

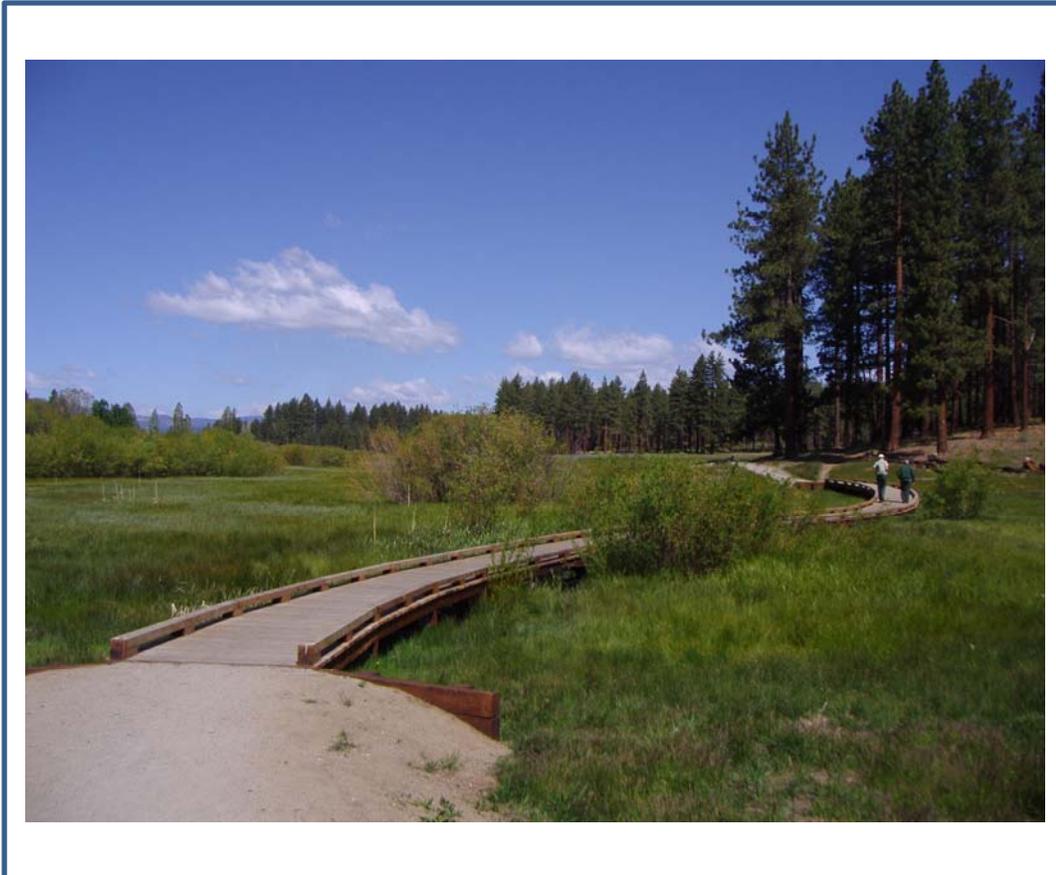


United States Department of Agriculture
Forest Service

Integrated Management and Use of Roads, Trails, and Facilities Draft Environmental Assessment

Lake Tahoe Basin Management Unit,
El Dorado County, California
Placer County, California
Alpine County, California
Washoe County, Nevada
Carson City, Nevada
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April 2016



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Acronyms

Acronym/ Abbreviation	Definition
ABA	Architectural Barriers Act
BA/BE	Biological Assessment/Biological Evaluation
BEIG	Built Environment Image Guide
BMPs	Best Management Practices
BMPEP	Best Management Practice Evaluation Program
Caltrans	California Department of Transportation
CAR	Critical Aquatic Refuge
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CLM	California Land Management
CO	Carbon Monoxide
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationship System
DBH	Diameter at Breast Height
DOE	Determination of Eligibility
DVT	Daily Vehicle Trips
EA	Environmental Assessment
EIP	Environmental Improvement Program
EIS	Environmental Impact Statement
ERA	Equivalent Roaded Acres
ESA	Endangered Species Act of 1973 as amended
FONSI	Finding of No Significant Impact
Forest Plan	Lake Tahoe Basin Management Unit Land and Resource Management Plan
Forest Service	USDA Forest Service
FSORAG	Forest Service Outdoor Recreation Accessibility Guideline
GFA	Gross Floor Area
GHGs	Greenhouse Gasses
GIS	Geographic Information System
HUC	Hydrologic Unit Code

Acronym/ Abbreviation	Definition
LEED	Leadership in Energy and Environmental Design
LOP	Limited Operating Period
LRMP	Land and Resource Management Plan
LRWQCB	Lahontan Regional Water Quality Control Board
LTBMU	Lake Tahoe Basin Management Unit
MIS	Management Indicator Species
MIS Report	Management Indicator Species for the Lake Tahoe Basin Management Unit
ND	Neighborhood Development
NDEP	Nevada Department of Environmental Protection
NEPA	National Environmental Policy Act
NFMA	National Forest Management Act
NFS	National Forest System
NHPA	National Historic Preservation Act
NO _x	Nitrous Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
OHV	Off-Highway Vehicle
PAC	Protected Activity Center
PAOT	Persons At One Time
PCT	Pacific Crest Trail
PM10	Particulate Matter less than 10 microns in diameter
RCA	Riparian Conservation Area
RCOs	Riparian Conservation Objectives
ROS	Recreation Opportunity Spectrum
ROW	Right-of-Way
SEZ	Stream Environment Zone
SHPO	State Historic Preservation Officer
SNF MIS	2007 Sierra Nevada Forests Management Indicator Species
SNFPA	Sierra Nevada Forest Plan Amendment
SO ₂	Sulfur Dioxide
South Shore Project	South Shore Fuel Reduction and Healthy Forest Restoration Project

Acronym/ Abbreviation	Definition
TEPCS	Threatened, Endangered, Proposed, or Candidate Species
TESP	Threatened, Endangered, Sensitive or Proposed
TES	Threatened and Endangered Species
TMPO	Tahoe Metropolitan Planning Agency
TRPA	Tahoe Regional Planning Agency
TRT	Tahoe Rim Trail
USDA	U.S. Department of Agriculture
USFS	United States Forest Service
USFWS	U.S. Fish and Wildlife Service
VMT	Vehicle Miles Traveled
VQO	Visual Quality Objective

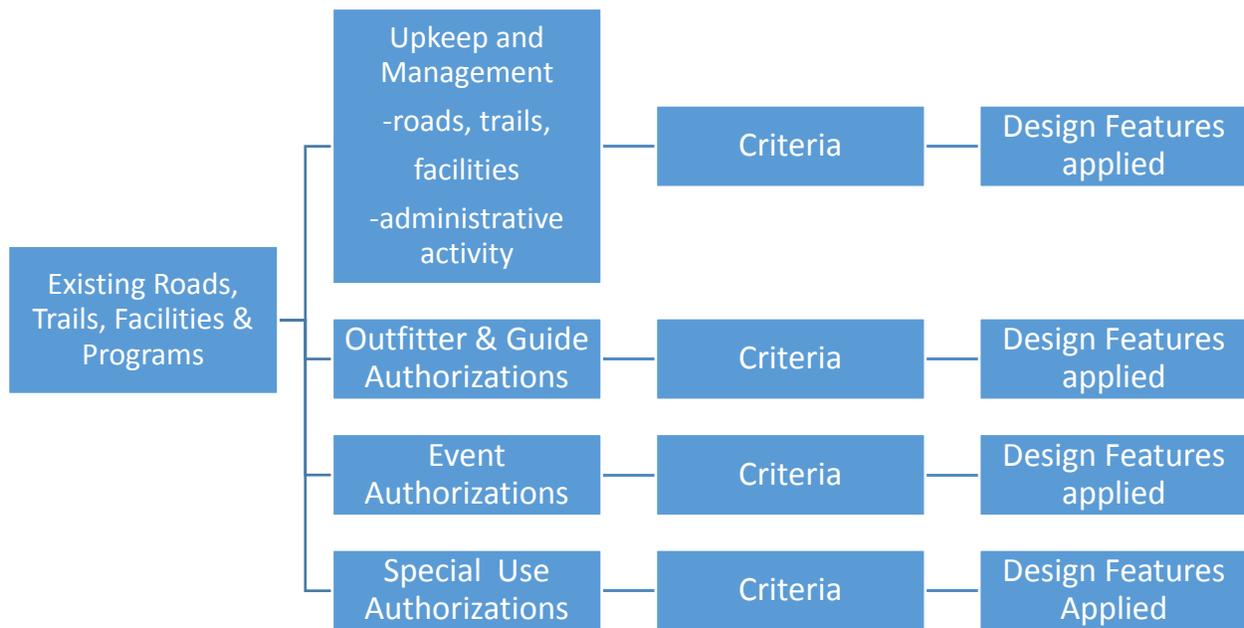
Project Summary

The *Integrated Management and Use of Roads, Trails, and Facilities Project* proposes maintenance, upgrades, operation, administration, and uses of existing roads, trails and facilities located on National Forest System (NFS) lands on the Lake Tahoe Basin Management Unit. Each proposed activity includes criteria which serve as filters for activities that may be authorized. Design features describe limitations and conditions for how those authorized activities would be carried out.

The Proposed Action consists of four components, each relating to existing roads, trails, and facilities, and the programs that occur on those roads, trails, and facilities.

Proposed Action Components:

1. Upkeep and management of roads, trails, and facilities,
2. Authorization of Outfitter / Guide activities,
3. Authorization of events, and
4. Authorization of special use permits for recreation uses of NFS lands



To implement the Proposed Action over time, a list of individual project activities will be reviewed by an interdisciplinary team (IDT) on an annual basis (or as needed), to determine consistency with the criteria and design features described in this Proposed Action. This list and project descriptions would be made available for stakeholder input, and any comments received would be considered by the ID Team. Only activities that are consistent with the Project scope, criteria, and design features will be authorized by the Forest Supervisor under the NEPA analysis associated with this Proposed Action.

Chapter 1 – Introduction

1.1 Document Structure

The U.S. Department of Agriculture (USDA) Forest Service (Forest Service) has prepared this draft environmental assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental effects that would result from the Proposed Action as well as the No Action Alternative. The document is organized as follows:

- **Chapter 1, “Introduction,”** includes information on the structure of the EA, background of the project, overview of the existing condition, the desired conditions, the purpose of and need for action, summary of the Proposed Action, applicable management direction, and the decision framework. This chapter also details how the Forest Service informed the public of the proposal through public involvement, describes the issues identified by the public, and summarizes laws, regulations, and policies that are applicable to the project.
- **Chapter 2, “Alternatives, Including the Proposed Action,”** provides descriptions of the No Action Alternative and the Forest Service’s Proposed Action. Site maps of the project area are included. Chapter 2 also summarizes the effects of the No Action Alternative and the Proposed Action.
- **Chapter 3, “Environmental Consequences,”** presents an overview of the analysis, the existing conditions, and the environmental effects of implementing the alternatives. The effects of the No Action Alternative are described first to provide a baseline for evaluation and comparison with the Proposed Action.
- **Chapter 4, “Consultation and Coordination,”** provides a list of preparers and agencies consulted during the development of this document.
- The **appendices** include water quality protection best management practices, invasive plants information, projects considered for cumulative effects, and examples of projects that would and would not be authorized under this NEPA document. Additional documentation may be found in the project record located at the Forest Supervisor’s office in South Lake Tahoe, CA.

1.2 Background

The Forest Service, Lake Tahoe Basin Management Unit (LTBMU) manages numerous facilities for public use and administrative purposes. Each facility serves a role in the overall stewardship and provision of public services on National Forest System (NFS) lands in the Lake Tahoe Basin. There are 42 developed recreation sites including campgrounds, day-use beaches, resorts, and trailheads. Numerous administrative sites include the Supervisor’s Office, Meyers Work Center, and fire station facilities. The

LTBMU also administers under permit private facilities located on NFS lands including resorts, such as Heavenly Mountain Resort, private organization camps, and cabins within recreation residence tracts.

There are approximately 250 miles of Forest Service system roads in the Lake Tahoe Basin which provide public and administrative access to National Forest resources. Public vehicle access on these roads is currently regulated through the 2011 Motorized Vehicle Use Map (MVUM) which establishes dates when gates may be open and the class of vehicle that may use the road. The LTBMU manages all approved recreational trails on NFS lands or rights-of-way within its jurisdiction. There are currently approximately 320 miles of classified NFS system trails, (approximately 20 miles authorized for motorized use) within the LTBMU. Deferred maintenance needs associated with roads, trails, and facilities are increasing at a considerable rate every year.

There are numerous events which occur on a regular basis on NFS lands managed by the LTBMU, including festivals, competitions, and social gatherings. These events are valued within the community and within the region for the experiences they offer as well as the economic benefit they contribute to the Lake Tahoe Basin. Many new users are introduced to the National Forest for the first time during these events.

Annually, the LTBMU receives dozens of requests to provide outfitting and guiding services on existing NFS roads and trails. Examples of requested activities include: guided hikes through Meiss Meadows for small groups; guided and/or outfitted mountain bike riding and shuttle services to popular trailheads; and guided overnight backpacking excursions. At present, only one authorization for outfitting and guiding activities is in place on the LTBMU (snowmobile tours near Brockway Summit), with the exception of wedding providers.

The operation, use, management, and upkeep of the developed roads, trails, and facilities on NFS lands are recurring and on-going activities. In previous years, analysis and environmental documentation of these specific management activities and authorizations has mostly occurred on a case-by-case basis as each individual activity is proposed. Currently maintenance of roads and trails is documented in a programmatic environmental analysis with annual review of specific proposed activities to ensure that extraordinary circumstances do not exist, and that project design accounts for particular site conditions. Events have typically been documented independently of each other, based on proponents' schedules. This approach to considering regular low-risk occurrences on NFS lands has proven unsustainable with respect to available public resources and staffing.

1.3 Proposed Action Summary

The LTBMU Proposes maintenance, upgrades, operation, administration, and uses of existing roads, trails and facilities located on NFS lands in the Lake Tahoe Basin. Criteria described for each proposed activity serve as filters for activities that may be authorized. Design features describe limitations and conditions for how those authorized activities would be carried out.

The Proposed Action consists of four components, each relating to existing roads, trails, and facilities (with the exception of backcountry ski / snowshoe and fishing outfitter guiding), and the programs that occur on those roads, trails, and facilities:

1. Upkeep and management of roads, trails, and facilities,
2. Authorization of Outfitter / Guide activities,

3. Authorization of events, and
4. Authorization of special use permits for recreation uses of NFS lands

A more detailed description of the Proposed Action, including criteria for each component and design features can be found in Chapter 2 of this EA.

1.4 Location

This project is on all National Forest System (NFS) existing roads, trails, and facilities administered by the LTBMU, and includes specific areas considered for Outfitter / Guide activities.

1.5 Purpose and Need for Action

The over-arching purpose and need for this Proposed Action is to create greater efficiency in reviewing and approving projects, events, and permits on NFS lands within the Lake Tahoe Basin. Currently every year the LTBMU analyzes dozens of individual projects under categorical exclusions (CE's) and environmental assessments (EA's) that are repetitive in nature, take a substantial amount of administrative time, result in large fees for analysis, involve minimal resource impacts, and rarely result in meaningful change to the actual on-the-ground activities. Specifically the need for this Proposed Action relates to the following activities:

There is a need to provide public access and administration of NFS lands on managed roads and trails, and at developed facilities. Reoccurring preventative maintenance, refurbishment, repair, and in some cases rebuild of developed features by trained construction or maintenance personnel, is needed to protect public resource investments and the Lake Tahoe Basin's natural setting and landscape character near roads, trails, and facilities. There is also a need to update the LTBMU Motor Vehicle Use Map (MVUM) to improve consistency and respond to public interest and environmental conditions.

There is a need to manage and maintain roads, trails, and facilities on NFS lands to meet established standards for health and safety, environmental sustainability, accessibility, and to minimize deferred maintenance. There is a need to manage public recreation use on NFS lands through appropriate facilities, and to protect resource values from degradation. There is also a need to partner with private and non-governmental entities to provide managed use of NFS lands for organized recreational and community-enhancing events.

There is a need to efficiently manage environmental analysis and staffing demands with respect to routine and recurring management, upgrades, and administrative authorizations of NFS lands.

There is a need to provide temporary authorizations for outfitting and guiding uses on NFS lands in the Lake Tahoe Basin to provide access to the forest for persons that might otherwise not be able to participate in a particular activity due to inexperience, cost of necessary equipment, unfamiliarity with activity rules/regulations/best practices, and in some cases due to physical limitations.

1.6 Decision Framework

The LTBMU Forest Supervisor would decide:

1. Whether or not to implement the project activities as described in the Proposed Action.
2. Whether or not a Finding of No Significant Impact (FONSI) can be supported by the environmental analysis contained in this Environmental Assessment (EA).

1.7 Public Involvement

The project was listed on the LTBMU’s “Schedule of Proposed Actions” on January 01, 2016, and proposed LTBMU Events and Outfitting and Guiding Strategy was listed on July 01, 2015. A scoping letter was mailed to stakeholders and interested parties on December 3, 2015. A copy of the scoping letter and Proposed Action were posted on the LTBMU website on the same day. A news release was distributed to local media outlets on December 3, 2015 summarizing the Proposed Action and asking for public input on the Proposed Action during the NEPA scoping period. On December 23, 2015 the Tahoe Daily Tribune published an article which highlighted the Proposed Action and identified where the public could access more information about the project. Thirty-nine commenters provided input on the Proposed Action during the scoping period.

1.8 Issues

Based on comments received during the scoping period a number of concerns were identified, including:

- Trail use and impacts associated with Outfitter / Guided mountain bike and shuttle activities,
- Environmental stewardship and “leave no trace” practices associated with Outfitter / Guide and event activities,
- Unnecessary limitations on Outfitter / Guide activities within designated wilderness areas and opportunities for additional Outfitter / Guide activity types,
- The LTBMU’s process for administering an Outfitter / Guide program including selection of applications and award of special use permits,
- The administrative process by which the LTBMU interdisciplinary team will evaluate proposed activities against the criteria and analysis for this project,
- Clarification of some terms and concepts described in the Proposed Action.

The Proposed Action has been refined based on scoping and other input. An alternative to the Proposed Action was not developed because concerns were able to be reflected in the refinement of the Proposed Action. A summary of the changes from the Proposed Action circulated for input during NEPA scoping is included in section 2.2.1 of this EA.

1.9 Laws, Regulations, and Policies

All resource management activities described and proposed in this document would be consistent with applicable federal law and regulations, Forest Service policies, and applicable provisions of state law. The major applicable laws are as follows:

National Forest Management Act

The National Forest Management Act (NFMA) requires the development of long-range land and resource management plans. The LTBMU Forest Plan was approved in 1988 as required by this act. It has been amended several times, including in the Sierra Nevada Forest Plan Amendment (SNFPA) (USDA Forest

Service 2004). The Forest Plan provides guidance for all natural resource management activities. The NFMA requires that all projects and activities be consistent with the Forest Plan. The Forest Plan has been reviewed in consideration of this project, and the design of the Proposed Action is consistent with the Forest Plan.

Endangered Species Act

In accordance with Section 7(c) of the Endangered Species Act, the U.S. Fish and Wildlife Service (USFWS) list of endangered and threatened species that may be affected by projects in the Lake Tahoe Basin Management Area was reviewed (January 11, 2016).

National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. Section 106 of the NHPA (Public Law 89.665, as amended) also requires federal agencies to afford the State Historic Preservation Officer a reasonable opportunity to comment. This project is consistent with the Programmatic Agreement between the USFS Region 5 and the Historic Preservation Officers of California and Nevada. (To be documented in Project Record).

