trees (potential roosts); risk from predicted decrease in mid seral open and early seral foraging habitat (Pallid), from developed recreation expansion, and from lack of cave and cave-surrogate standards and guidelines.	Potential for positive trend from restoration and inclusion of cave and cave-surrogate standards and guidelines; potential risk from predicted decrease in early seral foraging habitat (Pallid), ability to remove large trees (potential roosts), and developed recreation but less than Alternatives A and C.	Similar to Alternative B except potential benefit from predicted increase in mid seral open foraging habitat (Pallid) and increased risk from developed recreation expansion.	Similar to Alternative A but potential benefit if abandoned recreation structures can be used as roosts; risk from lack of restoration and increased wildfire, and if roosts excluded from decommissioned recreation structures.	Similar to Alternative B but with improved standard and guideline for LTBMU conditions.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Water Quality	TMDL milestones & 303(d) listings		TMDL milestones are achieved, and no additions to 303(d) list.	Same as Alternative A.	Same as Alternative A.	Achievement of long term (greater than 15 years) TMDL milestones may be delayed.	Same as A.	Alternative D would have the greatest potential for water quality impacts due to wildfire; Alternative C would have the least risk, and Alternatives A and B would have similar risk.
Water Quantity	% of water rights verified & maintained, surface and groundwater resources protected & maintained.		100% of USFS water rights are maintained. Groundwater and surface water resources continue to be protected and enhanced.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A.	Same as A.	---

Resource	Indicator	Unit of Measure	Alt. A	Alt. B	Alt. C	Alt. D	Alt. E	Comments
Watershed Condition	Watershed Condition Class (HUC 6)	Watershed Condition Class	Watersheds in condition class 1 and 2 are maintained. Ward and Upper Truckee watersheds continue to move toward Condition Class 1.	Same as Alternative A.	Same as Alternative A.	Same as Alternative A for 10-15 years. Greater risk of inability to maintain or improve Watershed Condition Class.	Same as A.	---
SEZ & Geomorphic Condition	Functioning condition	Miles/acres	Measurable improvement in geomorphic stability & floodplain connectivity.	Same as Alternative A.	Same as Alternative A.	Measurable improvement through projects currently planned in geomorphic stability & floodplain connectivity, but less than A, B & C in long term.	Same as A.	---
Wilderness	Existing and Recommended	Acres	24,665 No change from current	24,665, same as Alternative A. No change from current	24,665 +14,229 Total 38,894 Would provide an additional 14,229 acres of wilderness experience.	24,665 +29,581 Total 54,246 Would provide an additional 29,581 acres of wilderness experience.	24,665, same as Alternative A. No change from current	--- ---

