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LAKE TAHOE BASIN MANAGEMENT UNIT

Travel Analysis Process



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Chapter 1 – Setting Up the Analysis

Objectives

Title 36 CFR Part 212 Subpart A Section 5 requires each administrative unit of the National Forest System to identify the minimum road system needed for safe and efficient travel and for administration, utilization, and protection of National Forest System lands. In determining the minimum road system, the responsible official must incorporate a science-based roads analysis at the appropriate scale and, to the degree practicable, involve a broad spectrum of interested and affected citizens, other state and federal agencies, and tribal governments. The minimum system is the road system needed to meet resource and other management objectives adopted in the relevant land and resource management plan (36 CFR part 219), to meet applicable statutory and regulatory requirements, to reflect long-term funding expectations, and to ensure that the identified system minimizes adverse environmental impacts associated with road construction, reconstruction, decommissioning, and maintenance.

The Travel Analysis Process (TAP) conducted for the Lake Tahoe Basin Management Unit (LTBMU) provides an overview of issues related to the existing system roads designated for motorized use. The analysis compiles existing scientific information and provides a strategic framework to manage roads that are safe and meet public needs. The strategic framework can be efficiently administered, minimizes negative ecological effects on the land and water resources, and is in balance with funding available to operate and maintain the road system.

The TAP is a broad-scale, comprehensive review of the transportation network. The main objectives of the TAP are:

- Balance the need for access while minimizing risks by examining important ecological, social, and economic issues related to roads
- Describe transportation management opportunities and strategies in narratives, maps, and tables that address environmental concerns and future access needs
- Identify methods to achieve the minimum necessary road system for the LTBMU

Scale

The travel analysis was conducted for the entire area managed by the LTBMU and includes all system roads currently being managed by the Forest Service. In addition, the analysis includes known existing access routes for special uses, such as utility easement access which are part of the LTBMU system of roads. The analysis does not include opportunities to add routes to the system because of the extensive analysis and public involvement that has occurred over the past 12 years on both forest- and site-specific scales to identify needs and modify the road system to meet those needs. Opportunities to add roads to the system in the future will be analyzed at a

project level TAP as these opportunities occur through land acquisition, project specific analysis, or other ways.

How the Report Will be Used

The TAP results will assist the LTBMU in addressing issues related to the roads system. The TAP will inform future analyses, decisions, and specific actions. The TAP can be updated as necessary either as the entire document to inform long-range strategic plans or as a portion of the document to provide site specific information for a project level analysis.

Roles of Specialists

The Analysis Team was assigned by the Lake Tahoe Basin Unit Forest Supervisor. The Analysis Team members and their primary disciplines are listed in Table 1.

Table 1. Interdisciplinary Team Members

Name	Resource Area
Cheryl Beyer	Botany
Stan Kot	Wildlife
Maura Santora	Fisheries
Bob Rodman and Karen Kuntez	Lands, Utilities, Permits
Jim Harris	Hydrology
John Maher	Cultural Resources
Don Lane	Recreation
Tim Merten	Engineering
Dave Fournier	Vegetation Management
Emily Pallo	Urban Lots
Kit Bailey	Fire/Fuels
Denise Downie	Soils
Kurt Teuber	GIS
Craig Kjar	Coordinator

The team identified analysis criteria for each resource area and reviewed GIS screening information to determine relative rankings of risks and benefits for each road. Initial rankings were reviewed and adjusted based on the specialists’ field knowledge of the resources. Final rankings were tabulated and recommendations were developed.

Identification of Information Sources

Existing resource and access information was available for this study. The TAP may be revised as more information becomes available. For example, basin-wide studies for aquatic passage and water condition assessment are in progress that may provide better risk assessment determinations. A review of all utility access is also in progress which will identify opportunities to improve permitting of utility easements and associated access roads.