Clean Water Act (Public Law 92–500)

All federal agencies must comply with the provisions of the Clean Water Act (CWA), which regulates forest management activities near federal waters and riparian areas. The design features associated with the Proposed Action ensure that the terms of the CWA are met, primarily prevention of pollution caused by erosion and sedimentation.

California Environmental Quality Act [CEQA] (Public Resources Code, § 21080)

The California Environmental Quality Act (CEQA) applies to discretionary projects to be carried out or approved by public agencies in California. The Lahontan Regional Water Quality Control Board (LRWQCB) process to grant a conditional waiver of waste discharge requirements on NFS lands is a discretionary act subject to CEQA. Prior to approving a project, the LRWQCB must certify that: 1) the environmental document has been completed in compliance with CEQA; 2) that the Lahontan Water Board has reviewed and considered the information contained in the environmental document; and 3) that the environmental document reflects the Lahontan Water Board's independent judgment and analysis (Cal. Code Regs., tit. 14, § 15090.) For water quality improvement projects (i.e., projects with the primary purpose of reducing, controlling, or mitigating existing sources of erosion or water pollution), project-specific CEQA documents are not required.

Environmental Justice (Executive Order 12898)

Executive Order 12898 requires that all federal actions consider potentially disproportionate effects on minority and low-income communities, especially if adverse effects on environmental or human health conditions are identified. Adverse environmental or human health conditions created by the Proposed Action would not affect any minority or low-income neighborhood disproportionately.

Reviewing the location, scope, and nature of the proposed activity in relationship to non-federal land, there is no evidence to suggest that any minority or low-income neighborhood would be affected

disproportionately. Conversely, there is no evidence that any individual, group, or portion of the community would benefit unequally from the Proposed Action.

Invasive Species, Executive Order 13112 of February 3, 1999

This EA covers botanical resources and invasive plants. An Invasive Plant Risk Assessment has been prepared (to be documented in Project Record). The project's design features are designed to minimize risk of new invasive plant introductions.

Migratory Bird Treaty Act of 1918 as amended (16 USC 703-712)

The original 1918 statute implemented the 1916 Convention between the United States and Great Britain (for Canada) for the protection of migratory birds. Later amendments implemented treaties between the United States and Mexico, Japan, and the Soviet Union (now Russia). Specific provisions in the statute include the establishment of a federal prohibition, unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention . . . for the protection of migratory birds . . . or any part, nest, or egg of any such bird." Because forest lands provide a substantial portion of breeding habitat, land management activities within the LTBMU can have an impact on local populations.

A Migratory Bird Report (to be documented in Project Record) has been prepared for this project which fulfills the requirements of this act and Executive Order 13186.

Architectural Barriers Act

The Architectural Barriers Act (ABA) requires that facilities designed, built, altered, or leased with funds supplied by the United States federal government be accessible to the public. The ABA provides uniform standards for the design, construction, and alteration of buildings so that persons with disabilities will have ready access to and use of them. These standards are incorporated into the design of this proposed action in order to meet the ABA.

Special Area Designations

The project area contains the Grass Lake Natural Research Area, and portions of the Desolation, Granite Chief, and Mt. Rose wildernesses. Project activities and criteria are consistent with all management protections for these designated Special Areas.

Tahoe Regional Planning Agency (TRPA)

Management activities under this proposed action will be reviewed by TRPA consistent with the terms of the 1989 MOU between TRPA and the Forest Service. Depending on the extent of project activities permits may be required.

1.10 Permits and Coordination

Any ground-disturbing project activities (greater than three cubic yards of soil) that occur between October 15 and May 1 will require a grading exemption from TRPA and LRWQCB. In addition, any required permits will be obtained from TRPA and / or the LRWQCB prior to project implementation.

Project documents have been shared and reviewed with both TRPA and the LRWQCB. Appropriate permits will be obtained with Departments of Transportation (DOT) prior to project activity affecting the right-of-way along DOT managed highways.

Chapter 2 - Alternatives, Including the Proposed Action

2.1 No Action – Alternative 1

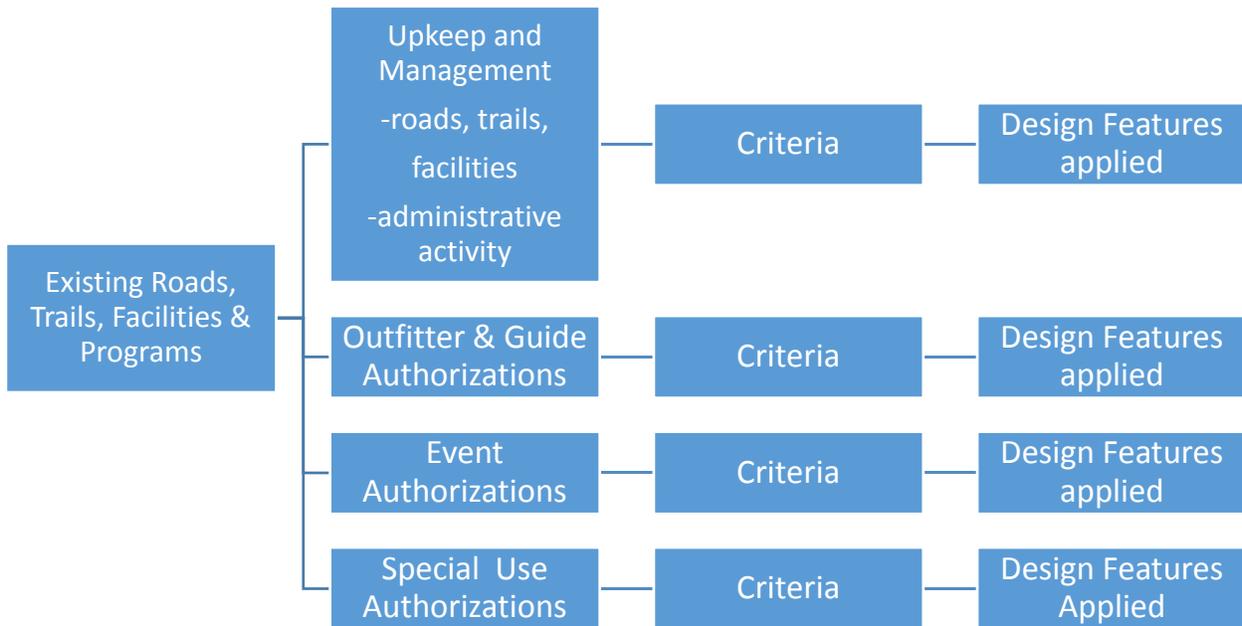
Under the No Action alternative, current conditions and management would persist. Maintenance of roads and trails would continue to occur consistent with the existing programmatic environmental analysis. Authorization of facility maintenance, as well as event activities and administrative permit changes, would be based on individual NEPA analysis documentation pending availability of funding and staffing resources. No action would be taken regarding Outfitter / Guide activities.

2.2 Proposed Action – Alternative 2

The LTBMU Proposes maintenance, upgrades, operation, administration, and uses of existing roads, trails and facilities located on NFS lands in the Lake Tahoe Basin. The criteria described for each proposed activity serve as filters for activities that may be authorized. Design features describe limitations and conditions for how those authorized activities would be carried out.

The Proposed Action consists of four components, each relating to existing roads, trails, and facilities, and the programs that occur on those roads, trails, and facilities (roads and trails include a 200 foot buffer; facilities are defined by the parcel area/permit boundary; single sites such as trailheads include a 400 foot buffer):

1. Upkeep and management of roads, trails, and facilities,
2. Authorization of Outfitter / Guide activities,
3. Authorization of events, and
4. Authorization of special use permits for recreation uses of NFS lands



To implement the Proposed Action over time, a list of individual project activities will be reviewed by an interdisciplinary team (IDT) on an annual basis, (or as needed), to determine consistency with the criteria and design features described in this Proposed Action. This list and project descriptions would be made available for stakeholder input, and any comments received would be considered by the ID Team. Only activities that are consistent with the Project scope, criteria, and design features will be authorized by the Forest Supervisor under the NEPA analysis associated with this Proposed Action (See Appendix B and C). The Forest Supervisor has discretion in authorizing activities consistent with this NEPA analysis and may choose to analyze activities under a separate environmental documentation, even if they could be consistent with this project scope, criteria, and design features.



The proposed action will not result in any changes to existing management direction found in the LTBMU Land and Resources Management Plan (Forest Plan), or existing rules, regulations, applicable state/local laws, or administrative decisions regarding the use of NFS lands (i.e. CFRs regulating dogs at Forest Service beaches, over-the-snow (OSV) or off-highway-vehicles (OHV) use laws/regulations/requirements, existing management plans for areas such as the Tallac Historic Site, volunteer service agreements, existing Forest Orders, etc.), or existing recreation use permits.

Design features for all activities (Section 2.3) are included to minimize effects to environmental conditions and social values. Permits for management activities may or may not be required from partnering regulatory agencies, depending on individual project specifications and site conditions. All

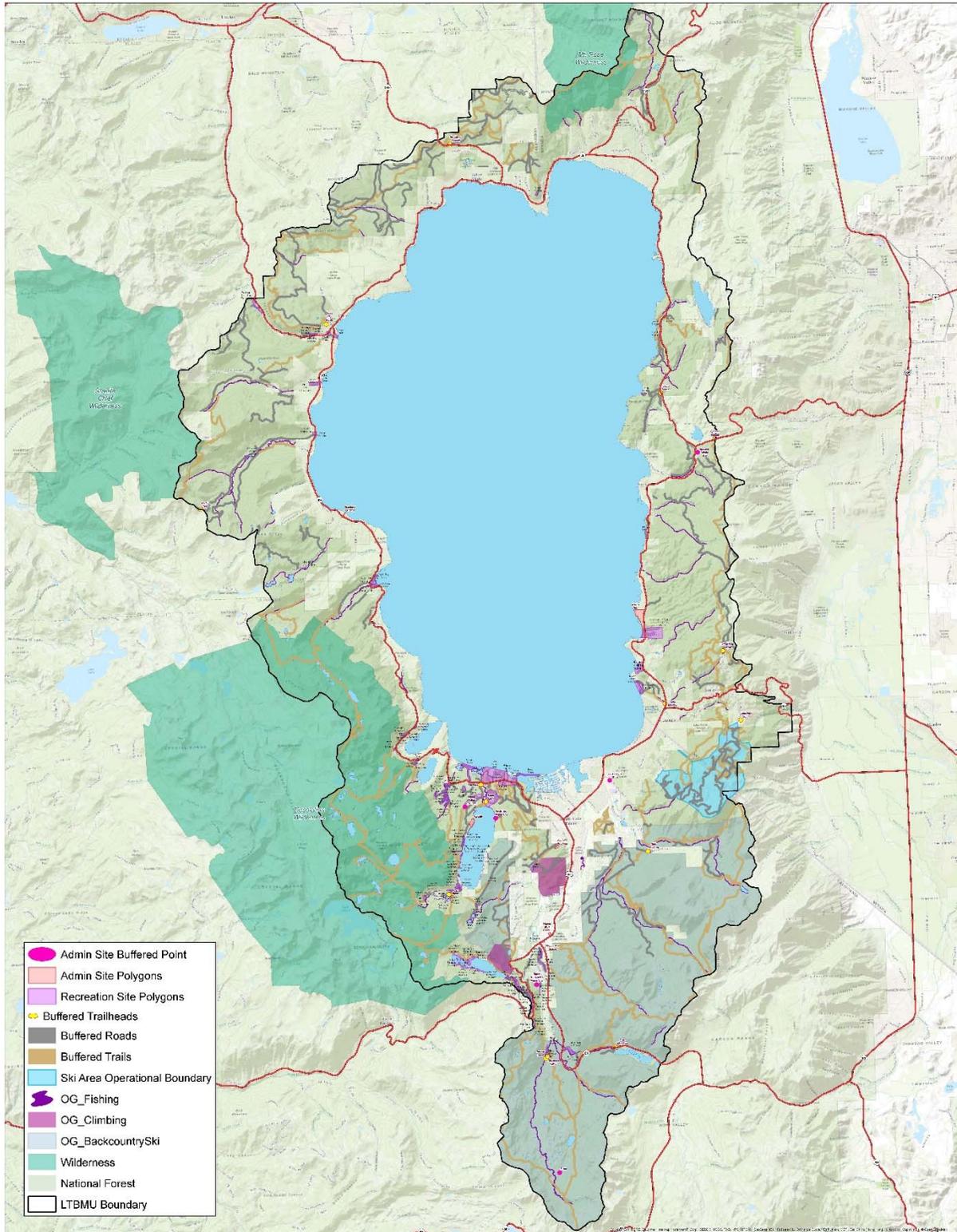
necessary permits would be obtained at the time of individual project planning and implementation after IDT review.

The following definitions are used for purposes of clarity in this project and document:

- *Ground disturbance*: Displacement of soil resulting from excavation with mechanical or hand tools. Routine public and administrative uses of road and trail surfaces consistent with their intended management is not considered ground disturbance.
- *Compaction*: Disturbance to soil surfaces and subsurface soil structure outside of managed roads, trails, and facilities that results in changes to the soil's ability to infiltrate water.
- *Threatened, Endangered, Proposed, Candidate, or Sensitive (TEPCS) Botanical occurrence*: The geospatially defined polygons from the Forest Service's Natural Resource Information System that describe known locations of protected plants.
- *Protected Wildlife Areas*: Habitat locations for TEPCS species, TRPA managed species, bat roosts, protected activity centers (PACs), waterfowl threshold zones, den site buffers, etc. A map showing these current locations is included below.

The Project Area for this Proposed Action includes all National Forest System (NFS) existing roads, trails, and facilities managed by the Lake Tahoe Basin Management Unit, and includes specific areas considered for Outfitter / Guide activities.

Figure 2-1. Proposed Action Project Area Map



2.2.1 Changes from Scoping Comments

Changes to the Proposed Action between the scoping period and draft Environmental Assessment were incorporated based on input received:

- The scope was reduced to eliminate adoption of non-system trails outside of existing road and trail buffers, and to limit trail re-routes outside of a 200-foot buffer for roads and trails;
- Outfitter / Guide opportunities for rock climbing and off-highway vehicle tour activities were added for consideration in the temporary use pool of Outfitter / Guide service days;
- Outfitter / Guide opportunities for mountain biking and shuttle services were refined to restrict authorizations during peak use periods on certain high-use trails;
- Outfitter / Guide opportunities were refined to include requirements for guest education regarding “leave no trace” ethics and appropriate trail use etiquette, as well as participation in trail maintenance and stewardship;
- Criteria have been refined regarding heritage resources to only consider activities which have “no effect” to those resources; and
- A process, while not defined, was identified to ensure stakeholders have an opportunity to review and provide input on activities being considered and reviewed by the LTBMU interdisciplinary team for consistency with this project.

2.2.2 Proposed Action Components and Criteria

2.2.2.1 Component 1: Upkeep and Management of Roads, Trails, and Facilities

Upkeep and management of Forest Service-owned and privately-owned buildings and sites on National Forest System lands, including administrative, recreation, public resort, private resort, ski areas, organization camps, and recreation residence buildings; upkeep and management of roads and trails on National Forest System lands.

A. Specific Activities for Upkeep and management of Roads, Trails, and Facilities include, but are not limited to:

1. Maintenance activities such as painting, roofing, and landscaping,
2. Management of hazard trees,
3. Implementation of Best Management Practice (BMP) measures to protect water quality and prevent facility erosion and degradation,
4. Replacement (or relocation within the site boundary) of existing features, including pavement, utilities, and buildings,
5. Addition of features that support existing program delivery without increasing vehicle use, such as restrooms or garbage collection facilities,

6. Placement of minor site features such as signs and benches,
7. Upgrades to meet requirements for universal accessibility, including the Architectural Barriers Act, and Forest Service Outdoor Recreation Accessibility Guide,
8. Delineation of parking areas to improve use and minimize resource impacts,
9. Placement of barriers to protect resource values (soil, vegetation),
10. Brushing and debris removal to maintain clear paths of travel,
11. Re-grading and re-surfacing travel routes,
12. Cleaning of culverts, drainage features, and sediment collection basins,
13. Staging of equipment in currently compacted areas, or on high-capability soil areas which will be restored following maintenance activity,
14. Re-route and restoration of trail segments within existing trail buffer or recreation sites from areas negatively impacting resources (i.e. water quality, habitat, SEZ) to areas with less impact,
15. Installation or replacement of gates to manage right-of-way access and to meet travel route designations,
16. Replacement of stream crossing structures to meet current design standards, protect resource values, and incorporate Aquatic Organism Passage (AOP) guidelines for projects less than 1 acre,
17. Update of the LTBMU Motor Vehicle Use Map (MVUM) for dates that each system road may be open for public motorized access and use, and for administrative updates,
18. Development or replacement of features within SEZ that reduce the long term impacts to the SEZ.

B. Criteria for Upkeep and Management of Roads, Trails, and Facilities:

The activities described above must meet the following criteria in order to be approved as part of this Proposed Action:

1. Construction of new facility features which fundamentally alter the program or services offered at the site will not be authorized,
2. Decommissioning and elimination of recreation or administrative facilities which terminate the program or services offered at the site will not be authorized,
3. Development or replacement of features beyond an existing special use permit boundary that serve the permitted program activity will not be authorized,
4. Changes to parking facilities that increase or decrease existing vehicle capacity by more than ten percent within the life of this document will not be authorized,
5. Construction of new roads or trails, not associated with a re-route for environmental or safety benefit will not be authorized,
6. Improvements within ski areas are limited to roads, trails, and facilities; modifications to ski runs and lifts will not be authorized,
7. Activities proposed in occupied habitat for any species, other than SNYLF or LCT, protected by the Endangered Species Act will not be authorized.
8. Activities in SNYLF occupied habitat will not be authorized.
9. Activities in critical or proposed critical habitat for SNYLF will not be authorized.

10. Activities in SNYLF suitable habitat will not be authorized unless:
 - a. An assessment is conducted which confirms a lack of habitat suitability
 - b. Areas confirmed suitable have surveys completed per the SNYLF Biological Opinion to determine if habitat is utilized/occupied.
 - c. Surveys to confirm occupancy are considered current per U.S. Fish and Wildlife Service.
 - d. Activities do not cause long-term or permanent reduction in the quality or quantity of unoccupied SNYLF suitable habitat.
11. Ground disturbing activities within 100-feet of occupied Lahontan cutthroat trout habitat will not be authorized.
12. Activities that impact the structural or biological integrity of aquatic habitat for TEPCS will not be authorized. Structural or biological integrity includes changes in stream shade, bank stability, species composition, and water quality parameters (dissolved oxygen, increased sediment, and/or temperature).
13. Activities which cannot be documented as having “no effect” to heritage values under the Programmatic Agreement between the USFS Region 5 and State Historic Preservation Officers, will not be authorized.
14. Road and trail maintenance will be limited to existing road prism and trail tread in areas which have not been surveyed for heritage resources, consistent with terms of the Programmatic Agreement between the USFS Region 5 and State Historic Preservation Officers.
15. Activities involving use of motorized equipment occurring in wildlife protected activity centers (PAC’s), other protected wildlife areas, or in TEPCS habitat during established limited operation periods (LOP’s) would not be authorized unless:
 - a. Absence of the species can be verified
16. Activities occurring in wildlife protected activity centers (PAC’s) or other protected wildlife areas would not be authorized unless:
 - a. They do not result in a substantial long-term increase in the extent of compacted soil,
 - b. They do not result in a reduction in canopy cover to a level less than 60-70%,
 - c. They do not remove vegetation, including multiple large snags, which would degrade the habitat requirements of focus species within one-quarter mile of a den or nest area of that focus species,
 - d. They do not result in a substantial increase in use level,
17. Activities that occur within 300 feet of an occupied bat roost and have the potential to disturb roost inhabitants or alter the roost habitat during the roosting period would not be authorized,
18. Trail maintenance activities within designated wilderness will follow restrictions and protocols consistent with the Wilderness Act,
19. Activities that cause ground disturbance, compaction or vegetation removal in known TEPCS botanical occurrences (except whitebark pine) or sensitive vegetation communities (e.g. fens) will not be authorized,

20. Other than routine use of roads and trails; activities occurring in the Grass Lake Research Natural Area will not be authorized without approval from PSW Research Station director
21. MVUM changes may be considered if they do not result in conflicts with wildlife protection LOPs,
22. MVUM changes may be considered if the road is managed under the terms of a special use permit,
23. MVUM changes will not be considered if they restrict access between May 25 and October; all roads open to public motorized access may be closed at any time by direction of the Forest Supervisor to protect public safety or environmental conditions such as high snow or soil moisture levels.