The following sources of information were identified for use in this analysis:

- Geographic Information System (GIS) database information on the transportation system, land ownership, vegetation management, stream environment zones, wildlife, botanical resources, cultural resources, fisheries, streams (perennial, ephemeral, and intermittent), wetlands, soils, Recreation Opportunity Spectrum, and Forest Plan management area
- Infra roads database
- Road management objectives for each system road
- Budget information for funding allocated to roads in prior years and costs for maintaining the road system to standards
- Wildland fire response plans, vegetation management plans, and fuels treatment plans
- Special Use authorizations
- Public comments related to motorized and non-motorized use
- Access and Travel Management planning information and transportation shed maps
- Existing publications and research relating to resource issues in the LTBMU

Analysis Plan

The analysis team followed these steps to complete this analysis:

- Identify the existing road system to be studied
- Identify criteria of each specialty area for ranking roads for risk and benefit
- Use GIS analysis to apply the criteria (no new data were collected)
- Rank the roads for risk and benefit based on the GIS analysis
- Review of the rankings by individual specialists and modify the rank based on knowledge of the field conditions
- Combine individual specialty rankings to assign risk and value rankings to each road
- Place roads in one of nine road management categories using relative risk and benefit rankings
- Use the road management categories of accept, encourage, and discourage to classify the roads in future project National Environmental Policy Act (NEPA) analysis
- Identify a minimum road system using the rankings and current use of each road

Chapter 2 - Describing the Situation

Existing Road System and Direction

The Lake Tahoe Basin Management Unit (LTBMU) was formed in 1973 to consolidate management of the portions of three national forests within the watershed of Lake Tahoe. Preservation of the clarity of Lake Tahoe is a primary goal of the LTBMU and the road system is managed to minimize impacts to the watershed. The majority of land managed by LTBMU has been purchased from private ownership. Many of the roads serving this land were also acquired. Therefore, LTBMU has been active in decommissioning unneeded roads and implementing Best Management Practices (BMPs) by reconstructing roads which did not meet design standards.

The LTBMU issued a travel management plan in 1976 to manage the road system for recreation and resource protection. The travel management plan was refined over time. In 1998, an *Access and Travel Management Strategy* (ATM) was initiated and included inventory, water quality risk assessment, road needs assessment, and public outreach. The ATM provided a systematic approach to decisions about roads and trails to reduce resource impacts through decommissioning and implementing Best Management Practices. The ATM divided the LTBMU into 12 transportationsheds for more detailed analysis and project planning. By 2001, trails had been added to the ATM. The routes open to the public are now documented on a Motor Vehicle Use Map (MVUM) in compliance with 36 CFR 212, Subpart B. The map is updated annually or as needed to show the roads and trails open to the public for motorized use and includes information on the types of vehicles allowed on each route (Figure 1).



Figure 1. Seasonal road closure on native surface road.

The current Forest Plan requires all National Forest System Roads be managed to provide for administration, recreation, and other management purposes and to lessen the adverse effects on water quality and other resources. Under the plan, few new roads were considered necessary and roads not needed would be closed. Roads remaining in the system would be improved to meet water quality protection standards. Road BMPs, such as surfacing and bridges would be used to reduce sediment transport into streams, meet aquatic organism passage (AOP) objectives, protect resources, and to provide access to National Forest System lands. Gates would be used to regulate seasonal use.

Over the past 10 years, the LTBMU decommissioned approximately 106 miles of roads. As site-specific projects are proposed, the existing road system within the project areas are reviewed and actions taken to correct deficiencies that are identified, including constructing, reconstructing, or decommissioning roads. Best management practices and monitoring are used to evaluate the effects of projects and the results are used to improve future activities.

To provide effective access to public and private land within the LTBMU, the transportation system includes Forest Service roads plus roads from other State and local governments and private entities. Cooperation among the road owners is necessary.

Table 2 shows the scope of the interconnected road system.