2.2.2.2 Component 2: Authorization of Outfitter / Guide temporary activities.

Authorize the creation of a “temporary use pool” for commercial Outfitter / Guide special use permits. One-year permits would be issued for Outfitter / Guide activities and the total authorization for available use days would be counted against the temporary use pool.

Establishment of a temporary commercial Outfitter / Guide use pool will be used to determine the demand, need, and capability for a longer-term outfitter /guide program. Operation of this temporary use pool will inform future consideration of priority use permits. The long term priority use pool would be analyzed under a separate NEPA analysis.

A. Specific Outfitter / Guide Temporary Activities include:

Issue a one-year authorization for Outfitter / Guides to operate the following use types on NFS lands outside of designated wilderness, up to the total number of allotted service days in each category, as shown in Table 2.1:

1. Backcountry skiing/snowshoeing,
2. Backpacking,
3. Fishing,
4. Hiking,
5. Horseback riding,
6. Mountain biking,
7. Shuttle services,
8. Rock climbing,
9. Off-highway tours,
10. Wedding/memorial service providers.

The Outfitter / Guide program will be administered as follows:

- a) Establish an open season for application of special use permits according to the guidelines outlined in FSH 2709.14 Ch. 50 Outfitting and Guiding and Other Concession Services. Existing priority use permit holders are not affected by this temporary use pool,
- b) Issue no more than 5 special use permits (up to 5 permittees) for each use type with the exception of wedding permit providers (see Wedding permit provider criteria below),
- c) Issue up to 200 service days at one time to an individual permittee. Once a permittee has used a significant portion of their 200 service days, they may apply for additional days, not to exceed 400 services days in a year. The total amount of service days for all permittees in any one activity may not exceed the total service pool day allocation (see Table 2.1),
- d) A service day is defined as a day or any part of a day on NFS lands for which an outfitter or guide provides services to an individual client,
- e) The total number of service days is calculated by multiplying each day of the trip by the number of clients on the trip,
- f) Outfitter / Guide trips that combine two or more guided activities within the same day will utilize a service day from each activity,
- g) The Forest Service maintains discretion in approving the location and timing of proposed activities. In general, activities proposed for use at high use sites will not be approved or additional requirements may be added to the permit terms (i.e. limitations on start times, the requirement to have all participants shuttled and shuttle vehicle may not park at the site, use of those sites only during non-peak days, etc.),
- h) With the exception of backcountry ski/snowshoe guiding, fishing guiding, rock climbing guiding, and overnight backpack camping, all guided activities will remain on existing roads and trails consistent with terms of guiding permits,
- i) Group size is determined by the number of clients and guides.

Table 2.1 Temporary Use Pool Service Day Allocation

<i>Use</i>	<i>Restrictions (all uses assume non-wilderness use)</i>	<i>Service Pool Day Allocation (per year*)</i>
Backcountry Skiing/snowshoeing	Group size of no more than 12; Locations limited to southern portion of LTBMU.	1000
Backpacking (overnight use)	Group size of no more than 12; follow all applicable campfire and fire restrictions	1000
Fishing	Group size of no more than 6; applicable state fishing license required	400
Hiking (day use)	Group size of no more than 12	2000
Horseback riding (day use or overnight use)	Group size of no more than 12; outside of existing developed recreation sites and only on trails with an equestrian Trail Maintenance Objective	300

Mountain biking	Group size of no more than 12; no use of Pacific Crest Trail (PCT)	1500
Shuttle Services (other than public transit)	Pickup at FS or non-FS site with drop-off at designated FS parking areas or where the activity will take place on NFS lands. Lapping services (picking up and dropping off multiple times in one day) is not allowed	2000
Rock Climbing / Bouldering	Group size of no more than 12; Locations limited to "Bottle Creek Crag" and "Pie Shop" pending verified absence of peregrine falcons and botanical resources	400
Off Highway Vehicle Tours	Group size of no more than 6	300
Wedding/Memorial Service Providers	Consists of less than 20 people at the 64 Acres lakeside facility or the Logan Shoals Vista	2000

* The total amount of service days for all permittees in any one activity may not exceed the total annual service pool day allocation.

B. Criteria for one-year Outfitter / Guide Permits:

1. The permit may not include temporary closure of system roads, trails, or facilities to general public use for the purposes of an Outfitter / Guide operation,
2. All permitted activities must be consistent with allowable general public use in the area proposed for use, and all applicable guidelines, regulations, and identified best practices,
3. Night lighting will generally not be authorized unless it does not interfere in any way with the natural environment, general public, or surrounding uses,
4. Amplified sound will generally not be authorized unless it does not interfere in any way with the natural environment, general public, or surrounding uses,
5. The permit may not authorize Outfitter / Guide activities within a designated wilderness (this requires specific and separate Wilderness needs assessment),
6. Issuance of an Outfitter / Guide special use permit for any activities within a developed recreation site already under special use permit will not be considered under this authorization. Outfitter / Guide activities at these sites are managed under the terms of the existing special use permit,
7. Proposed uses must be appropriate for the proposed facilities (i.e. horse trailer parking may only occur at facilities designed to accommodate horse trailers),
8. Where Outfitter / Guides (including shuttle services) utilize a facility operated under an existing special use permit, written concurrence from the concessionaire will be required,
9. Outfitter / Guide activities may not result in exclusive use of a site,
10. Outfitter / Guide activities, including shuttle services, will not be authorized on Holidays and weekends from June 15 – September 15 on the following high use trails: Armstrong Pass/Corral Trail Complex (18E09A, 18E14, 18E14B, 18E14A), Tahoe Mountain Trails (17E78, 17E78.3), Tahoe Rim Trail (19E00) from Big Meadow to Round Lake, and Tahoe Rim Trail from Tahoe Meadows to Tunnel Creek Road,

11. Use of unmanned aerial vehicles (drones) is not allowed,
12. All parking must occur at existing authorized parking areas that can accommodate the group size. Parking of client vehicles may not occur in parking areas designed for fewer than 25 vehicles. Shuttle services must be provided to access sites with fewer than 25 parking spaces. Pickup and drop-off of any shuttle services must occur at designated parking areas or at pull-offs where vehicle parking is permitted and legal according to applicable state/county/local law,
13. Outfitter / Guide activities may be de-authorized or required to move to an alternate location if it is determined that use conflicts exist or other extenuating circumstances exist such as construction or holiday crowds that would result in negative impacts to a particular area,
14. Outfitter / Guide activities will be revoked or will not be approved if they unreasonably conflict or interfere with administrative use of the Forest Service, other scheduled or authorized existing uses of the National Forest System, or use of adjacent non-National Forest System lands,
15. Activities proposed in occupied habitat for any species, other than SNYLF or LCT, protected by the Endangered Species Act will not be authorized,
16. Activities in SNYLF occupied habitat will not be authorized,
17. Activities in critical or proposed critical SNYLF habitat will not be authorized,
18. Activities in SNYLF suitable habitat will not be authorized unless:
 - a. An assessment is conducted which confirms a lack of habitat suitability,
 - b. Areas confirmed suitable have surveys completed per the SNYLF Biological Opinion to determine if habitat is utilized/occupied,
 - c. Surveys to confirm occupancy are considered current per U.S. Fish and Wildlife Service,
 - d. Activities do not cause long-term or permanent reduction in the quality or quantity of unoccupied SNYLF suitable habitat,
19. Ground disturbing activities or activities causing soil compaction within 100-feet of occupied Lahontan cutthroat trout habitat will not be authorized,
20. Activities that impact the structural or biological integrity of aquatic habitat for TEPCS will not be authorized. Structural or biological integrity includes changes in stream shade, bank stability, species composition, and water quality parameters (dissolved oxygen, increased sediment, and/or temperature),
21. Staging in areas of occupied or proposed critical habitat for SNYLF will not be authorized as part of this project,
22. Activities which cannot be documented as having “no effect” to heritage values under the Programmatic Agreement between the USFS Region 5 and State Historic Preservation Officers, will not be authorized,
23. Activities that cause ground disturbance, compaction or vegetation removal and/or rock climbing guiding in known TEPCS botanical occurrences (except whitebark pine) or other botanical resources (e.g. LTBMU watch list occurrences, fens, alpine pincushion vegetation) will not be authorized.

24. Other than routine use of existing roads and trails, activities occurring in the Grass Lake Research Natural Area will not be authorized without approval from PSW Research Station director,
25. Outfitter / Guide activities would comply with requirements for universal accessibility consistent with appropriate essential eligibility criteria for safe participation (FS-757, Accessibility Guidebook for Outfitters / Guides Operating on Public Lands),
26. Rock climbing Outfitter/Guiding will not include placement of permanent rock anchors,
27. Fishing Outfitter/Guiding will be limited to perennial streams and lakes, and will be in accordance with State and Federal fishing regulations,
28. Overnight camping Outfitter / Guide activities outside of developed facilities, including overnight staging of horses, must occur at least 100-feet from water bodies or streams,
29. Activities occurring in wildlife protected activity centers (PACs) or other protected wildlife areas may not include placement of aid / activity support stations, or designated congregation areas.

C. Additional Criteria for Wedding Provider one-year permits:

In addition to the general criteria listed above for Outfitter / Guide use, the following criteria apply for permitted Wedding providers:

1. The number of special use permits issued is not limited; however no one permit holder may operate more than 400 service days,
2. Group sizes are limited to 20 people including the officiant,
3. Wedding parties are restricted to the 64 Acres lakeside facility and the Logan Shoals Vista,
4. Receptions, loud music, releasing helium balloons, and throwing rice, confetti of any kind, or birdseed are prohibited,
5. Wedding ceremonies are not permitted on Forest Service beaches,
6. Setup of dining facilities and moving of site infrastructure such as picnic tables is not allowed.

2.2.2.3 Component 3: Authorization of Events

Authorize special events (commercial activities or group events containing more than 75 persons) under the terms of a special use permit, for the use of Forest Service roads, trails, and facilities. Events must remain on roads, trails, or developed facilities and permit terms may not include any off-road/trail travel or dispersed use of the general forest.

A. Event Authorization Activities include:

1. Travel, by means available to the general public, on system roads and trails,
2. Staging of equipment and people (including spectators) on existing paved or protected surfaces which do not block general public access,
3. Approving trail/road event uses consistent with the specific Trail Management Objectives (TMO) (i.e. mountain bike race on a trail that has a TMO with mountain biking [or higher] as a designated managed use) and applicable trail regulations,
4. Issuance of 1-year permit for new events which have not previously occurred on NFS lands,

5. Issuance of 5-year permits for events which have previously occurred on NFS lands within the last 5 years and can demonstrate a history of compliance with the terms of Forest Service special use permits, where activity is compatible with current policy, law, and regulation.

B. Criteria for Events:

1. Temporary closure of system roads, trails, facilities, and parking areas to general public use for the purposes of an event is not authorized; however reasonable interference, which could include short-term delays, is acceptable,
2. New mountain bike trail racing events (high intensity, short duration) will not be authorized on Corral Trail Complex (18E14, 18E14B, and 18E14A), Tahoe Mountain Trails (17E78, 17E78.3), TRT from Big Meadow to Round Lake, and TRT from Tahoe Meadows to Tunnel Creek Road as part of this project. Endurance and personal challenge events involving mountain bike riding on these trails may be authorized,
3. Event activities must be consistent with allowable general public use in the area proposed for use, and must comply with all applicable guidelines, regulations, and identified best practices,
4. Events may not conflict with or displace a normally occurring program in the area proposed for use,
5. Use of unmanned aerial vehicles (drones) for event purposes is not authorized,
6. Night lighting will generally not be authorized unless it does not interfere in any way with the natural environment, general public, or surrounding uses,
7. Amplified sound will not be authorized unless it does not unreasonably interfere with the natural environment, general public, or surrounding uses,
8. Portable restrooms and refuse containers appropriately sized and spaced for event staff/participants must be provided by the permittee,
9. Motorized vehicles are prohibited on any non-motorized trail/route,
10. Any dogs accompanying participants and staff must remain on leashes,
11. Sites with concessionaires will require coordination with and written concurrence from the concessionaire,
12. The event must comply with relevant accessibility requirements,
13. The event group must be able to be physically accommodated within the developed footprint at all proposed sites along the event route on existing developed parking or gathering areas (i.e. a large event must be staged on a site large enough to accommodate the group or the group must be split so that at any one time no more individuals will be located on a site than that particular site can accommodate within the developed footprint, including all proposed supporting vehicles and infrastructure),
14. Events may be de-authorized or required to move to an alternate location if it is determined that the proposed site is too small or other extenuating circumstances exist such as construction or holiday crowds that would result in impacts to a particular area,
15. Events will be revoked or will not be approved if they unreasonably conflict or interfere with administrative use by the Forest Service, other scheduled or authorized existing uses of the National Forest System, or use of adjacent non-National Forest System lands,

16. When an event permit expires, the Forest Service will evaluate any competing interest for use of those facilities being utilized during that event,
17. Ground disturbing activities proposed in occupied habitat for any TEPCS species will not be authorized,
18. Events proposed in occupied habitat for any species, other than SNYLF or LCT, protected by the Endangered Species Act will not be authorized,
19. Activities in SNYLF occupied habitat will not be authorized,
20. Activities in critical or proposed critical habitat will not be authorized,
21. Activities in SNYLF suitable habitat will not be authorized unless:
 - a. An assessment is conducted which confirms a lack of habitat suitability,
 - b. Areas confirmed suitable have surveys completed per the SNYLF Biological Opinion to determine if habitat is utilized/occupied,
 - c. Surveys to confirm occupancy are considered current per U.S. Fish and Wildlife Service,
 - d. Activities do not cause long-term or permanent reduction in the quality or quantity of unoccupied SNYLF suitable habitat.
22. Ground disturbing activities within 100-feet of occupied Lahontan cutthroat trout habitat will not be authorized,
23. Events that impact the structural or biological integrity of aquatic habitat for TEPCS will not be authorized. Structural or biological integrity includes changes in stream shade, bank stability, species composition, and water quality parameters (dissolved oxygen, increased sediment, and/or temperature),
24. Activities which cannot be documented as having “no effect” to heritage values under the Programmatic Agreement between the USFS Region 5 and State Historic Preservation Officers, will not be authorized,
25. Activities occurring in wildlife protected activity centers (PACs) or other protected wildlife areas may not include the staging of equipment or placement of aid stations or designated congregation areas,
26. Event activities occurring in wildlife protected activity centers (PACs) or other protected wildlife areas will include pulsed starts when the event includes more than 30 participants,
27. Activities that cause ground disturbance, compaction or vegetation removal in known TEPCS botanical occurrences (except whitebark pine) or other botanical resources (e.g. LTBMU watch list occurrences, fens, alpine pincushion vegetation) will not be authorized,
28. Activities in known Tahoe yellowcress occurrences will not be authorized,
29. Events occurring in the Grass Lake Research Natural Area will not be authorized without approval from PSW Research Station director,
30. Motorized / OHV events will be limited to the Sand Pit designated OHV Area, and McKinney Rubicon OHV staging area.

2.2.2.4 Component 4: Authorization of special use permits for recreation uses of NFS lands

Re-authorize existing recreation special use permits that will be expiring or are expired, for the use and management of LTBMU roads, trails, and facilities. Authorize filming under the terms of a special use permit for the use of roads, trails, and facilities.

A. Specific activities proposed include:

1. Re-issuance of an expired or expiring special use permit for the management of LTBMU roads, trails, and recreation facilities for which substantial operational changes are not proposed. The actual action is the approval of the permit with updated permit terms. Individual projects occurring at the site for construction projects would be authorized under Component 1 activities and are not considered part of the special use permit terms authorized in this action.
2. Authorization of special use permits for commercial filming.

B. Criteria for Re-issuance of expiring or expired special use permits:

In general the re-authorization of a special use permit does not include any ground disturbing activities. Any criteria for ground disturbing activities referenced below would be as a result of updated permit terms such as protection measures for newly listed species, placement of animal (bear) proof trash containers, etc.

1. All permitted activities would remain the same as the current existing permit,
2. Substantial operational changes are not proposed under the new permit (non-substantial changes could include: screening for Aquatic Invasive Species, relocation of existing services and amenities, adding animal (bear) proof trash containers, equipment rentals offered, etc.),
3. All relevant design features must be updated at the time of re-issuance (examples include, but are not limited to: protection measures for newly listed species, updated scientific methods for preventing spread of noxious species, new best management practices, etc.),
4. Requirements for annual operating plans must be updated at the time of re-issuance,
5. Permit issuance for activities in SNYLF occupied habitat will not be authorized,
6. Permit issuance for activities in critical or proposed critical SNYLF habitat will not be authorized.
7. Activities in SNYLF suitable habitat will not be authorized unless:
 - a. An assessment is conducted which confirms a lack of habitat suitability,
 - b. Areas confirmed suitable have surveys completed per the SNYLF Biological Opinion to determine if habitat is utilized/occupied,
 - c. Surveys to confirm occupancy are considered current per U.S. Fish and Wildlife Service,
 - d. Activities do not cause long-term or permanent reduction in the quality or quantity of unoccupied SNYLF suitable habitat.
8. Ground disturbing activities within 100-feet of occupied Lahontan cutthroat trout habitat will not be authorized,
9. Activities that impact the structural or biological integrity of aquatic habitat for TEPCS will not be authorized. Structural or biological integrity includes changes in stream shade, bank stability, species composition, and water quality parameters (dissolved oxygen, increased sediment, and/or temperature),
10. Activities which cannot be documented as having “no effect” to heritage values under the Programmatic Agreement between the USFS Region 5 and State Historic Preservation Officers, will not be authorized,
11. Activities that cause ground disturbance, compaction or vegetation removal in known (TEPCS) botanical occurrences (except whitebark pine) or other botanical resources (e.g. LTBMU watch list occurrences, fens, alpine pincushion vegetation) will not be authorized.