Table 2. Miles of Routes by Jurisdiction within the Lake Tahoe Basin Management Unit

System	Miles of Road*
National Forest	257
State	116
County, City	591
Private	40
Total	1,004
* The data source is Infra	

There are five Maintenance Levels (ML) used by the Forest Service to determine the work needed to preserve the investment in the road. These MLs are described in FSH 7709.62.32 *Road System Operation and Maintenance Handbook* and are briefly summarized as follows:

- ML 1: basic custodial care (closed to motor vehicle traffic). Roads are closed to traffic for protection of a resource, maintenance cost, or other reasons and vegetation may be growing on the roadway.

- ML 2: suitable for high clearance vehicles. Roads are primarily one lane, low traffic, low speed roads and can range from native surface to pavement depending on resource protection needs.
- ML 3: suitable for passenger cars. Roads support higher traffic volumes and are constructed with wider surfaces and longer sight distances for higher speed traffic.
- ML 4: suitable for passenger cars, moderate degree of user comfort. Roads support higher traffic volumes and are constructed with wider surfaces and longer sight distances for higher speed traffic.
- ML 5: suitable for passenger cars, high degree of user comfort.

There are no ML 5 roads in the LTBMU. All levels of roads have drainage and erosion protection features that are maintained to protect water quality. Miles of road by maintenance level is provided in Table 3.

Table 3. Miles of Forest System Road by Maintenance Level

Maintenance Level	Miles	Percent
1	26.599	10.3
2	143.328	55.7
3	66.811	25.9
4	20.730	8.1
Total	257.468	100.0

Unauthorized routes are not shown on the MVUM, including user-defined or decommissioned routes. This TAP analysis does not include those routes and they are not part of the transportation system. Unauthorized routes currently in use were established illegally and users cannot expect the routes to be legitimized. If there is a need for any of these routes, it will become evident in a project analysis or a specific request from an interest group (OHV users for example). The appropriate NEPA analysis would be completed to evaluate adding the route at that time.

Forest Highways and Scenic Byways

The analysis area contains three Forest Highways and a National Scenic Byway designated by the Public Lands Highway program of the Federal Highway Administration. These are Federal and State and County highways that qualify for Federal Highway Act funding. They provide a higher standard of public access than the Forest System Roads. In addition to National Scenic Byways, State Scenic Byways have been designated. These are the Mt. Rose Scenic Highway in Nevada and the Monitor Pass and Luther Pass Highways and the Lake Tahoe Road Scenic Byway in California. These scenic highways and other State highways comprise about 116 miles of road within the LTBMU.

Forest Highways

The Forest highway program is funded through the Federal Highway Act and provides monies to forest roads which must serve the national forests and also the communities within and adjacent to the national forests. The designation of forest highways is not intended to form an independent system of roads. The purpose of the designation is to identify State and local government roads that qualify for construction and reconstruction funding through the Forest highway program. This program creates funding opportunities for improvements that meet highway standards when high traffic volume and increased speed are necessary. The Forest Highways on the LTBMU are shown in Table 4.

Table 4. Forest Highways

Forest Highway	Forest Highway Name	County	Length (miles)	State/County Highway No.	Termini
1	Lake Tahoe	Placer, Washoe, Carson City, Douglas	27.5	CA 28/NV 28	HWY 89 at Tahoe City to Hwy 50
2	Mount Rose	Washoe	8.7	NV 431	Hwy 28 to Boundary
223	Fallen Leaf Road	Eldorado	3.8	Eldorado Co. 1940	Hwy 89 to Terminus

National Scenic Byways

The National Scenic Byways Program is part of the U.S. Department of Transportation, Federal Highway Administration. The program is a grass-roots collaborative effort established to help recognize, preserve, and enhance selected roads throughout the United States. Since 1992, the National Scenic Byways Program has funded over 2,800 projects on designated state and national byways in 50 states, Puerto Rico, and the District of Columbia. The U.S. Secretary of Transportation recognizes certain roads as All-American Roads or National Scenic Byways based on one or more archeological, cultural, historic, natural, recreational, and scenic qualities.