C. Criteria for Commercial Filming special use permits:

1. Filming access must be consistent with authorized public and/or permittee access,
2. Filming activities may not conflict with or displace a normally occurring program in the area proposed for use,
3. Locations will be within existing roads, trails, and facilities, and all equipment, crew, vehicles, and talent will remain within designated areas,
4. Duration will not exceed two weeks,
5. All filming activity must be able to be physically accommodated at proposed sites (i.e. at any one time no more individuals will be located on a site than that particular site can accommodate, including all proposed supporting vehicles and infrastructure),
6. Sites with concessionaires will require coordination with and written concurrence from the concessionaire,
7. All recreation user fees must be paid,
8. Night lighting will generally not be authorized unless it does not interfere in any way with the natural environment, general public, or surrounding uses,
9. Amplified sound will generally not be authorized unless it does not interfere in any way with the natural environment, general public, or surrounding uses,
10. NFS roads, trails, and facilities will remain open for public access and disruptions to normal use will be limited,
11. No construction of sets will be approved,
12. All props must be approved and will be limited in size,
13. No pyrotechnic special effects will be approved,
14. No ground disturbance will be authorized,
15. Traffic control will manage vehicle and visitor circulation,
16. Filming activities would result in “no effect” to historic resources,
17. Activities proposed in occupied habitat for any species, other than SNYLF or LCT, protected by the Endangered Species Act will not be authorized,
18. Activities in SNYLF occupied habitat will not be authorized,
19. Activities in critical or proposed critical habitat will not be authorized,
20. Activities in SNYLF suitable habitat will not be authorized unless:
 - a. An assessment is conducted which confirms a lack of habitat suitability,
 - b. Areas confirmed suitable have surveys completed per the SNYLF Biological Opinion to determine if habitat is utilized/occupied,
 - c. Surveys to confirm occupancy are considered current per U.S. Fish and Wildlife Service,
 - d. Activities do not cause long-term or permanent reduction in the quality or quantity of unoccupied SNYLF suitable habitat.
21. Filming activities which would require formal consultation with Fish & Wildlife Service (F&WS) will not be authorized,
22. Filming and filming related, activities will not occur during limiting operating periods (LOPs) in wildlife protected activity centers, or in other areas protected for wildlife,
23. Filming occurring in wildlife protected activity centers (PACs) or other areas protected for wildlife outside of established LOPs may not include:
 - a. Staging of equipment
 - b. Placement of designated congregation areas

24. Filming will not be authorized in Grass Lake Research Natural Area without approval from the PSW Research Station director.

2.3 Design Features

Project design features are elements of the project that are applied in implementation. These features are developed based on Forest Plan direction and site specific evaluations in order to reduce or avoid negative impacts of the proposed action activities.

2.3.1 Design Features common to all proposed action components

The following design features would apply to all activities in the proposed action, regardless of activity type. The term “authorized activities” refers to the specific activity taking place for each component. In the example of a maintenance/construction project, the activity would be construction activities (all stages including site preparation, staging, construction, trail maintenance, monitoring, etc). In the example of an event, the activity includes event setup, the actual event, and event cleanup. In the example of Outfitter / Guide operations, it would be any operation conducted by the permittee, including any preparation, actual guiding activities, or any necessary cleanup. These design features would also be included as part of special use permit terms.

1. Daily monitoring of fire weather and Project Activity Level (PAL) will occur during authorized activities. If thresholds for restrictions on project activities are reached, related activities will be suspended in compliance with Forest Service direction. A variance may be authorized and approved if project conditions meet specific criteria.
2. When mechanized equipment is used for authorized activities, fire tools and extinguishers or adequate water source will be kept on site and readily available.
3. Authorized activities will avoid all known occurrences of prehistoric or subsurface cultural resources through flag-and-avoid procedures or through explicit instructions.
4. If any previously unrecorded cultural resources are discovered during authorized activities, all activities would cease immediately in the vicinity of such discoveries and the Forest Service would be notified. The conditions of the programmatic agreement between the State Historic Preservation Office (SHPO) and USFS would then be followed (stipulation 7.10).
5. Implement dust control procedures to all disturbed soil areas to prevent transmission of visible airborne dust, during periods when forecast or actual wind conditions are equal to or greater than 25 mph.
6. Vehicle washing will be done at a commercial car or truck wash facility or at a designated and contained vehicle washing area that is connected to the sewer system to minimize introduction and spread of invasive plant species.
7. The use of leaf blowers or other air-powered devices shall not be used to clear any pathway or paved surface in order to prevent fugitive dust particles from entering the air. The use of brooms or other manual clearing devices is allowed for pathway clearing.
8. Avoid or minimize impacts to federally threatened, endangered, proposed, candidate, and Forest Service Sensitive botanical species (TEPCS) and other botanical resources (e.g. LTBMU watch list occurrences, fens, alpine pincushion vegetation). TEPCS occurrences (except whitebark pine) will be flagged and avoided (where they overlap with authorized activities. The need to flag

occurrences may be waived by forest botanist if overlap is incidental (such as with Outfitter / Guide, filming, or event activities) and potential user/plant conflict would be mitigated through specific requirements in the permit and annual operating plan that results in avoidance of occurrences of TEPCS species.

9. Locations where activities that cause ground disturbance, compaction or vegetation removal in known (TEPCS) botanical suitable habitat (except whitebark pine) will be surveyed prior to implementation; requirement may be waived if current surveys (<2 years for TYC, <5years for other TEPCS species) have been reviewed and approved by forest botanist. If such botanical occurrences are identified, they will be avoided or the project will not be authorized.
10. Locations where activities that cause ground disturbance, compaction or vegetation removal will be surveyed for invasive plants prior to implementation; requirement may be waived if current surveys (<5years) have been reviewed and approved by forest botanist. If invasive plants are identified, they will be avoided or treated during implementation.
11. Follow all LTBMU Invasive Plant Species Management measures to minimize the spread of invasive plants through project activities, including:
 - a. Staging areas—do not stage equipment, materials, or crews in invasive plant-infested areas,
 - b. Livestock—if supplemental fodder (e.g hay, silage) is required for livestock, including horses and other pack animals, it will be certified weed-free,
 - c. Early Detection—any additional infestations discovered prior to or during project implementation should be reported to the Forest Botanist or their designated appointee for prioritization and assessment for treatment.
12. Any sighting of threatened, endangered, sensitive or special interest species, or location of nests or dens of these species will be reported to the Forest Wildlife Biologist.
13. Nests and dens will be protected in accordance with management direction for the Lake Tahoe Basin Management Unit, Land Management Plan.
14. When equipment (construction or recreational) or vehicles are used at sites known or thought to be contaminated with AIS, measures will be employed following formal decontamination procedure. All suspect equipment and/or vehicles will be inspected prior to launching in Lake Tahoe or other waterbody as required through the Watercraft Inspection Program.
15. Equipment used in project activities must be sanitized and free of non-native invasive aquatic species before moving into a project area to ensure that the equipment is free of soil, seeds, vegetative material, or other debris or water that could contain or hold seeds of non-native aquatic invasive species. It is recommended that all vehicles, especially large, off-road and/or earthmoving vehicles are cleaned and completely dry when they come into the Basin or come from an area known to contain non-native aquatic invasive species. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, standing water, or other such debris.
16. Use screening devices for all water drafting activities. Use pumps with low entry velocity and appropriate mesh/screen size to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats.

17. Leave existing downed trees and large woody debris (LWD) that are in perennial or intermittent stream channels in place unless removal would enhance or maintain channel stability, as determined by a LTBMU Watershed Specialist or Fisheries Biologist.
18. All permanent trash facilities will be designed to prevent access by animals, including bears. Any temporary trash facilities would be removed daily (no trash may remain overnight) or be designed to prevent access by animals, including bears.
19. Follow the applicable National or Regional Best Management Practices for the protection of soil, water, and riparian resources, as presented in Appendix A. These include measures for portable restroom locations and staging of materials and equipment.

2.3.2 ***Additional Design Features for Construction-Related Activities***

1. Follow the “Technical Guidance on Implementing the Storm water Runoff Requirements for Federal Projects” under Section 438 of the Energy Independence and Security Act. To the degree feasible, trail and road maintenance activities will be confined to the area of existing disturbance within the trail corridor or road prism. No snags or green trees will be felled for road/trail maintenance unless identified as a hazard and then only in compliance with direction given in FSH 7709.59 Chapter 41.7 Section 2. Tree-felling along decommissioned road or trail segments as necessary to block and cover the closed surface in a non-continuous manner may occur.
2. Best Management Practices for trail construction, maintenance, and decommissioning outlined in the Forest Service Trails management handbook and Standard Specifications for Construction and Maintenance of Trails will be followed.
3. Following project completion, any areas free of weeds used for staging and not intended for continued vehicular use will be mulched at a minimum. Additional measures such as decompaction and seeding may be considered based on site conditions.
4. Follow all LTBMU Invasive Plant Species Management measures to minimize the spread of noxious weeds through project activities, including:
 - a. Inventory—as part of site-specific planning, project areas and adjacent areas (particularly access roads) will be inventoried for invasive plants.
 - b. Equipment Cleaning—All equipment and vehicles (Forest Service and contracted) used for project implementation must be free of invasive plant material before moving into the project area. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material or other such debris. Cleaning shall occur at a vehicle washing station or steam-cleaning facility before the equipment and vehicles enter the project area. Equipment used during emergency work or used exclusively on paved surfaces is exempt from the cleaning requirement.
 - c. When working in known invasive plant infestations or designated weed units, equipment shall be cleaned before moving to other National Forest Service system lands. These areas will be identified on project maps and delineated in the field with flagging.
 - d. Control areas—Equipment traffic and soil-disturbing project activities would be excluded from invasive plant infestations or designated weed units, where

- feasible. These areas will be identified on project maps and delineated in the field with flagging.
- e. Project-related disturbance—Minimize the amount of ground and vegetation disturbance in staging and construction areas.
 - f. Where feasible, reestablish vegetation on disturbed bare ground to reduce invasive species establishment; revegetation is especially important in staging areas.
 - g. Post Project Monitoring—After the project is completed the Forest Botanist should be notified so that (as funding allows) the project area can be monitored for invasive plants subsequent to project implementation.
 - h. Gravel, fill, and other materials--All gravel, fill, or other materials are required to be weed-free. Use onsite sand, gravel, rock, or organic matter when possible. Otherwise, obtain weed-free materials from sources that have been certified as weed-free. If an LTBMU inspector is not available to inspect material source, then the project proponent will provide a weed-free certificate for its material source.
 - i. Mulch and topsoil--Use weed-free mulches and topsoil. Salvage topsoil from project area for use in onsite revegetation, unless contaminated with invasive species.
 - j. Do not use material (or soil) from areas contaminated by cheatgrass.
 - k. Revegetation—
 - i. Seed and plant mixes must be approved the LTBMU Forest Botanist or their designated appointee who has knowledge of local flora.
 - ii. Invasive species will not be intentionally used in revegetation. Seed lots will be tested for weed seed and test results will be provided to Forest Botanist or their designated appointee.
 - iii. Persistent non-natives, such as timothy (*Phleum pretense*), orchardgrass (*Dactylis glomerata*), ryegrass (*Lolium spp.*), or crested wheatgrass (*Agropyron cristatum*) will not be used in revegetation.
 - iv. Seed and plant material will be from native, high-elevation sources as much as possible. Plant and seed material should be collected from as close to the project area as possible, from within the same watershed, and at a similar elevation whenever possible.
 - l. Prior to implementation, treat or avoid infestations of priority invasive plant species that intersect proposed activities. Infestations prioritized for treatment will be treated in accordance with Forest Service management direction and the design features of the LTBMU 2010 Terrestrial Invasive Plant Species Treatment Project Environmental Assessment.
5. Minimize removal of trees 30 inch diameter at breast height (DBH) or greater to the extent feasible.
 6. Projects will follow all applicable protection measures identified in the US Fish and Wildlife Service Biological Opinion on Sierra Nevada Yellow Legged Frog within the Lake Tahoe Basin.
 7. Implement Limited Operating Periods (LOPs) to avoid or minimize disturbance to breeding activities of sensitive species. LOPs will be implemented around nests, dens, roost sites, and other areas of concentrated use (e.g., Protected Activity Centers) by these species as directed in the Forest Plan. LOPs limit the type, spatial extent, and timing of project activities permitted. The timing of LOPs is standardized by species as described below. The use of surveys to confirm

non-presence of species, limitations on types of equipment used, or other measures as identified during the annual review process may be implemented in order to prevent disturbance to these species during the LOP. Only project activities that do not result in disturbance to these species may proceed.

- a. California spotted owl PAC: March 1 - August 15
 - b. Northern goshawk PAC: March 15 - September 15
 - c. Bald eagle nest: March 1 - August 31
 - d. Bald eagle winter habitat: October 15 - March 15
 - e. Golden eagle nest: March 1 - July 31
 - f. Osprey nest: March 1 - August 15
 - g. Willow flycatcher nest: June 1 - August 31
 - h. Pacific marten den: May 1 - July 31
 - i. Peregrine Falcon: April 1-July 31
 - j. Waterfowl (mapped TRPA site): March 1 – June 30
 - k. Townsend’s big-eared bat roost: May 1 – August 31
8. For projects that affect public access or use of a facility (i.e. a project that requires partial closure of a site or a substantial change to site operations as a result of project activities): provide advanced notice to the public to ensure that the public is aware of project activities. Post signs in project area near public access points to highlight the proposed action. Advanced notice for activities that do not result in a substantial change to access is not required (i.e. trail or road maintenance where an alternate route is provided, an alternate on-site restroom is available for the public, etc.).
 9. All construction-related food waste must be removed daily or stored in an animal-proof container.
 10. Grading will be minimized to the extent feasible, and any cut/fill slopes or exposed surfaces will be stabilized in a manner that results in low visual contrast with the surrounding landscape character.

2.3.3 Additional Design Features for Events, Filming, and Outfitter / Guide Operations

1. Outfitter / Guide permit holder is responsible for promoting and monitoring “Leave No Trace” principles, including proper disposal of human waste in “backcountry” settings remote from developed toilet facilities.
2. Outfitter / Guide permit holder is responsible for promoting and monitoring appropriate and respectful client behavior, including trail use etiquette.
3. Outfitter / Guides will be visibly identifiable with company name and contact information.
4. Information regarding Outfitter / Guide operations, locations, and use periods will be posted on the LTBMU public website.
5. For event and Outfitter / Guide special use permits, a clause will identify the responsibility of permit holders to participate or contribute to trail maintenance. Maintenance must comply with Forest Service trail standards.

6. The permit holder is responsible for all participants' compliance with fire prevention requirements in effect at the time; such requirements may prohibit smoking outside enclosed vehicles during periods of increased fire danger.
7. Temporary signs to mark event routes may be posted on stakes; signs may not be posted on trees, and markings on bicycle paths are prohibited. All materials must be collected and removed at the end of the event. Flagging to mark trails will not be authorized.
8. Notice of the event will be posted by the permittee at the appropriate trailheads at a minimum the weekend before the event is to occur. Notices will include maps of NFS roads and trails to be used for the event and the event schedule.
9. Camping, fishing, or staging of materials/people is not allowed within PAC's, den site buffers, or other areas protected by an LOP.
10. Permittees will provide an annual report that summarizes their use activities, observations regarding site conditions and overall use, interactions/conflicts with other user groups, and recommendations for management improvements.
11. Permits authorizing activities within 100ft of known TEPCS botanical occurrences (except whitebark pine) will include information on rare plant protection.
12. Permits authorizing staging areas, ground disturbance, compaction, or vegetation removal within 100ft of known invasive plant infestations will include information on invasive plant prevention.
13. Backcountry skiing and snowshoeing Outfitter / Guide activities will not be authorized when less than 12 inches of compacted snow is present.
14. Overnight camping with horses will require use of water buckets to prevent horses watering along lake shorelines.

2.4 Project Area Mapped Criteria

The following maps reflect locations of resource-specific criteria, which limit certain activities as described above.

Figure 2-2. Protected Wildlife Areas

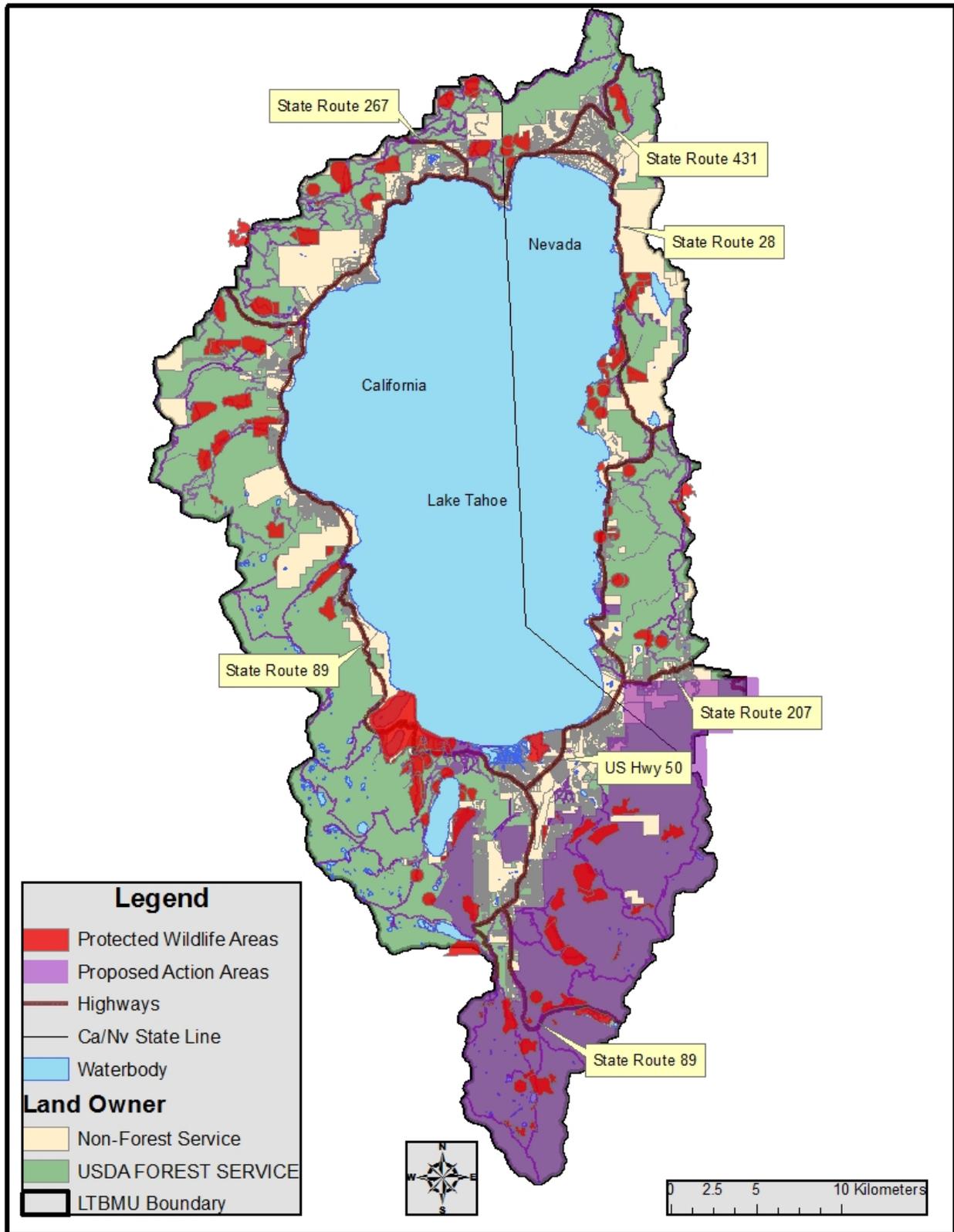
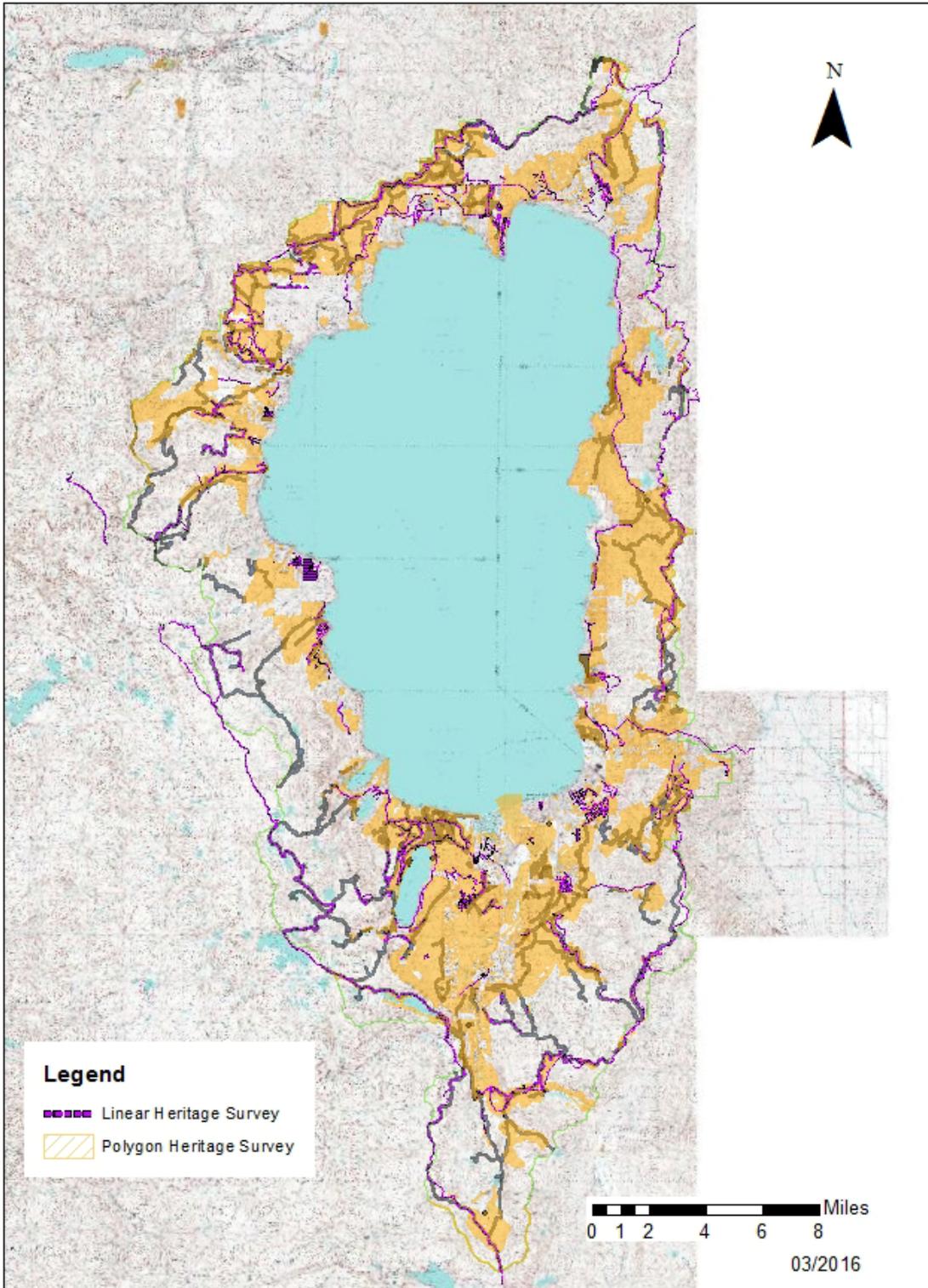


Figure 2-3. Heritage Survey Areas

Heritage Resources Surveys



2.5 Summary of Environmental Consequences

Chapter 3 of this EA discusses the environmental consequences of the No Action and Proposed Action alternatives by resource area, including direct, indirect, and cumulative effects. The following table provides a comparative summary of these effects.