Lake Tahoe Eastshore Drive National Scenic Byway

State Route 28 and Highway 50 combine for a 28-mile stretch from Stateline to Crystal Bay on the east shore of Lake Tahoe. The east shore of Lake Tahoe offers breathtaking views of the crystal clear lake, towering pine trees, and snow-capped mountains, earning the title, "the most beautiful drive in America." (National Scenic Byways Program website, 2011)

State Scenic Byways

California and Nevada have State scenic highway programs to designate highways located in areas of outstanding natural beauty. This designation implements and enforces a Corridor Protection Program and makes the highway eligible for additional funding sources for enhancement projects.

Mount Rose Scenic Biway

This State of Nevada Scenic Highway rises in dramatic fashion from the sage-covered foothills of the Truckee Meadows, topping the Carson Range of the Sierra Nevada Mountains at 8,911 feet. The Mt. Rose Highway is the highest all-season pass in the Sierras. Near its summit, the highway passes through the beautiful, high alpine Tahoe Meadows, a favorite all-season recreation area. The highway then descends through pine forests, finally joining Highway 28 at Incline Village on the north shore of Lake Tahoe. (National Scenic Byways Program website, 2011)

Monitor Pass and Luther Pass Highways and Lake Tahoe Road Scenic Byway

This State of California Scenic Highway is located on the west and south sides of Lake Tahoe with views of the beautiful Sierra Nevada Mountain Range, passing through high passes and open mountain valleys. The clear blue lake and spectacularly high mountains provide spectacular scenery. This byway extends from the Placer County Line near Tahoma south along Highway 89, exits the Lake Tahoe Basin at Luther Pass, and terminates at Highway 395. (National Scenic Byways Program website, 2011)

Land Ownership Patterns

The following figures display the change in land ownership between 1963 and 2011. The Forest Service has been able to acquire private land through authorities for exchange or purchase. The primary authority used for acquisition has been through the Santini-Burton Act and Southern Nevada Public Lands Management Act (SNPLMA) which provides funds from sale of public lands near Las Vegas to purchase land for conservation purposes. The dark green line on the figures denotes the boundary of the LTBMU. About 130,000 acres have been acquired of the 160,000 acres managed by LTBMU.

In addition, the States of Nevada and California have acquired land for State Parks and for conservation purposes within the Lake Tahoe Basin. Most of the large blocks of non-federal land shown on the 2011 figure are now owned by the States. The State lands are managed for public benefit including implementation of Best Management Practices which will preserve the Lake Tahoe resources. The State Parks provide additional recreation and lodging amenities for visitors to Lake Tahoe as well as some large areas of undeveloped land.

Public agency acquisition of private land has prevented construction of roads that were platted and allowed the decommissioning of roads which had been constructed and were not needed for management of public land. In addition, in some areas roads on National Forest System lands were in areas permitted for subdivision and are held today in county ownership. The LTBMU acquisition program has funds available and will continue to seek desirable land for purchase. These purchases have the potential to affect the existing LTBMU road system by either adding or subtracting roads. The status of State acquisition programs is outside the scope of this report,

but can also have an impact on the LTBMU road system where access to public land owned by any agency is needed.

The acquired lands have at times been encumbered with rights for access, utilities, or other purposes which will remain in effect until there is an opportunity for change. Several roads with LTBMU jurisdiction are used as access for these purposes or encumbrances. As changes occur in access needs, opportunities to manage the roads differently will occur.

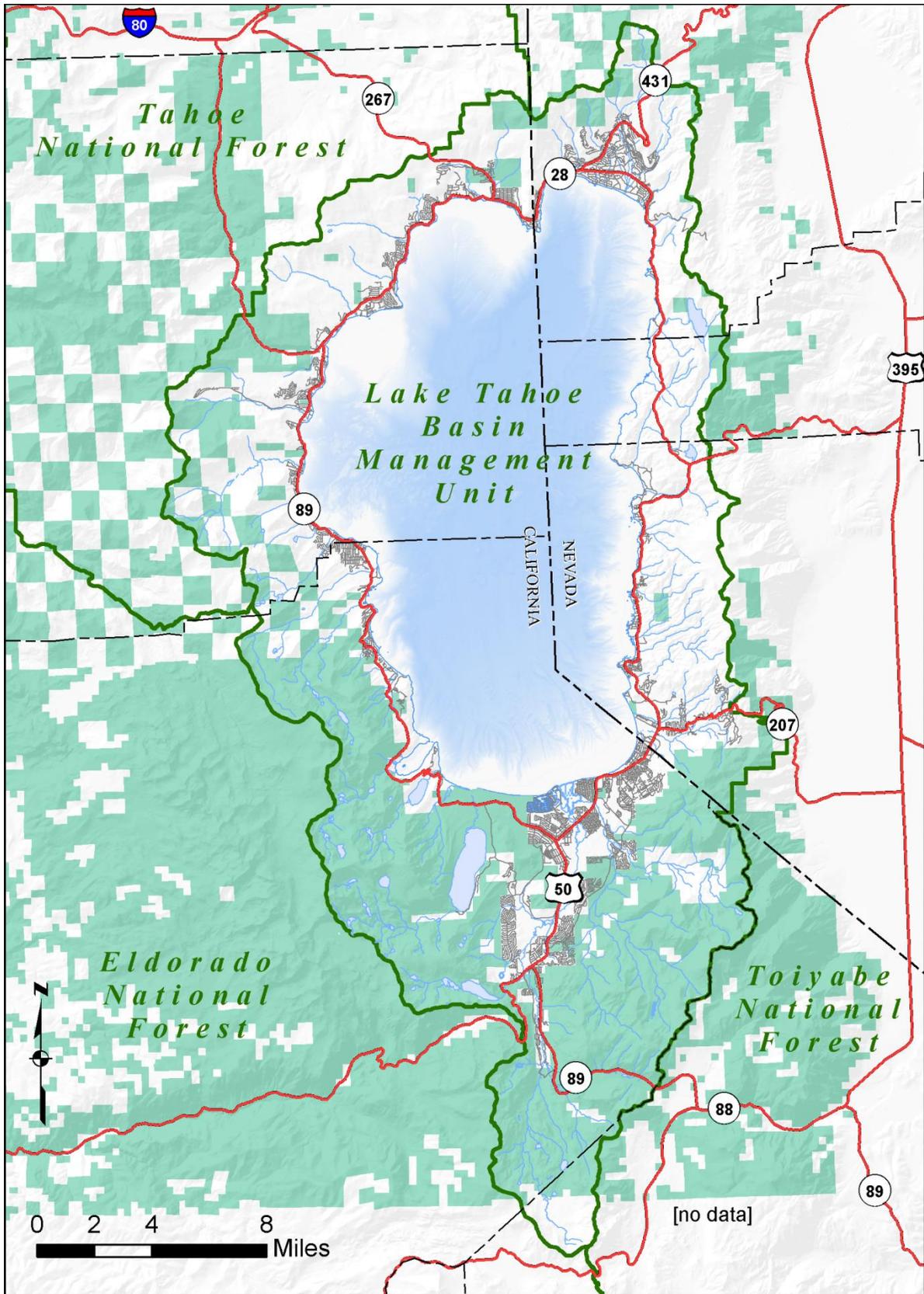


Figure 2. Federal Land Ownership (green) in the Lake Tahoe Basin in 1963.