<i>Upkeep and Management of Roads, Trails, & Facilities / Authorization of Special Use Permits</i>		
<u>Resource</u>	<u>No Action Alternative</u>	<u>Proposed Action</u>
Recreation	No effect to recreation access. Indirect impacts to recreation experience and opportunity related to degraded facilities, roads, and trails.	Experience and opportunity, including access for people with disabilities expected to benefit from improved facility, road, and trail conditions.
Scenic Resources	No effect	Project activity consistent with Forest Plan visual quality objectives
Botanical Resources	No effect to protected species, persistence of current risks associated with invasive plants	Less than significant effect to protected species, risks associated with invasive plants are managed through best management practice design features and project criteria
Wildlife	No effect	No effect to TEPCS species or habitats resulting from application of project design features and criteria
Fisheries & Aquatic Resources	No effect	No adverse effect resulting from application of project design features and criteria
Soils & Hydrology	No Effect	No effect, to beneficial effect, resulting from application of project design features and criteria
Heritage	No effect	No effect, consistent with Programmatic Agreement between USFS and State Historic Preservation Officers

Authorization of Outfitter / Guide Activities / Authorization of Events		
Resource	No Action Alternative	Proposed Action
Recreation	No direct effect to recreation access, opportunity, or experience. Existing barriers to Outfitter / Guide activities would remain.	Improved recreation access and opportunity associated with new Outfitter / Guide activities. Limited and temporary restrictions to general access associated with events.
Scenic Resources	No effect	Project activity consistent with Forest Plan visual quality objectives
Botanical Resources	No effect to protected species, persistence of current risks associated with invasive plants	Less than significant effect to protected species, risks associated with invasive plants are managed through best management practice design features and project criteria
Wildlife	No effect	No effect to TEPCS species or habitats resulting from application of project design features and criteria
Fisheries & Aquatic Resources	No effect	No effect resulting from application of project design features and criteria
Soils & Hydrology	No Effect	No effect, to beneficial effect, resulting from application of project design features and criteria
Heritage	No effect	No effect, consistent with Programmatic Agreement between USFS and State Historic Preservation Officers

Chapter 3 - Environmental Consequences

3.1 Recreation Resources

3.1.1 Background

The aim of sustainable recreation management is to integrate recreation program activities with landscape processes, social values, and economic considerations to provide high quality recreation opportunities that can be perpetuated through the long term. By addressing facilities issues in concert with resource protection, sustainable recreation management increases the longevity and quality of developed and dispersed recreation opportunities on the LTBMU. Potential adverse effects to natural, cultural, and social resources may occur if recreation is unmanaged. By managing for these values in a sustainable way, the Forest Service will continue to deliver a wide range of developed and dispersed recreation opportunities on NFS lands.

Possible impacts to recreation from project activities are analyzed by determining the effects to recreation access, opportunity, and experience.

3.1.2 Indicators for Analysis of Effects

This analysis relies on the LTBMU's Forest Plan, the Forest Service Outdoor Recreation Accessibility Guidelines, the Architectural Barriers Act/American Disabilities Act, the Forest Service Built Environment Image Guide, and Forest Service Manual direction (USDA Forest Service 2006:Section 2333–Site and Facility Planning and Design; USDA Forest Service 2003:Chapter 2380–Landscape Management).

Recreation opportunity is described using the Recreation Opportunity Spectrum (ROS). The Forest Plan classifies management areas within LTBMU-managed lands that have associated ROS classifications ranging from urban (highest level of development) to semi-primitive non-motorized (lowest level of development). Most of the developed recreation sites within the LTBMU fall within the urban and rural ROS classifications. Project activities would be considered to have a significant impact on recreation opportunity if the resulting facilities would require a change in ROS designation.

3.1.3 Analysis of Effects

3.1.3.1 No Action - Alternative 1

There are no impacts to recreation access from project activities under the No Action alternative. Facilities, roads, and trails would not be updated to meet current standards or accessibility guidelines. Difficulty in accessing NFS lands by individuals who might not otherwise be able to access recreation opportunities on NFS lands without using an outfitted or guided service would continue. The ability for event providers and participants to access NFS lands for use in their event would continue to be processed on a case-by-case basis, resulting in a continuation of the existing backlog and administrative inefficiencies. The existing number and volume of FS roads, trails, and facilities would remain. There are no impacts to recreation experience or opportunity from project activities under the No Action alternative. As facilities continue to accrue deferred maintenance, they will continue to be in a

state of disrepair and the opportunity for the public to use these facilities will continue to decrease over time. The experience of recreating in buildings that do not meet current standards or accessibility guidelines will continue to decline. No changes to the existing unmanaged outfitting and guiding that is currently known to exist on NFS lands would result from the no action alternative. No changes to the current opportunity for events on NFS lands would occur.

3.1.3.2 Proposed Action - Alternative 2

The Proposed Action includes four components:

1. Upkeep and management of roads, trails, and facilities,
2. Authorization of a temporary use pool for Outfitter / Guide activities,
3. Authorization of events,
4. Authorization of special use permits for recreation uses of NFS lands

Upkeep and management of roads, trails, and facilities:

The activities proposed in *Upkeep and management of Forest Service-owned and privately-owned buildings and sites on National Forest System lands, including administrative, recreation, public resort, private resort, ski areas, organization camps, and recreation residence buildings; upkeep and management of roads and trails on National Forest System lands*, will improve overall access to existing NFS facilities, roads, and trails. Proposed activities will improve access for individuals with disabilities, families with small children, and the general public by upgrading facilities to existing standards and accessibility guidelines. Proposed activities will reduce the environmental impact of the existing recreation access routes while maintaining the existing level of access at recreation parking areas (within 10%). New facilities will meet the existing demand at FS sites but will not expand facilities to create new recreation opportunities. The design features included in the Proposed Action will limit the extent of short-term or permanent disruption to visitors' ability to access NFS lands for recreation. Overall the proposed activities will improve the experience of all users, including those with disabilities, in accessing NFS lands while reducing the environmental impacts of those access routes and opportunities.

The experience of recreating on NFS roads, trails, and facilities would improve under the proposed action. Facilities would be upgraded to meet current standards and accessibility guidelines, improving the experience of all users by reducing the deferred maintenance backlog and creating facilities that meet the expectations of current visitors. The Forest Service will better be able to meet changing recreation preferences and trends to provide facilities that match the opportunities and experiences the public is looking for on NFS lands. The FS will better be able to respond to trends in sustainability and actions to combat climate change through measures such as facilities upgrades, changes in materials, updated construction techniques, conversions for the inclusion of transit opportunities, etc. Design features and project criteria included in the Proposed Action limit the potential for a reduction in the opportunities available for recreation in the LTBMU and limit any short term or permanent reductions in the experience of recreating on NFS roads, trails, and facilities as a result of project activities.

Authorization of Outfitter / Guide activities:

The authorization of a temporary use pool for commercial Outfitter / Guide special use permits and issuance of one-year authorizations against the use pool would improve the ability for the public to access NFS lands. Members of the public who might otherwise not be able to participate in a recreation

activity due to lack of equipment or experience may have an easier and more comfortable way to recreate on NFS lands by using an outfitted/guided service. The overall performance of the temporary use pool will be used to help inform the size, scope, and scale of a future priority use permit system on the LTBMU. Issuance of the temporary use pool will help the LTBMU in meeting its goal of providing economic benefit to the community. The criteria and design features included in the proposed action ensure that the use resulting from the temporary use pool does not unreasonably impact other users' ability to access and enjoy NFS lands.

The scale of the proposed temporary use pool is extremely small when compared to the overall use of roads and trails within the LTBMU. Over 5.7 million people visit the LTBMU on an annual basis. Of these visitors, 47% report hiking/walking as an activity they engage in while recreating at the LTBMU. This means that an estimated 2.6 million people walk/hike on NFS roads, trails, and pathways in the LTBMU on a yearly basis. The proposed temporary use pool that would contribute use on these same facilities is only 8,900 visitor use days total over all proposed outfitting/guided activities across all seasons, (not including weddings). At the most this represents 0.3% of the existing use if every use pool day represented a new visitor to the National Forest engaging in a new activity, which does not take into account the possibility of multi-day guided activities. This small scale and the limitations of outfitter/guiding activities on the busiest trails and during busy time periods limits the extent to which the temporary use pool will disrupt the experience of other users on NFS roads, trails, and pathways. Additional design features and project criteria were added to the proposed action to further ensure that the temporary use pool will not unreasonably impact the opportunity for other users to recreate on NFS lands or the experience of users while they are using NFS roads and trails. Further, the LTBMU has discretion in issuing permits for location, time, and intensity of the proposed activities to ensure public recreation values are not negatively affected. The Proposed Action does not alter any existing local/State/Federal laws, regulations, or Forest Orders regarding motorized use.

The LTBMU hopes to eventually manage a priority use pool system for Outfitter / Guide services that improves the experience of roads and trails users by limiting unmanaged outfitting/guiding on NFS lands, providing stewardship of the roads and trails so that overall facilities are improved, providing opportunities for additional segments of the population to experience new recreational activities on NFS lands, and improving the overall ability of the LTBMU to efficiently provide a managed system of roads and trails for all users. The temporary use pool planned in this Proposed Action is the first step in determining the parameters by which such a program could be offered and administered to the business community in Lake Tahoe.

Authorization of events:

The Proposed Action will improve the efficiency by which event permits are issued to prospective permit holders. The criteria clearly spell out the parameters under which the LTBMU will issue an event permit, and the LTBMU retains discretion in determining whether a proposed event is appropriate for use on NFS lands or will unreasonably interfere with the ability of non-event participants to access NFS lands. Special events are a major portal by which new participants and their families access NFS lands for the first time. The ability to efficiently administer an event permit program will improve the ability of these visitors to access NFS lands. Short term disruptions to general forest access may be experienced on a localized scale due to event activities, however the criteria and design features included in the Proposed Action will limit potential disruptions to access and provide mechanisms by which the LTBMU may pose additional restrictions on event activities to limit potential impacts to the experience of other users.

Authorization of special use permits for recreation uses of NFS lands:

The ability to efficiently and effectively re-issue permits that require no changes to the use or permit terms will greatly improve the LTBMU's ability to process these low-risk permits, and allow for dedication of time and resources towards analyzing other activities with unknown risks/effects, and improving the recreation offering available at the LTBMU. These permits will be updated for any necessary BMPs and any current local/state/Federal requirements at the time of re-issuance. The criteria limit the requirements under which permits may be re-issued, and all relevant laws/regulations/policy regarding the need for competitive offerings will be followed. Overall, the Proposed Action will allow for a straight-forward process for the public, permittees, and LTBMU staff in conducting a routine administrative activity. Similarly, filming permits at the LTBMU will be processed in an efficient and timely manner.

The re-issuance of these permits will not change access to any NFS lands, or the opportunity to recreate on any NFS roads, trails, or facilities. The requirement to update the permit for non-substantial operational changes and updated design features (such as screening requirements for Aquatic Invasive Species, relocation of existing services and amenities, adding animal [bear] proof trash containers, protection measures for species and habitat, updated scientific methods for preventing spread of noxious species, new best management practices, etc.) will improve overall resource management and the experience of visitors using these permit-operated recreation sites.

3.1.4 Cumulative Effects

This project will not result in significant direct or indirect negative impacts to recreation access, opportunity, or experience. When these effects are considered in the context of other past, present, and reasonably foreseeable future projects the cumulative effects are considered to be less than significant

3.1.5 Analytical Conclusions

Temporary and short term disruptions to general forest recreation access may result from maintenance, event and permit activities; however the criteria and design features included in the Proposed Action will limit any disruptions in both time and intensity to a level that is less than significant. Overall the Proposed Action will improve access to NFS lands for individuals with disabilities, families with small children, and for the general public. The range of recreation opportunities available to the public and the number of facilities available for these activities will not significantly change under the Proposed Action. The overall experience of engaging in such activities will improve through reduced facility deferred maintenance, and facility upgrades to current standards and accessibility requirements. The ability of the LTBMU to respond to changing trends in recreation will be improved. The efficiency of issuing event and filming permits will be improved. The temporary Outfitter / Guide use pool will provide opportunities for users to try activities that they might otherwise not engage in due to lack of equipment, experience, or confidence in doing an activity without the aid of an Outfitter / Guide service. None of the proposed activities will result in a change to the ROS designation of recreation sites in the LTBMU. Impacts from all proposed activities are limited by the proposed criteria and design features and will result in a less than significant impact to recreation access, opportunity, and experience on NFS lands in the LTBMU.

3.2 Scenic Resources

3.2.1 Background

The visual appearance of National Forest System lands is a valued resource. Project activities have the potential to alter the visual appearance and scenic character of LTBMU managed lands. This analysis describes potential changes, how the effects of those changes to scenic resources are evaluated and conclusions about the significance of those changes.

The visual effects of management activities vary depending on viewing distance (foreground, middleground, and background) and temporal duration. The results of management activities will be more visible to those viewing them from close distances, generally from existing roads, trails, or facilities. Depending on the type of management activity, visual contrast may be evident immediately following implementation but may disappear or be diminished within several months.

3.2.2 Indicators for Analysis of Effects

The LTBMU Forest Plan assigns Visual Quality Objectives (VQOs) to lands managed by the LTBMU. The Forest Plan identifies three primary VQOs: Preservation, Retention, and Partial Retention. Under the Preservation VQO, which is primarily assigned to designated wilderness areas, management activities should not be visually evident. Under the Retention VQO, the visual result of management activities should utilize characteristics of the landscapes' line, form, color, texture, and massing to blend into the visual setting without creating visual contrast. Under the Partial Retention VQO, the result of management activities should remain visually subordinate to the surrounding landscape visual character.

Within the Forest Service's facility settings, the Built Environment Image Guide (BEIG) is followed to ensure that constructed features compliment the naturally-appearing setting. Examples of these principles include the utilization of steep building roofs, as well as dark brown and green paint colors.

3.2.3 Analysis of Effects

3.2.3.1 No Action – Alternative 1

Under the No Action Alternative existing conditions and management direction would be unchanged. This alternative would have no effect on scenic resources and would be consistent with Forest Plan direction.

3.2.3.2 Proposed Action – Alternative 2

The Proposed Action includes four components:

1. Upkeep and maintenance of roads, trails, and facilities,
2. Authorization of a temporary use pool for Outfitter / Guide activities,
3. Authorization of events,
4. Authorization of special use permits for recreation uses of NFS lands

Authorization of a temporary use pool for Outfitter / Guide activities, authorization of events, and administration of recreation uses represent activities which are either of short-term duration or do not result in physical changes within the landscape. These activities are considered to have no effect on scenic resources.

Upkeep and maintenance of roads, trails, and facilities has the potential to permanently alter the environment in ways that are visually evident. Within developed facilities project activities would follow the design principles described in the BEIG and would result and changes to the built environment which were visually compatible with the scenic character of the surrounding landscape. The establishment of additional buildings or features consistent with existing recreation programs could result in an increase in the visual magnitude, or total area of development, within a facility. This type of increase would occur within the facility or recreation site and would not result in an increase in the scale of the facility or site's development footprint. Maintenance and work to upkeep roads and trails will not result in extensive vegetation removal, and will not result in visual disruption to the scenic attributes which contribute to the landscape's scenic character. Project design features include minimization of grading as well as stabilization and treatment of any cut or fill slopes to reduce their visual contrast. Removal of hazard trees is anticipated to be intermittent, allowing the majority of trees to remain in place without altering the scenic character.

While project activities may be visually evident in immediate foreground views, they will not alter background views of the landscape and will not alter overall scenic character. This project is not anticipated to result in significant direct or indirect effects to scenic resources.

3.2.4 Cumulative effects

The direct and indirect effects to scenic resources resulting from this project are considered to be less than significant. In considering cumulative effects, the current condition for scenic resources represents the effect of previous projects. When the effects of this project are considered with current conditions, and the addition of direct and indirect effects from other anticipated future projects, cumulative effects are considered to remain less than significant. While incremental increases in the Lake Tahoe Basin's built environment are anticipated, the addition of effects from this project are not anticipated to be substantial or controversial.

3.2.5 Analytical Conclusions

The project will not result in substantial changes to background views of the landscape and will not alter overall scenic character. This project is not anticipated to result in significant direct or indirect effects to scenic resources and is consistent with Forest Plan direction for scenic resource management and with the established Visual Quality Objectives.

3.3 Botanical Resources & Invasive Plants

3.3.1 Background

Botanical species and habitat for threatened, endangered, proposed, and candidate species under the Endangered Species Act; species designated by the Forest Service as sensitive; and other botanical resources including special habitats and sensitive communities have the potential to be negatively affected as a result of project activities. Project activities also have the potential risk of introduction and spread of invasive plants. This analysis discloses the extent of these potential effects.

Analysis focuses on special status species (i.e. federally Threatened, Endangered, Proposed or Candidate or Forest Service Sensitive) because these have been evaluated by US Fish and Wildlife Service or the Forest Service and deemed to be at risk from management activities. Effects to botanical resources are analyzed in detail in the project's Biological Evaluation of Botanical Species and Other Botanical Resource Assessment.