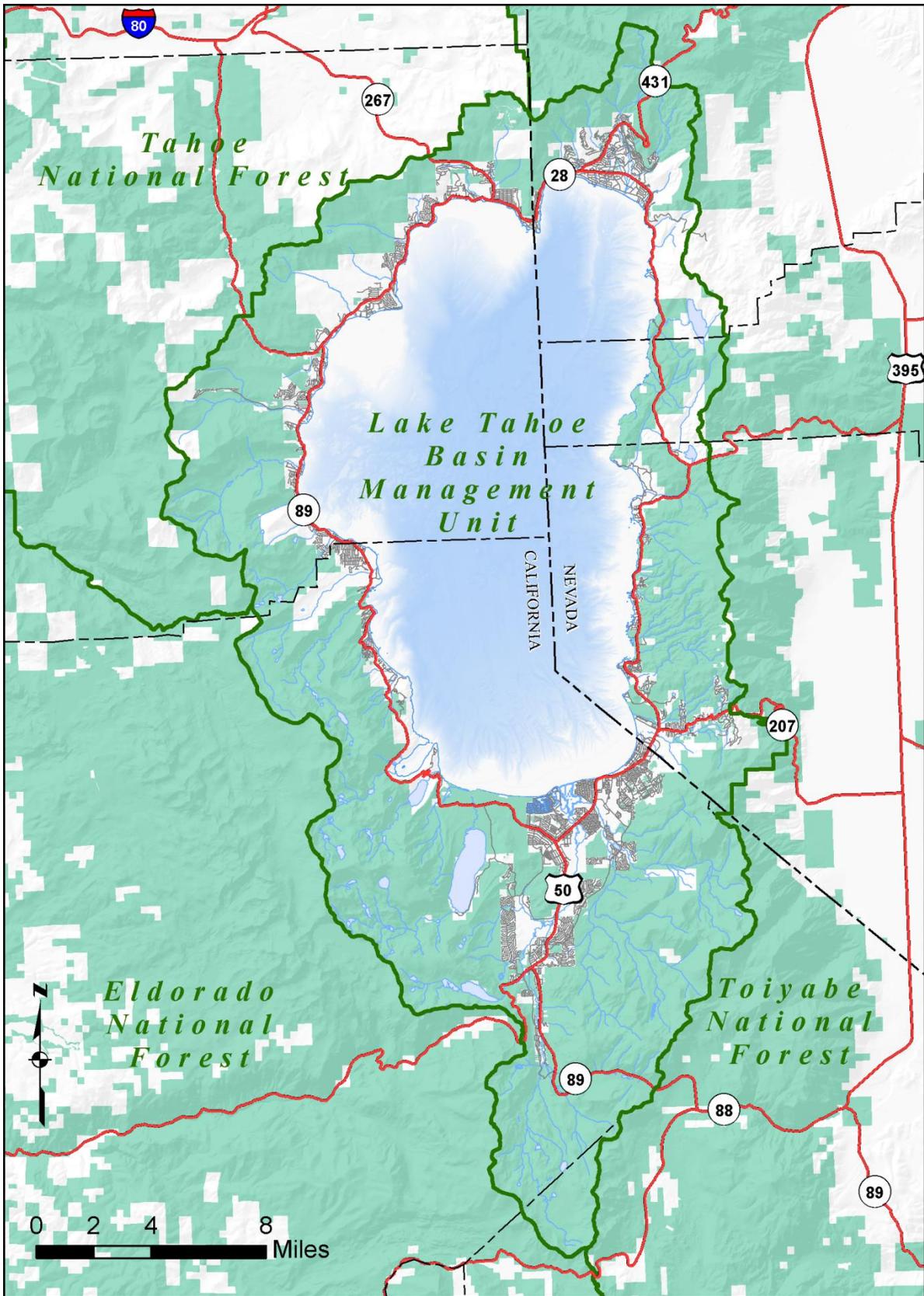


Figure 3. Federal Land Ownership (green) in the Lake Tahoe Basin in 2011.

Physical Environment

The Lake Tahoe Basin is situated on the Sierra Crest and on the state line between California and Nevada. Lake Tahoe is 12 miles wide and 22 miles long, with a maximum depth of 1,645 feet. The lake is fed by 63 streams, but only one stream, the Truckee River, flows out.