3.3.2 Indicators for Analysis of Effects

The following botanical resources are considered in this analysis: 1) Threatened, Endangered, Proposed and Candidate and Forest Service Sensitive botanical species (TEPCS); 2) special habitats and uncommon plant communities; and 3) LTBMU Watch List botanical species. Only those TEPCS species with occurrences or known suitable habitat on LTBMU were considered. Only those special habitat or uncommon plant communities referenced by TRPA or in the LTBMU Land and Resource Management Plan as amended by the Sierra Nevada Forest Plan Amendment (namely, fens and bogs) were considered (Tahoe Regional Planning Agency 2012; USDA Forest Service 1988, 2004).

Effects to threatened, endangered, proposed, candidate, and sensitive (TEPCS) species are measured with respect to the scale and scope of potential impact. The scale, or extent, of potential impact is described by the number and acres of known botanical element occurrences (EO) and botanical resources (special habitats, sensitive communities) that coincide with the proposed project area, as well as the percentage of suitable habitat within lands managed by the LTBMU for TEPCS species potentially impacted by proposed activities.

Effects are also considered with respect to the scope of the proposed activities. Scope considers the character of potential impacts that could occur. For example, portions of the project area include trail segments that coincide with botanical resources. Some activity described in the Proposed Action includes routine foot travel on designated trail surfaces. Scope of impact considers the effects of the specific activity (routine foot travel, for example) within the scale (location or context) of that activity.

Analysis of the scope of impact considers the number of known occurrences of TEPCS botanical species which coincide with various site types of the Proposed Action (administrative facility, recreation facility, trail tread, road prism, and trail/road buffer), except for whitebark pine. Due its comparatively widespread extent, whitebark pine is quantified at a stand-level—in terms of acres—using existing

vegetation GIS data, rather than by a number of discrete occurrences. This analysis considers the intensity of potential impacts from each component of the Proposed Action.

Analysis of potential risks of invasive plant introduction and spread associated with the Proposed Action considers inventory, known infestations, habitat vulnerability, project- and non-project-related vectors; as well as project- and non-project-related habitat disturbance.

3.3.3 Analysis of Effects

3.3.3.1 No Action – Alternative 1

Under the No Action alternative, current conditions and management would persist. There would be no direct effects to botanical resources or invasive plant species under this alternative. Indirect effects resulting from the continuation of existing conditions could result in on-going persistence and spread of invasive species from existing occurrences.

3.3.3.2 Proposed Action – Alternative 2

Effects to TEPCS Species

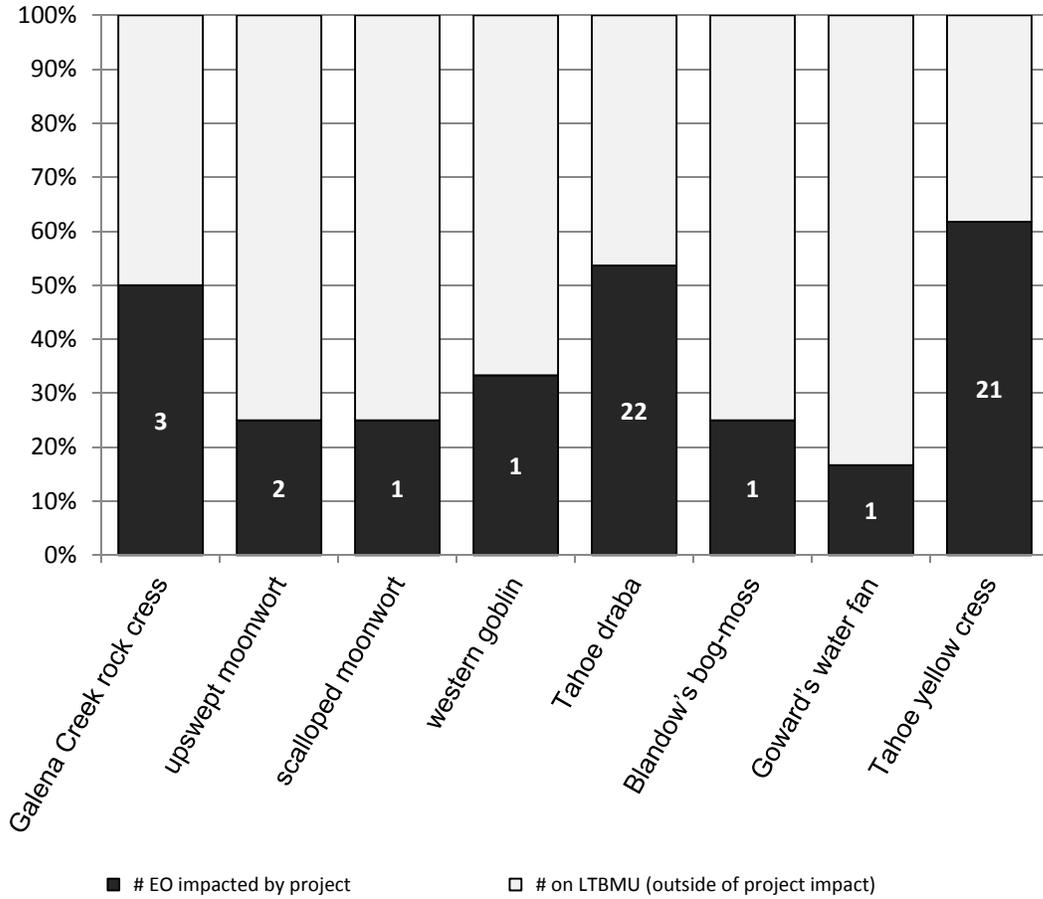
There are no federally threatened, endangered, or proposed botanical species known to occur or with known suitable habitat within LTBMU, so none will be affected. There is one candidate species known to occur on the LTBMU and which intersects the Proposed Action project area—whitebark pine (*Pinus albicaulis*) which is restricted to high-elevation habitats. Of the 26 Forest Service Sensitive (FSS) botanical species known to occur or with known suitable habitat within LTBMU-managed lands, there are only nine known to occur in the analysis area: Tahoe yellow cress (*Rorippa subumbellata*), upswept moonwort (*Botrychium ascendens*), scalloped moonwort (*Botrychium crenulatum*), western goblin (*Botrychium montanum*), Blandow's bog-moss (*Helodium blandowii*), Galena Creek rock cress (*Boecheira rigidissima*), Tahoe draba (*Draba asterophora* var. *asterophora*), Goward's water fan (*Peltigera gowardii*) and whitebark pine (*Pinus ablicualis*).

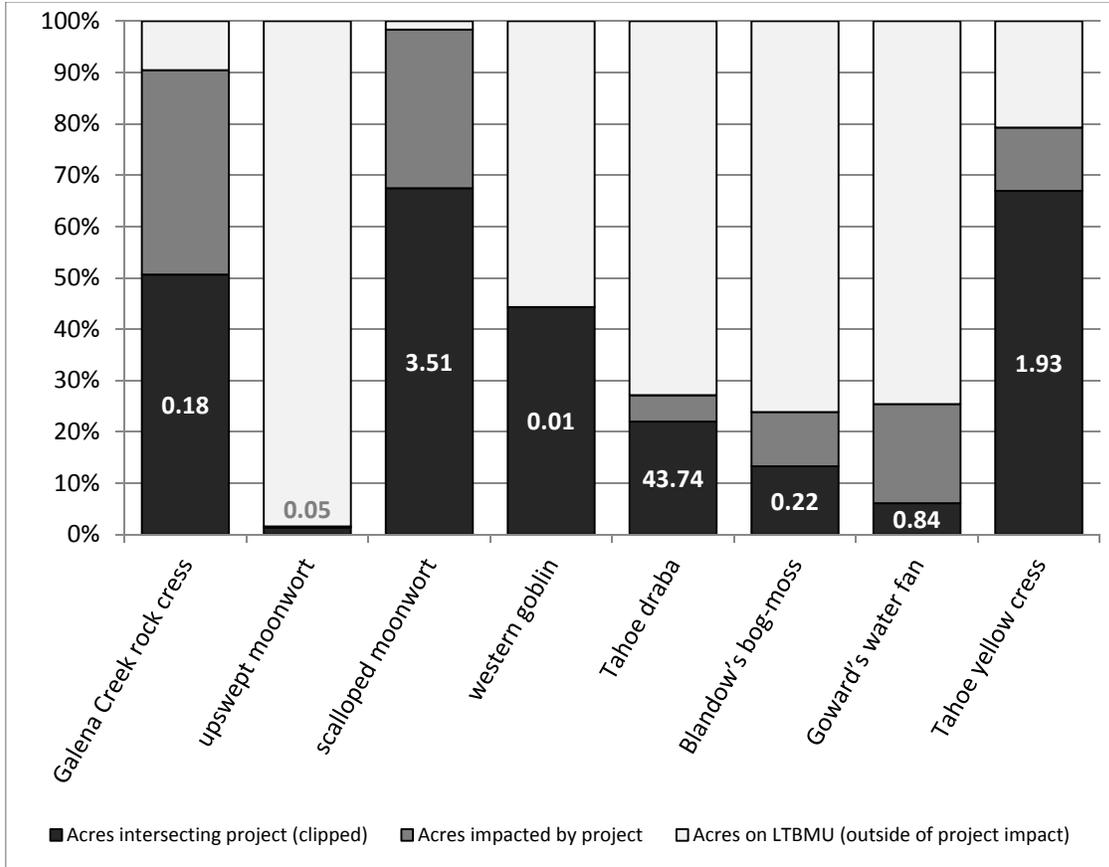
Based upon the scale and scope of the Proposed Action, excluding whitebark pine, there are 52 known Forest Service Sensitive botanical occurrences (of 106 known occurrences within LTBMU-managed lands) of which 50 acres (of 226 total acres within LTBMU-managed lands) intersect the project area and would potentially be impacted by proposed project activities. For all but one of these species (excluding whitebark pine), the proposed activities coincide with 20% or more of known occurrences. Project activities in these locations have the potential to adversely affect these occurrences. For Galena creek rockcress, Tahoe draba and Tahoe yellow cress, project activities coincide with over 50% of known occurrences and have the potential to adversely affect these occurrences. Given the scale of the project, it is expected that most project areas intersect suitable habitat for some TEPCS botanical species. There are whitebark pine-dominated stands that intersect the project area and could have potential impacts. Estimates of the total extent of whitebark pine on LTBMU range from 1,500-24,000 acres. The Proposed Action—particularly hazard tree removal along trails—may result in limbing and removal of individual whitebark pine hazard trees; effects to whitebark pine habitat are expected to be negligible to none.

There are 10 known occurrences of LTBMU watch list botanical species that intersect the project area. There are 9 fens in 7 locations (Armstrong Pass, Elbert Lake, Freel Meadows, Grass Lake, Meeks, Meiss

Lake, Showers Lake) that intersect proposed activities—mainly road and trail maintenance work and some road and trail use (Pacific Crest Trail at Showers Lake; Grass Lake road). There is one road and one trail that intersect the Grass Lake Research Natural Area. The Tahoe Rim Trail intersects the Freel alpine pincushion community.

The following graphics depicts the number and percentage of occurrences of TEPCS botanical species (excluding whitebark pine) which coincide with the Proposed Action project area, as well as the acreage of element occurrences (EO) within the project area:





The above information is based on current botanical surveys, which are limited in scale. There are current botanical surveys for only 3,558 acres of the 34,815-acre project area. Most of the administrative and recreation facilities, with the exception of the Zephyr North parcels—have been surveyed, though most lack current surveys. Large sections of the road and trail system have not been systematically surveyed; there are likely additional botanical occurrences within these areas. Project design features require that surveys be conducted in un-surveyed locations prior to any ground disturbing project activity. If TEPCS species are identified within a proposed project area, mitigation measures will be implemented to avoid negative impacts, or activities will not be authorized.

When potential impacts are stratified by activity type, it becomes clear that most of the botanical element occurrences are within recreation facilities and road and trail buffers (outside the road prism), with the vast majority occurring either at beach recreation sites or at Heavenly Mountain Resort. TEPCS species are most at risk from potential impacts at these locations.

Species	Common Name	# of LTBMU EO	# EO intersect roads	# EO intersect trails	# EO intersect trail & road buffer but not road or trail	# EO intersect admin sites	# EO intersect rec sites
<i>Boechnera rigidissima</i>	Galena Creek rock cress	6	0	0	3	0	0
<i>Botrychium ascendens</i>	upswept moonwort	8	0	0	1	0	1
<i>Botrychium crenulatum</i>	scalloped moonwort	4	0	1	0	0	1
<i>Botrychium montanum</i>	western goblin	3	0	1	0	0	0
<i>Draba asterophora</i> var. <i>asterophora</i>	Tahoe draba	41	6	3	8	0	16
<i>Helodium blandowii</i>	Blandow's bog-moss	4	0	0	1	0	0
<i>Peltigera gowardii</i>	Goward's water fan	6	0	0	1	0	0
<i>Rorippa subumbellata</i>	Tahoe yellow cress	34	0	0	14	1	15
		106	6	5	28	1	33

Site-specific botanical element occurrences (EO) which coincide with the Proposed Action project area are as follows:

- Road Use: 6 EO intersect roads prism
 - 5 draba on upper mountain road & spurs at Heavenly Mountain Resort (13N52), from top of canyon chair to top of tamarack chair
 - 1 draba on radio tower access road at Relay Peak (17N85)
- Trail Use: 5 EO intersect trails tread
 - 1 draba on Tahoe Rim Trail at Freel Peak
 - 2 draba on Tahoe Rim Trail (TRT) at Relay Peak
 - 1 moonwort on powerline trail
 - 1 moonwort on meeks trail
- Road & Trail (buffer): 28 EO that intersect road & trail buffer but not road prism or trail tread
 - 14 Tahoe yellow cress near beach roads and trail
 - 2 Galena Rock cress along trail near Incline Village
 - 1 Galenda Creek Roack cress near TRT near Martis Peak
 - 1 draba near TRT near Freel Peak
 - 2 draba near TRT & radio tower access road at Relay Peak
 - 5 draba near roads and trails at Heavenly Mountain Resort
 - 1 moonwort near Mine Shaft road (15N09A)(chimney rock area)

- 1 bog-moss near Armstrong Pass trail
- 1 goward's water lichen near Armstrong Pass trail
- Administrative Facility Use & Maintenance:
 - 1 Tahoe yellow cress EO at Zephyr North
- Recreation Facility Use & Maintenance: 33 intersect recreation facilities
 - 2 moonwort at Heavenly Mountain Resort
 - 16 draba at Heavenly Mountain Resort
 - 15 Tahoe yellow cress at beaches & associated beachfront resort areas (Baldwin Beach, Camp Richardson Resort, Kiva Picnic Area, Meeks Bay Day Use, Meeks Bay Resort, Nevada Beach Campground, Nevada Beach Day Use, Pope Beach, Zephyr Cove Resort).

The upkeep and maintenance of roads, trails, and facilities is the Proposed Action component with the greatest potential for negative effects for botanical resources because this component may include ground disturbance, vegetation removal or compaction. Among all the proposed activities, it is these types of activities that represent the greatest risk of direct impacts to TEPCS plants, lichen and fungi, as well as the greatest potential to degrade suitable habitat. Specific project criteria and design features associated with this component limit potential effects by surveying for botanical occurrences and avoiding known occurrences. If avoidance is not possible, project activities will not be authorized under this Proposed Action. Similarly, the project area will be surveyed for presence of invasive species, and if found they will be avoided or treated; this should further limit impacts to TEPCS botanical species habitat that might be altered by invasive plant invasion.

Authorization of a temporary use pool for Outfitter / Guide activities will primarily occur on existing road and trail surfaces and will not include ground disturbance and are not likely to cause compaction or vegetation removal. These activities are not anticipated to negatively affect botanical resources. In some instances, guiding activity will occur off of road and trail surfaces including rock climbing at designated locations, overnight camping during backpacking trips, fishing along designated streams, and over-the-snow backcountry ski and snowshoe guided activities. These off of road and trail surface activities have the potential to negatively affect botanical occurrences, however the intensity of this use is expected to be limited based on maximum annual use number and maximum group size included in the Proposed Action. In addition, terms that limit activities may be added to permits where guided activities have the highest probability of affecting TEPCS botanical occurrences, further reducing the risk to these species. Rock climbing Outfitter / Guide activities will only be authorized if botanical occurrences are not present in the activity area.

Authorization of events is limited to use of existing roads, trails, and developed facilities and will not include ground disturbance and are not likely to cause compaction or vegetation removal. Similarly, administration and permitting of existing recreation uses is not anticipated to result in new uses or in ground disturbance and are not likely to cause compaction or vegetation removal. These activities are not anticipated to negatively affect botanical resources.

Furthermore, all activities and events occurring near known TEPCS botanical occurrences are required to include educational information for participants; increasing participant awareness should further reduce the risk of direct impacts to TEPCS botanical species.

Effects on Invasive Plant Species

The majority of the Proposed Action project area has not been surveyed for the presence of invasive plant species; currently, only 3,558 acres of the 34,815-acres project area has been surveyed. Therefore, the inventory component is considered insufficient. However, specific project criteria and design features associated with ground disturbing activities require surveying for invasive plants prior to implementing project activities in un-surveyed areas. If invasive plants are identified in activity areas they will be avoided or treated prior to implementation. These criteria and other design features implement best management practices to minimize introduction and spread of invasive plant species.

Some portions of the Proposed Action project area have been surveyed for the presence of invasive plant species. Of the 548 known infestations on LTBMU-managed lands, 251 infestations (45%) intersect the project area and include all 18 of the species of management concern known to occur on LTBMU (including all of the high priority species). There are 121.2 acres of known infestations that intersect the project area; consistent with the inventory across the basin, the vast majority of infestations are either bull thistle (140 infestations, 70 ac) or common St. Johnswort (23 infestations, 1.6 ac).

The table below summarizes known invasive species of management concern, and the areas of the Proposed Action which coincide with these infestations.

Species	LTBMU Priority	# of infestations	Sum of Clipped Acres
Cardaria draba	Medium	1	0.03
Cardaria pubescens	Medium	1	0.05
Carduus nutans	High	2	0.60
Centaurea diffusa	High	1	0.09
Centaurea maculosa	High	4	0.08
Chondrilla juncea	High	1	0.06
Cirsium arvense	High	12	2.45
Cirsium vulgare	Low	148	71.11
Conium maculatum	Low	1	0.03
Cytisus scoparius	Medium	3	0.18
Hypericum perforatum	Medium	23	31.65
Lepidium latifolium	High	16	1.63
Leucanthemum vulgare	Low	21	9.49
Linaria dalmatica ssp. dalmatica	High	1	0.01
Linaria vulgaris	High	10	0.45
Onopordum acanthium	High	2	0.34
Potentilla recta	Medium	2	2.95
Rubus armeniacus	Medium	2	0.00
Total		251	121.20

LTBMU: High—Species that have a large ecological impact or invasive potential; species that are easily controlled. Medium—Species that have a moderate ecological impact or invasive potential; species that may be difficult to control. Low—Species that have a low ecological impact or invasive potential; species that require substantial effort to control. N/A—species not evaluated.

The scope and scale of the project encompasses the entire range of habitat types known on LTBMU. Due to previous ground disturbance and continual use; road, trails and recreation facilities are more

likely to be disturbed—and more susceptible to invasion—than surrounding vegetation. These areas are considered to have a high (but variable) habitat vulnerability with respect to invasive plant introduction and spread.

Roads, trails, and recreation facilities are primary sources for movement of weeds and represent a high risk of non-project-related vector. Use and maintenance of these areas increases the risk of spread and introduction of invasive plants. Road and trail maintenance may necessitate the use of imported materials or equipment which represent the greatest vector for invasive plant introduction. Project design features require certification of imported materials to be free of invasive plants, plant materials, and seed. Large-scale events that draw visitors from valley and foreign locales also represent a potential risk of introduction vectors, especially for new invasive species. Project activities represent a moderate risk of project-related vector for introduction and spread of invasive plants.

The scope and scale of the project encompasses the entire range of disturbance variation seen in the Lake Tahoe basin—from undisturbed backcountry trails to denuded and highly disturbed roadside areas. Non-project-related habitat disturbance for this project is considered high, but variable. Most of the authorized special use permits for recreation use, outfitter-guide permits, and events permits do not authorize ground disturbance. Proposed road and trail maintenance is mostly limited to previously disturbed areas. Project-related habitat disturbance for this project is considered low.

3.3.4 Cumulative Effects

This project will not result in significant direct or indirect negative impacts to botanical resources, or result in significant negative effects associated with invasive plant species. When these effects are considered in the context of other past, present, and reasonably foreseeable future projects, the cumulative effects are considered to be less than significant.

3.3.5 Analytical Conclusions

Based on existing survey data there is a high percentage of TESCO occurrence & acres that intersect the project area. There is also a lack of current survey data for much of the project area, meaning there may be undetected occurrences at risk of impact. Project design features, however, require that surveys be conducted in un-surveyed locations prior to any ground disturbing project activity. If TESCO species are identified within a proposed activity area, such as the substantial portion of Tahoe yellow cress occurrences and suitable habitat, measures will be implemented to avoid negative impacts, or project activities will not be authorized under this NEPA. Most proposed use is limited to current road, trail, administrative and recreation facilities—areas that are typically highly disturbed and not likely to support TESCO species (with the exception of Tahoe yellow cress at Lake Tahoe shoreline beach sites).

Project specific criteria and design features ensure TESCO species are identified prior to project implementation and measures to prevent negative impacts are applied. Educational requirements increase user awareness of TESCO species that intersect activities, further reducing the risk of direct impacts. Without included criteria and design features, proposed activities represent a significant risk to botanical resources, mainly due to the high percentage of Tahoe yellow cress botanical occurrences and suitable habitat within the project area combined with the high existing recreation use at these locations; and the high percentage of other TESCO botanical occurrences included in project area (especially Tahoe draba and Galena rock cress).

Application of project criteria and design features limiting use in TEPCS botanical occurrences, requiring protection of known occurrences, requiring education for uses near occurrences, and requiring surveys for ground disturbing, compaction, vegetation removal and staging activities result in project impacts that are less than significant.

Implementation of the project represents a high risk for invasive plant introduction and spread, although application of criteria and design features include best management practices to minimize this risk. Project activities are concentrated on existing roads, trails, and facilities which represent disturbed areas near known weed infestations or areas vulnerable to weed introduction or spread. Areas of proposed activity have been or will be surveyed prior to authorization of any ground disturbing activity, and best management practices will be utilized to avoid or treat any identified invasive plant infestations during project activity. These measures manage the risk of invasive plant introduction and spread to a level considered less than significant, but do not fully eliminate it.

3.4 Terrestrial Wildlife

3.4.1 Background

The Integrated Management and Use of Roads, Trails, and Facilities Project analysis area supports Forest Service Sensitive Species and Management Indicator Species, Tahoe Regional Planning Agency Special Interest Species and migratory birds. There are no terrestrial wildlife US Fish and Wildlife Service-listed species (Endangered, Threatened, Candidate or Proposed) species or Critical Habitat found within the analysis area. The analysis area for terrestrial wildlife (154,851 acres) encompasses all the Lake Tahoe Basin Management Unit, although included actions may only occur in specific areas.

3.4.2 Indicators for Analysis of Effects

Indicators for Effects to Endangered Species Act Listed Species

Section 7 (c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*) provides specific protection of identified species and habitat. Species lists are based on the FWS IPAC lists for the LTBMU requested on 11 January, 2016 (USFWS; consultation code 08ESMF00-2016-SLI-0004 and 08ENV000-2016-SLI-0001; <http://ecos.fws.gov/ipac/>).

Indicators for Effects to Forest Service Sensitive Species

Forest Service Manual and Handbooks (FSM/H 2670) provide direction regarding Forest Service sensitive species:

1. Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.
2. Maintain viable populations of all native and desired non-native wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands.
3. Develop and implement management objectives for populations and/or habitat of sensitive species.

The Lake Tahoe Basin Management Unit Land and Resource Management Plan (Forest Plan) provides additional management direction regarding Nonstructural Wildlife Habitat Management (pgs. IV-26 and IV-27) and through the Sierra Nevada Forest Plan Amendment Appendix A: Management Direction, (Section B. Land Allocation and Desired Conditions Pg. 36-40, and Section D. Management Standard and Guidelines pg. 49-66).

The USDA Forest Service, Pacific Southwest Region, Sensitive Species list was last updated on, July 3, 2013 (<http://www.fs.usda.gov/main/r5/plants-animals>) and includes:

- Northern goshawk (*Accipiter gentilis*)
- Willow flycatcher (*Empidonax traillii*)
- Bald eagle (*Haliaeetus leucocephalus*)
- Great gray owl (*Strix nebulosa*)
- California spotted owl (*Strix occidentalis occidentalis*)
- Pallid bat (*Antrozous pallidus*)

- Townsend’s big-eared bat (*Corynorhinus townsendii*)
- Fringed myotis (*Myotis thysanodes*)
- North American wolverine (*Gulo gulo luscus*)
- Pacific marten (*Martes caurina*)
- Western bumble bee (*Bombus occidentalis*)

3.4.3 Analysis of Effects

3.4.3.1 No Action – Alternative 1

Under the No Action alternative current conditions and management would persist. There would be no direct or indirect effects to terrestrial wildlife.

3.4.3.2 Proposed Action – Alternative 2

Effects to Endangered Species Act Listed Species

The following Threatened species and proposed critical habitat are considered:

- Yellow-billed Cuckoo (*Coccyzus americanus*)
- Yellow-billed Cuckoo Proposed Critical Habitat

The Threatened species yellow-billed cuckoo does not occur on the LTBMU. There is no proposed Critical Habitat on the LTBMU. Therefore there will be “**No Effect**” to this species and it will not be addressed further in this document. No terrestrial, non-botanical federally-listed, threatened, proposed or candidate species are found within the analysis area. Botanical and aquatic wildlife species are addressed in separate sections of this document

Effects to Forest Service Sensitive Species

There are 38 Northern goshawk protected activity centers (PACs) (27 territories) in the LTBMU-managed lands. 31 of these were occupied at least once in the previous 10 years (2006-2015). There are six known willow flycatcher nesting areas (Blackwood Canyon, Grass Lake, Mattole Road, Tallac Creek, Taylor Creek and Uppermost Upper Truckee) on Forest Service land within the LTBMU. There are three active bald eagle nesting territories within the Lake Tahoe Basin; however none of them are currently on Forest Service land. Forest Service land within the Lake Tahoe Basin includes one bald eagle winter management area and one nest. The nest has not been known to be active since 2000. Current nests in that territory are on Nevada state land. There are 22 California spotted owl PACs (18 territories) on the LTBMU. Fifteen of these were occupied at least once in the previous 10 years (2006-2015). Depending on species there are between 14,399 and 32,970 acres of habitat for sensitive bat species within the LTBMU. There are four detections of pallid bat, eight of Townsend’s big-eared bat, and 39 detections of fringed myotis on the LTBMU. There are three roosts that may possibly house Townsend’s big-eared bat; one on the east shore and two on the west shore. There are no known roosts that house pallid bat or fringed myotis. There are 138,091 acres of Pacific marten habitat within the LTBMU along with numerous detections and two dens. One den is on Forest Service land near Fallen Leaf Lake, the other is on California state land. Western bumble bee habitat within the LTBMU would consist of all areas where there are flowering plants. There are no known recent detections of Western bumble bee within the LTBMU.

Great gray owl and North American wolverine are not known to occur on the LTBMU therefore these species will not be affected by this project and will not be further addressed.

For all sensitive species found within the LTBMU, criteria included within the Proposed Action would prevent effects. If criteria cannot be met by a proposed activity, a separate NEPA analysis would need to be completed. Therefore, there will be “**No Effect**” to Forest Service sensitive species as a result of this project.

Effects to Migratory Landbird Conservation

Under the National Forest Management Act (NFMA), the Forest Service is directed to “provide for diversity of plant and animal communities based on the suitability and capability of the specific land area in order to meet overall multiple-use objectives.” (P.L. 94-588, Sec 6 (g) (3) (B)). The January 2000 USDA Forest Service (FS) Landbird Conservation Strategic Plan, followed by Executive Order 13186 in 2001, in addition to the Partners in Flight (PIF) specific habitat Conservation Plans for birds and the January 2004 PIF North American Landbird Conservation Plan all reference goals and objectives for integrating bird conservation into forest management and planning.

In late 2008, a Memorandum of Understanding between the USDA Forest Service and the US Fish and Wildlife Service to Promote the Conservation of Migratory Birds was signed. The intent of the MOU is to strengthen migratory bird conservation through enhanced collaboration and cooperation between the Forest Service and the Fish and Wildlife Service as well as other federal, state, tribal and local governments. Within the National Forests, conservation of migratory birds focuses on providing a diversity of habitat conditions at multiple spatial scales and ensuring that bird conservation is addressed when planning for land management activities.

Likely impacts to habitats and select migratory bird populations resulting from project activities have been assessed in detail within the project MIS report and impacts to select TES birds and their habitats have been analyzed in the project BA or BE. These reports are included as part of the project record. These impacts are summarized below:

For all species found within the LTBMU, criteria included within the proposed actions would prevent effects. If criteria cannot be met by a proposed project, a separate NEPA analysis would need to be completed.

Effects to Management Indicator Species Habitat

Management Indicator Species (MIS) are animal species identified in the Sierra Nevada Forest Plan Amendment MIS Amendment Record of Decision (ROD) signed December 14, 2007, which was developed under the 1982 National Forest System Land and Resource Management Planning Rule (1982 Planning Rule) (36 CFR 219). Guidance regarding MIS set forth in the Lake Tahoe Basin Management Unit LRMP as amended by the 2007 SNF MIS Amendment ROD directs Forest Service resource managers to (1) at the project scale, analyze the effects of proposed projects on the habitat of each MIS affected by such projects, and (2) at the bioregional scale, monitor populations and/or habitat trends of MIS, as identified in the Lake Tahoe Basin Management Unit LRMP as amended.

The following MIS habitats are considered in this analysis:

- Riverine and Lacustrine – aquatic macroinvertebrates

- Riparian – yellow warbler (*Dendroica petechia*)
- Wet Meadow – Pacific tree (chorus) frog (*Pseudacris regilla*)
- Early Seral Coniferous Forest – Mountain quail (*Oreortyx pictus*)
- Mid Seral Coniferous Forest – Mountain quail (*Oreortyx pictus*)
- Late Seral Open Canopy Coniferous Forest – Sooty (blue) grouse (*Dendragapus obscurus*)
- Late Seral Closed Canopy Coniferous Forest – California spotted owl (*Strix occidentalis occidentalis*), Pacific marten (*Martes caurina*), Northern flying squirrel (*Glaucomys sabrinus*)
- Snags in Green Forest – Hairy woodpecker (*Picoides villosus*)

All of these habitat types occur within the LTBMU. However, criteria included within the proposed action require that a project have no habitat manipulation in order to be included, therefore there will be no effects to any of these habitat types.

3.4.4 Cumulative Effects

This project will not result in significant direct or indirect negative impacts to terrestrial wildlife (TEPCS) species or habitats. When these effects are considered in the context of other past, present, and reasonably foreseeable future projects the cumulative effects are considered to be less than significant.

3.4.5 Analytical Conclusions

There are no significant effects to any threatened, endangered, proposed, or candidate species (TEPCS), Forest Service sensitive species, migratory landbirds, or Management Indicator Species (MIS) from project activities as a result of the criteria and design features applied to each proposed action component.

3.5 Aquatic Wildlife Resources

3.5.1 Background

Aquatic species and habitat for threatened, endangered, proposed, and candidate species under the Endangered Species Act; as well as species designated by the Forest Service as sensitive have the potential to be negatively affected as a result of project activities. This analysis discloses the extent of these potential effects.

Analysis focuses on special status species (i.e. federally Threatened, Endangered, Proposed or Candidate or Forest Service Sensitive) because these have been evaluated by US Fish and Wildlife Service or the Forest Service and deemed to be at risk from management activities. Effects to aquatic resources are analyzed in detail in the project's Biological Evaluation of Aquatic Species.

The analysis area for aquatic wildlife (154,851 acres) encompasses all the Lake Tahoe Basin Management Unit, although actions may only occur in specific areas. The approximate footprint of proposed activities under the Integrated Management and Use of Roads, Trails, and Facilities Project is 26,823 acres. Within the footprint exists suitable habitat for Sierra Nevada yellow-legged frog (SNYLF; *Rana sierrae*; Federally Endangered), occupied and suitable habitat for Lahontan Cutthroat Trout (LCT; *Oncorhynchus clarkia henshawi*; Federally Threatened), and occupied and/or suitable habitat for Forest Service Regional sensitive species Lahontan Lake Tui Chub (*Gila bicolor pectinifer*) and Great Basin rams-horn (*Helisoma newberryi*) (Table 1).

Table 1: Aquatic species and habitat within the analysis area and project footprint.

	Acres/miles w/in project footprint (26,823)	Acres in Analysis Area (154,851)	% in project footprint
Sierra Nevada yellow-legged frog Suitable Habitat (minus Lake Tahoe)	2,257 ac	20,800	11%
Occupied Sierra Nevada yellow-legged frog	97 ac	279	35%
Proposed Critical Habitat	0	8740	0%
Occupied Lahontan Cutthroat Trout lake habitat	2450 ac	2450	100%
Occupied Lahontan Cutthroat Trout Stream habitat	30 miles	30	100%

3.5.2 Indicators for Analysis of Effects

Forest Service Manual (FSM) 2670 Threatened, Endangered, and Sensitive Plants and Animals:

Manage National Forest System habitats and activities for threatened and endangered species to achieve recovery objectives so that special protection measures provided under the Endangered Species Act are no longer necessary.

Develop and implement management practices to ensure that species do not become threatened or endangered because of Forest Service actions.

Effects to threatened, endangered, proposed, candidate, and sensitive (TEPCS) species are measured with respect to the scale and scope of potential impact. The scale, or extent/location, of potential impact is described by the number of occupied sites maintained or increased and the acres/miles of suitable habitat maintained or increased. The scope considers the character of potential impacts that could occur. For example, the proposed action describes potential Outfitter / Guide activities in occupied Lahontan cutthroat trout habitat. This activity could include foot travel, use of pack stock, and overnight trips with or without pack stock. Scope of impact considers the effects of the specific activity (e.g. routine foot travel or pack stock) within the scale of that activity.

Analysis of the scope of impact considers the number of occupied sites and amount of suitable habitat which coincide with four components of the Proposed Action (upkeep and management of roads, trails, and facilities; authorization of Outfitter / Guide activities; authorization of events; authorization of special use permits for recreation use of National Forest System lands). This analysis considers the intensity of potential impacts from each component of the Proposed Action.

3.5.3 Analysis of Effects

3.5.3.1 No Action – Alternative 1

Under the No Action alternative existing conditions and management direction would remain. There would be no direct effects to aquatic resources under this alternative. Indirect effects may include continued erosion associated with current conditions along roads and trails, and at facilities which have the potential to negatively affect aquatic resources. Existing barriers to aquatic organism passage may remain under this alternative.

3.5.3.2 Proposed Action – Alternative 2

Proposed activities in the project area coincide with 100% of known occurrences of Lahontan cutthroat trout, 35% of occupied Sierra Nevada yellow-legged frog habitat and 11% of suitable habitat for Sierra Nevada yellow-legged frog (Table 1). No activities are permitted in occupied habitat for Sierra Nevada yellow-legged frog, consistent with project criteria. Project activities in occupied Lahontan Cutthroat Trout locations or suitable habitat for Sierra Nevada yellow-legged frog have the potential to adversely affect (short term) these occurrences or habitat. The intensity of the effects depends on the proposed activity and proximity to occupied or suitable habitat. Some maintenance activities intended to install long term Best management Practices or move infrastructure from sensitive areas will have long term benefits.

Effects to Sierra Nevada Yellow Legged Frog

Upkeep and maintenance of roads, trails, and facilities:

- Criteria restricting activities in occupied or proposed critical Sierra Nevada yellow-legged frog habitat will ensure proposed activities do not affect the number of sites occupied by Sierra Nevada yellow-legged frog and have no effect on proposed critical habitat.

- Criteria requiring current surveys to determine occupancy will ensure species are not affected by proposed road, trail and/or facility upkeep and maintenance. If species are detected, criteria will prevent activities from being approved under this project.
- Criteria preventing any long term alteration to the quality and quantity of suitable habitat will maintain the existing conditions of suitable habitat.
- Suitable habitat for Sierra Nevada yellow-legged frog could have short term impacts during maintenance activities; however, activities that remove infrastructure from suitable habitat or improve water quality in suitable habitat will have long term benefits.

Outfitter / Guide Activities:

- Criteria restricting activities in occupied or proposed critical Sierra Nevada yellow-legged frog habitat will ensure proposed activities do not affect the number of sites occupied by Sierra Nevada yellow-legged frog and have no effect on proposed critical habitat.
- Criteria requiring current surveys to determine occupancy will ensure species are not affected by commercial Outfitter / Guide special use. If species are detected, project activity will not be authorized under this project.
- Criteria preventing any long term alteration to the quality and quantity of suitable habitat will maintain the existing conditions of suitable habitat. Design Features preventing pack stock watering along lake shorelines will prevent habitat modification and protect water quality characteristics.

Events

- Criteria restricting activities in occupied or proposed critical Sierra Nevada yellow-legged frog habitat will ensure proposed activities do not affect the number of sites occupied by Sierra Nevada yellow-legged frog and have no effect on proposed critical habitat.
- Criteria requiring current surveys to determine occupancy will ensure species are not affected by proposed use. If species are detected, project activity will not be authorized under this project.
- Criteria preventing any long term alteration to the quality and quantity of suitable habitat will maintain the existing conditions of suitable habitat.

Recreation Permit administration:

- Criteria restricting permit re-issuance in occupied or proposed critical Sierra Nevada yellow-legged frog habitat will ensure proposed activities do not affect the number of sites occupied by Sierra Nevada yellow-legged frog and have no effect on proposed critical habitat.
- Criteria requiring current surveys to determine occupancy will ensure species are not affected by permit activities. If species are detected, project activity will not be authorized under this project.
- Criteria preventing any long term alteration to the quality and quantity of suitable habitat will maintain the existing conditions of suitable habitat.

Effects to other aquatic TEPCS species including Lahontan cutthroat trout

Upkeep and maintenance of roads, trails, and facilities:

- Criteria and design features restricting activities (e.g. ground disturbing activities, activities that affect stream shade, bank stability, and/or restriction of activities within 100 feet of occupied waterbody) in occupied Lahontan cutthroat trout will maintain the number of occupied sites and protect existing habitat characteristics.
- Criteria and design features restricting activities that affect the structural or biological integrity of aquatic habitat will ensure acres/miles of suitable habitat for TEPCS is maintained and ensure proposed activities will not impact Forest Service sensitive species or associated habitat in a manner that would lead to a trend towards federal listing.
- Proposed activities will not alter aquatic habitat conditions in such a way that life history requirements (e.g. migration, reproduction, growth) cannot be met. Proposed activities that reduce fine sediment transport into aquatic habitat such as installation of barriers for resource protection or re-routing trails out of sensitive habitat, will benefit aquatic habitat by improving water quality.
- Proposed activities that address Aquatic Organism Passage barriers could contribute to an increase in available suitable habitat for TEPCS species.
- Proposed activities that prevent and reduce Aquatic Invasive Species will increase the amount of suitable habitat for TEPCS.