The Lake Tahoe Basin was shaped by several natural processes: rise and fall of fault blocks in the Sierra Nevada Range, volcanic lava flows forming a barrier across the northeastern outlet, glacial action, and erosion. The result is the very deep Lake Tahoe in an oval-shaped watershed characterized by rugged, steep topography with smaller U-shaped valleys and small lakes.

Elevation ranges from 6,225 feet at lake level to 10,891 feet at Freel Peak. The basin topography is dominated by steep mountainsides with smaller areas of less steep land in riparian corridors and meadows and on alluvial flats and glacial outwash plains. The acreage of less steep land increases with proximity to Lake Tahoe, and only one-seventh of the land area has a slope of less than 10 percent.

Soils of the Tahoe Basin are predominantly derived from igneous rock, with minor contributions from metamorphic rocks. The volcanic (extrusive) rocks are mainly andesitic lahars and the granitic (intrusive) rocks are mostly granodiorite. Soils are coarse textured with depths ranging from very shallow on mountains to very deep in some meadows and glacial deposits.

The climate for Lake Tahoe Basin ranges from warm, dry summers to cold wet winters. Weather varies considerably with elevation, slope, aspect, and season. Winters are marked by the occurrence of frequent low-pressure systems and cold temperatures and reflect the influence of maritime polar air. Precipitation is highest from November through March. Precipitation tends to taper off after March, as the flow pattern of storms shifts to the north, resulting in warm summers with light precipitation. Mean annual precipitation ranges from over 55 inches in watersheds on the west side of the basin to about 26 inches near the lake on the east side of the basin. Rain on snow events account for the largest storm flows. In some years, summertime monsoon storms bring intense rainfall.

August is normally the warmest month at the Lake Tahoe Airport (elevation 6,254 feet) with an average maximum of 78.7°F and an average minimum of 39.8°F. January is the coolest month with an average maximum of 41.0°F and an average minimum of 15.1°F. The all-time maximum of 99°F was recorded on July 22, 1988. The all-time minimum of -29°F was recorded on December 9, 1972, and February 7, 1989. Temperatures exceed 90°F on an average of 2.0 days annually. Minimum temperatures of 32°F or lower occur on an average of 231.8 days annually, and minimum temperatures of 0°F or lower occur on an average of 7.6 days annually. Freezing temperatures have occurred every month of the year.

Biological Environment

The vegetation of the Lake Tahoe Basin is a remarkable natural resource that ranges from deep water plants living more than 300 feet below Lake Tahoe's surface to uncommon plant communities on the summit of Freel Peak at 10,881 feet. Vegetation categories of subalpine forest, shrub association, deciduous riparian, and meadow association all exist in the basin. Unique vegetation exists in the deep waters of Lake Tahoe and Osgood swamp. The basin contains significant areas of wet meadows and riparian areas, dry meadows, brush fields, and rock outcrop areas. Mountain alder and ceanothus are components of the brush fields that supply food for deer and elk as well as fixing nitrogen, contributing to nitrate concentrations in some small streams. The beaches of Lake Tahoe are the only known habitat for the rare Tahoe Yellow Cress, which grows in wet sand between low and high water marks. Sensitive plants, such as the Tahoe Yellow Cress, thrive in constant conditions to which these plants have adapted. Changes in environment affect all of the vegetation species, but to varying degrees. The "second growth" forest of today has grown since the logging activities which clearcut about 60 percent of the basin. The remaining area was alpine, barren, or inaccessible. The resulting forest is even aged, overcrowded, and susceptible to disease and drought due to many factors including fire suppression.