Outfitter / Guides:

- Proposed issuance of commercial Outfitter / Guide and special use permits has potential adverse effects to suitable aquatic habitat, specifically activities that are permitted off existing roads and trails (e.g. fishing, overnight backpacking, and overnight horseback trips). Although criteria and design features are in place to reduce impacts to occupied and unoccupied habitat, these activities have the potential to increase sediment into aquatic habitat, impact water quality, and alter habitat for life history requirements (specifically reproduction and embryo development).
- Proposed activities that do not deviate from existing road or trail are not expected to impact Lahontan cutthroat trout long term. Activities along roads and trails that cross occupied habitat could have short term impacts by startling resident fish or increasing sediment in waterbody.
- Criteria and design features restricting activities within 100 feet of occupied Lahontan cutthroat trout waterbodies (e.g. ground disturbing activities, soil compacting activities, activities that affect stream shade, bank stability) will maintain the number of occupied sites and protect existing habitat characteristics.
- Criteria and design features restricting activities that affect the structural or biological integrity of aquatic habitat will ensure acres/miles of suitable habitat for TEPCS is maintained and ensure proposed activities will not impact Forest Service sensitive

species or associated habitat in a manner that would lead to a trend towards federal listing.

- Proposed activities will not alter aquatic habitat conditions in such a way that life history requirements (e.g. migration, reproduction, growth) cannot be met.

Events:

- All events are on designated roads and trails. Activities that cross occupied Lahontan cutthroat trout habitat could have short term impacts by startling resident fish or increasing sediment in waterbody.
- Additionally, criteria and design features restrict activities within 100 feet of occupied Lahontan cutthroat trout waterbodies (e.g. ground disturbing activities, soil compacting activities, activities that affect stream shade, bank stability) will maintain the number of occupied sites and protect existing habitat characteristics. Proposed events will not affect species or habitat.
- All events are on designated roads and trails. Additionally, criteria and design features restricting activities that affect the structural or biological integrity of aquatic habit will ensure acres/miles of suitable habitat for TEPCS is maintained and ensure proposed activities will not impact Forest Service sensitive species or associated habitat in a manner that would lead to a trend towards federal listing.
- Proposed activities will not alter aquatic habitat conditions in such a way that life history requirements (e.g. migration, reproduction, growth) cannot be met.

Recreation Permit administration:

- Criteria and design features restricting activities within 100 feet of occupied Lahontan cutthroat trout waterbodies (e.g. ground disturbing activities, soil compacting activities, activities that affect stream shade, bank stability) will maintain the number of occupied sites and protect existing habitat characteristics.
- Criteria and design features restricting activities that affect the structural or biological integrity of aquatic habit will ensure acres/miles of suitable habitat for TEPCS is maintained and ensure proposed activities will not impact Forest Service sensitive species or associated habitat in a manner that would lead to a trend towards federal listing.
- Proposed activities will not alter aquatic habitat conditions in such a way that life history requirements (e.g. migration, reproduction, growth) cannot be met.

3.5.4 Cumulative Effects

This project will not result in significant direct or indirect negative impacts to aquatic species (TEPCS) or habitats. When these effects are considered in the context of other past, present, and reasonably foreseeable future projects the cumulative effects are considered to be less than significant.

3.5.5 Analytical Conclusions

All project activities are consistent with law, regulation and policy. The criteria associated with project activities ensures that proposed projects needing further analysis to determine environmental consequences are not authorized under this Environmental Assessment.

The scope of potential impacts to the amount of suitable aquatic habitat is minimal due to the criteria and design features that are incorporated with each component of the proposed action. Activities such as roads maintenance and facilities upgrades, will result in beneficial impacts to soil and water resources, thus improve aquatic habitat. Activities off designated trails, roads or designated developed recreation sites have the potential for adverse effects to species and habitats. The intensity of the impacts depends on the proposed location and results of occupancy surveys. These effects are anticipated to be minimal because of project criteria and design features. A detailed analysis of the effects to TEPCS species and associated habitat can be reviewed in the Aquatic Biological Evaluation and Assessment (Project Record).

3.6 Hydrology and Soils

3.6.1 Background

In 2011, the US Environmental Protection Agency (EPA) approved the Lake Tahoe TMDL, developed jointly by California and Nevada. The Tahoe TMDL was established because of excessive sediment and nutrient loading to Lake Tahoe, and subsequent impacts to Lake Tahoe water clarity. Based on the TMDL analysis, upland sources (i.e. forested lands) are estimated to contribute 9% of the sediment and 26% of the phosphorus, and 15.5% of the nitrogen loading to the lake (TMDL, 2010). The USFS is the primary land manager of forested lands in the Tahoe Basin.

Under the TMDL, the USFS is required to report annually on actions taken to achieve TMDL milestones for upland source categories on USFS managed lands. The TMDL regulatory agencies (Lahontan RWQCB and NDEP) will use select metrics within the Tahoe Regional Planning Agency's Environmental Improvement Program (EIP) performance measures tracking and reporting program to evaluate progress for upland sources areas. The LTBMU will continue to provide data to the EIP performance measure tracking and reporting program. The following EIP performance measures will be reported related to projects implemented under this project: miles of road inspected and maintained, miles of roads retrofitted, and number of parcels with storm water retrofits.

The USFS has developed National Guidance for the planning, design, and implementation of soil, water and riparian resource protection best management practices (BMPs) (USFS, 2012). In addition Region 5 of the USFS has developed guidance for additional soil and water protection BMPs (USFS, 2011). This guidance provides the foundation for managing USFS activities in a manner that is protective of soil, water, and riparian resources. The BMP guidance that is relevant to actions described in the proposed action are presented in Appendix A. This guidance has been identified in this document as part of planning, but the guidance is also meant to be used during project design and implementation, as project specific soil and water protection measures are developed and incorporated in project implementation documents (including designs, contracts, implementation plans) and special use permits.

The USFS also conducts annual BMP implementation and effectiveness monitoring, currently using Draft National Monitoring Protocols (USFS, 2015). This annual monitoring is applied to a subset of all Forest Service management activities, through a random selection process. All ground disturbing activities described in the proposed action would be part of the sample pool for random selection for monitoring. Monitoring results are tracked in a National database, and are reported annually on the LTBMU website.

3.6.2 Indicators for Analysis of Effects

Metrics to be analyzed include soil and water quality, and water flow characteristics. For the purposes of analysis, the proposed projects are analyzed in two separate categories. Upkeep and management of USFS Infrastructure (roads, trails, and facilities), and Special Use Permit Authorizations for Recreation Uses and Events, including Outfitter / Guide activities.

Soil and Water Quality refers to the condition of the soil as it relates to compaction and disturbance, and resulting risk to water quality from soil erosion, including impacts to soils in riparian areas (SEZs). Other

water quality considerations include the management of solid and human waste. Water flow characteristics describe the condition of surface, subsurface and groundwater flow patterns.

3.6.3 Analysis of Effects

3.6.3.1 No Action – Alternative 1

Under the No Action alternative, current conditions and management would persist. There would be no direct effects to soil and water quality under this alternative. Indirect effects resulting from existing conditions could result in on-going soil erosion and impacts to water quality.

3.6.3.2 Proposed Action – Alternative 2

Upkeep and management of USFS Infrastructure

Many of the actions described in this component of the Proposed Action are designed specifically to maintain and in some cases improve features at USFS facilities designed to mitigate and prevent soil disturbance due to removal of stabilizing vegetation and soil compaction, soil erosion as a result of soil disturbance, and transport of eroded sediments to waterbodies. Road and trail maintenance is critical for maintaining the effectiveness of soil and water protection features such as water bars, rolling dips, infiltration/detention basins, and road side drainage ditches. Proposed road and trail upgrades would be designed to specifically reduce risk of adverse impacts to soil, water and riparian resources, such as improving designation and protection measures for vehicle parking areas, and relocating small lengths of roads and trails away from sensitive riparian resources.

Maintenance and upgrades to USFS buildings and associated parking areas will be designed to maintain and or improve capacity of features designed to convey and treat storm water runoff generated from those facilities. Other upgrades will be designed to increase the capacity of restroom or garbage collection facilities.

Any temporary disturbance created during maintenance or upgrade activities would be mitigated through the application of USFS BMPs, following the National and Regional Guidance documents identified above.

Similar to the soil and water quality discussion above, the intent of maintenance and upgrade activities described in the proposed action is to maintain as much as possible natural flow drainage patterns. The footprint of these facilities is dispersed enough that although some impacts to natural flow patterns are inevitable, these impacts are less than significant, particularly when drainage features designed to convey storm water flows are done so in a way that conforms to natural flow patterns. Drainage features such as water bars and drainage ditches are designed to captures storm water flows from compacted surfaces (roofs, roads, parking lots) and convey them to adjacent forest lands where they can infiltrate.

Special Use Permit Authorizations for Recreation Uses and Events

These activities have the potential for creating adverse impacts to soil, water and riparian resources, if a “leave no trace” approach is not outlined and followed in the special use permit conditions. Project design features incorporate application of “leave not trace” principles, and applicable BMPs, as

identified in Appendix A, will be utilized during the development of special use permit conditions to ensure specific measures for handling solid and human waste, and minimizing disturbance to soils and vegetation (particularly in riparian areas) are clearly described and relevant to the activity covered under the special use permit. With the application of this BMP guidance during the development of special use permit conditions, effects to soil, water and riparian resources will be mitigated to a less than significant effect.

The scale and scope of these activities are considered too small to have a significant impact on water flow characteristics.

3.6.4 Cumulative Watershed Effects

A Cumulative Watershed Effects (CWE) analysis describes the expected impacts of the proposed action in the context of the effects on the watershed in which it lies, including the cumulative effects of other past, present, and reasonably foreseeable future actions.

As illustrated in Figure 2-1, the project area is widely dispersed throughout the watershed of the Lake Tahoe Basin. Cumulative watershed response is assessed based on whether the cumulative effects of past, present and future projects are expected to cause an overall change in watershed hydrology, including increases in peak flows which can cause destabilization of stream channels that are not adapted to those flows. This type of cumulative watershed response can be caused by an excessive amount of soil disturbance and compaction which exceeds the ability of the watershed to infiltrate surface runoff generated from storm events, generating flow volumes and sediment loads that exceed the transport capacity of the stream channel network. For projects that involve a large amount of ground disturbing activity, there are procedures for quantitatively assessing the risk of cumulative watershed response. However because the disturbance footprint of the proposed project is so small in comparison to the watershed size, and the scale of existing soil disturbance from urban development around the project is so large, it was determined that a qualitative assessment was more reasonable, and is summed up in the statement below.

Based on the limited scope and scale of project activities in proportion to the watershed size (USGS, HUC7 level), temporary soil disturbance from project activities, are not expected to contribute to changes in flow volumes or sediment loads to stream channels, regardless of past, present and reasonably foreseeable future actions. The application of identified Design Features and BMPs, further reduces the risk for CWE.

3.6.5 Analytical Conclusions

Many projects and activities implemented under this NEPA analysis, such as roads maintenance and facilities upgrades, will result in beneficial impacts to soil and water resources. Ongoing maintenance of existing USFS infrastructure will help keep structural soil and water BMPs functioning properly, and installation of additional storm water treatment infrastructure at facilities will improve and increase treatment capacity. Implementation of established USFS best management practices utilizing established guidance documents will limit impacts to soil, water and riparian resources from other activities to less than significant (see Appendix A).

Land management activities have the potential to negatively affect soils and water quality. Projects and activities implemented under this Proposed Action result in either a neutral or beneficial impact on soil,

water, and riparian resources, which supports USFS efforts in complying with water quality pollutant reduction targets established in the Lake Tahoe Total Maximum Daily Load (TMDL).

References:

USFS. 2011. RF FSH 2509.22- Soil and Water Conservation Handbook, Chapter 10-Water Quality Management Handbook. Pacific Southwest Region, Vallejo, CA.

USFS. 2012. National Best Management Practices for Water Quality Management on National Forest System Lands, Volume 1: National Core BMP Technical Guide, FS-990a. Washington D.C.

USFS. 2015. *Draft* National Core Best Management Practices (BMP) Monitoring Technical Guide, Volume 2. Washington D.C.

LRWQCB and NDEP. 2010. Final Lake Tahoe Total Maximum Daily Load Report. Lahontan Regional Water Quality Control Board, South Lake Tahoe, CA and Nevada Department of Environmental Protection, Carson City, Nevada.

3.7 Heritage Resources

3.7.1 Background

The National Historic Preservation Act (NHPA) requires that Federal agencies take into account the effects that their undertakings could have on properties listed on or eligible to the National Register of Historic Places (NRHP). This effects assessment is accomplished through inventory, evaluation, and determination of effects in under the terms of the Section 106 process, the public, and pertinent Native American Tribes.

3.7.2 Indicators for Analysis of Effects

The National Historic Preservation Act (NHPA) requires federal agencies to “take into account the effects of their undertakings on properties that could be eligible to the National Register of Historic Places”. In many cases, the federal agencies comply with the NHPA through the Section 106 process. In Region 5, the Forest Service has negotiated an alternative process to the Section 106 process for projects that can be implemented without affecting historic properties. This process is documented in the *“Programmatic Agreement Among The U.S.D.A. Forest Service, Pacific southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, and the Advisory Council on Historic Preservation Regarding the Process for Compliance with Section 106 of the National Historic Preservation Act for Management of Historic Properties By the National Forests of the Pacific Southwest Region”* (PA).

Review of the Proposed Action and project maps resulted in the determination that the activities proposed could all be approved under the provisions of the PA (Class B – Screened Undertaking 2.3).

3.7.3 Analysis of Effects

3.7.3.1 No Action – Alternative 1

The No Action Alternative would not result in management activity and would have no direct or indirect effects to heritage resources.

3.7.3.2 Proposed Action – Alternative 2

The Proposed Action includes four components:

1. Upkeep and maintenance of roads, trails, and facilities,
2. Authorization of a temporary use pool for Outfitter / Guide activities,
3. Authorization of events,
4. Authorization of special use permits for recreation uses of NFS lands

Each of the above actions can be authorized under provisions of the PA without having an effect on historic properties or heritage resources. Activities related to upkeep and maintenance of roads, trails, and facilities are considered Class B- Screened Undertaking for:

(l) routine trail maintenance limited to brushing and light maintenance of existing tread with hand tools, including chain saws;

(m) trail maintenance of existing tread on slopes exceeding 30 %;

(n) routine road maintenance and resurfacing where work is confined to previously maintained surfaces, ditches, culverts, and cut and fill slopes within road prism, where there are no known historic properties;

(t) maintenance and replacement in kind of existing nonstructural facilities (i.e., cattle guards, gates, fences, stock tanks, guardrails, barriers, traffic control devices, utility poles, light standards, curbs, sidewalks, etc.) that do not involve new ground disturbance, or where ground disturbance is limited to less than one cubic meter total per acre and in areas where there are no known historic properties or where the presence of historic properties is considered highly unlikely;

(u) activities or alterations involving facilities or structures that are less than 45 years of age as of the date of the project and will not alter the view shed of historic buildings, structures, or Districts;

(v) maintenance (that does not add to nor change the configuration of the existing facilities) to existing electronic communication sites involving no ground disturbance of impacts to known historic properties; and

(w) installation of any off-site historic property protection measures.

Activities related to authorization of a temporary use pool for Outfitter / Guide activities, authorization of events, and administration and permitting of recreation uses are considered Class B Screened Undertakings for:

(f) issuance, granting, or renewal of permits, easements, or rights-of-way that do not authorize surface or resource disturbance and do not have the potential to affect access to or use of resources by Indians based on the nature of the undertaking or prior or current consultation with Indian tribes.

3.7.4 Analysis of cumulative effects

The project will not result in direct or indirect effects to historic properties, therefore there will be no cumulative effects.

3.7.5 Analytical Conclusions

The project will not result in direct, indirect, or cumulative effects to historic properties and will result in a “no effect” determination to heritage resources.

Chapter 4 – Coordination and Consultation

The following individuals, agencies, and organizations were consulted during the preparation of this document.

4.1 *LTBMU Interdisciplinary Team Members*

Daniel Cressy, Landscape Architect, Project Team Lead

Ashley Sibr, Landscape Architect, Project Team Lead

Mike LeFevre, Planning Staff Officer, Project Team Lead

Rena Escobedo, Wildlife Biologist, Project Team Lead

Matt Dickinson, NEPA Advisor, Project Team Lead

Gina Thompson, Recreation Staff Officer

Michael Gabor, Forest Engineer

Michael Alexander, Assistant Forest Engineer

John Maher, Tribal Relations and Heritage

Tom Fuller, Heritage Resources

Courtney Rowe, Botanist

Shay Zanetti, Wildlife Biologist

Sarah Muskopf, Aquatic Biologist

Susan Norman, Hydrologist

Holly Eddinger, Life Science Program Manager

Jonathan Cook-Fisher, Recreation Special Uses Program Manager

4.2 *Federal, State, and Local Agencies*

Tahoe Regional Planning Agency

Lahontan Regional Water Quality Control Board

California Department of Transportation

Nevada Department of Transportation

California Tahoe Conservancy
Nevada Division of Natural Resources
Nevada State Historic Preservation Office
California Office of Historic Preservation
Nevada State Clearinghouse
California State Clearinghouse
Incline Village GID
Kingsbury GID
Tahoe City Public Utility District
Douglas County
Washoe County
Carson City Board of Supervisors
Eldorado County
Alpine County
Placer County
City of South Lake Tahoe
South Tahoe Public Utility District
Nevada State Parks
California Department of State Parks
Tahoe National Forest,
Eldorado National Forest
Humboldt Toiyabe National Forest, Carson Ranger District

4.3 Tribal Coordination

Washoe Tribe of Nevada and California

4.4 Individuals

The following list represents individuals who responded during the NEPA scoping period:

Thaleia Georgaides
Gay Havens

Andrew Strain

Emilie Lorenz

Amy Granat

Carla & David Ennis

Donald Heath

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Bob Rowan

Clay Grubb

Michael Cate

Linda Marrington

Allen Havens

Jeff Plant

Ben Fish

Hilary Eisen

David Reichel

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Kathryn Biasotti
Sam Hyslop
Mary Bennington
Matthew McFee
Katrin DeBacker
Catherine Aisner
Chris Paxman
Logan Talbott
Becky Bell

4.5 Organizations

The following list represents organizations that were contacted about this project and/or provided input during the NEPA scoping period:

Heavenly Mountain Resort
Snowlands Network
Tahoe Area Mountain Biking Association
Winter Wildlands Alliance
Tahoe Backcountry Alliance
Tahoe Fly Fishing Outfitters
Lake Tahoe Ski Guides
Lover's Leap Guides
Camp Richardson Corral
Friends of Incline Trails
Angora Lakes Resort
Tahoe Area Sierra Club
Tahoe Rim Trail Association
Hermosa Tours
Wanna Ride Shuttles
Tahoe Chamber of Commerce
League to Save Lake Tahoe

Tahoe Heritage Foundation
Pacific Crest Trail Association
Wedding Chapel at the Horizon
The Dream Maker Lake Tahoe
California Land Management
Camp Richardson Resort and Marina
Echo Chalet
Round Hill Pines Resort
Zephyr Cove Resort
Valhalla Tahoe
Berkeley Camp
Camp Concord
Camp Shelly
Homewood Mountain Resort
Diamond Peak Ski Resort
Friends of the West Shore
Chapel of the Pines
Chapel of the Bells
The Chapel at Harvey's
Truckee River Fly Fishing Products
Alpine Fly Fishing Services
Jameson Beach Property Owners Association
Jacqueline Mittelstadt