The Lake Tahoe Basin supports a wide range of wildlife species that occur year round and seasonally. Past and current land uses have degraded the quality and quantity of wildlife habitats. Interagency efforts to survey and manage for sensitive species are being accomplished for species such as California Spotted Owl, Northern Goshawk, Osprey, sensitive amphibians, waterfowl, Willow Flycatcher, furbearers, Golden Eagle, Peregrine Falcon and Bald Eagle among others. Terrestrial species such as deer, elk, mink, bears, and beaver are found in the forests surrounding Lake Tahoe. Both lakes and streams support aquatic species in the basin (Figure 4). Native fish species including Cui ui sucker, Lahontan cutthroat trout, and mountain whitefish were abundant prior to settlement of the basin. Lahontan cutthroat trout are being reintroduced and mountain whitefish occur in very low numbers. Introduction of non native fish and aquatic organisms was one of many contributing factors to loss of native species. Currently Lake Tahoe supports game fish including lake, rainbow, and brown trout and Kokanee salmon as well as several smaller game fish.



Figure 4. Non-Native crayfish in Fallen Leaf Lake in 3 feet of water. Note the clarity of the water.

Stream environment zones constitute 11 percent of the land area, and are extremely valuable in providing habitat for wildlife, purification of water, and scenic enjoyment (Figure 5). Additional hardening by impervious land coverage is regulated in these areas to protect biological processes and species.



Figure 5. Stream environment zone (SEZ) along Taylor Creek.

Roads impact this biological environment through land disturbance, increased access for human visitation, facilitation of communities, and other factors. The identification of a minimum road system will assist in minimizing impacts.

Social, Cultural, Economic and Political Environment

Ancestors of the Washoe people have inhabited the area for many millennia. They used the area to fish, hunt, trap, and gather the bounty of food that could be found in the meadows and waters of the Lake Tahoe Basin. In the winter, they migrated to the lower valleys to escape the heavy snows of winter. The Washoe have sacred places around Lake Tahoe including De ek Wadapush (Cave Rock) which was only visited by Washoe healers seeking spiritual renewal. Cave Rock has been determined to be a Traditional Cultural Property eligible to the National Register of Historic Places. In 1931 and 1951, tunnels were excavated through Cave Rock to facilitate travel along the east shore of the lake. The Washoe Tribe has a strong cultural connection to the Lake Tahoe Basin and continues to be involved with management of the public land. The Washoe Tribe also currently operates the Meeks Bay Resort and Marina on the west shore of Lake Tahoe.

The first European-American to see Lake Tahoe was Lt. John C. Fremont in 1844. The area received few outside visitors and no permanent settlers for quite some time. The 1848 California gold rush bypassed the basin. In 1859, gold and silver were discovered at the Comstock Lode near Virginia City, Nevada. The “Rush to Washoe” resulted in need for lumber for mining, railroads, and homes. The Tahoe Basin became a logging camp and over a 40-year period, nearly two-thirds of the forest was taken, leaving only stumps and unwanted species.

By 1900, the resort era was beginning at Lake Tahoe. The depletion of precious metals reduced logging and allowed the forests to renew themselves. People were once again interested in visiting this unique mountain lake in the summer, but this time, it was for rest and recreation. Expanding and improving the roads allowed people from around the world to visit the once remote Lake Tahoe. Visitation increased as road networks improved. Availability of land brought private development. The spectacular scenery and availability of year round activities that took advantage of the heavy snowfall and beautiful summer weather drew visitors from around the world. Winter ski areas, summer campgrounds, roads to access the lands, trails, casinos, recreation residences, resorts, businesses and towns has drawn more people to the area, resulting in a population base larger than ever supported by the land in the past. By the 1970s, it was clear that public policy at Lake Tahoe needed to address the environmental impacts of development and visitation in the basin.

By 2000, numerous programs and actions were being undertaken to control impacts to the Lake Tahoe environment. Citizens and their local authorities were working together through Tahoe Regional Planning Authority and other groups. State governments had joined forces to cooperate and share expertise. Congress had passed laws and provided funds through acts like Southern Nevada Public Lands Management Act and Santini-Burton Act to restore public ownership of

large portions of the basin. Presidential Executive Orders established priorities for federal agencies managing public lands and facilitated partnerships with all levels of government. Non-governmental organizations provided other means for the general public to be involved as well as opportunity to provide cost share funds for specific projects. These activities have changed the regulatory and development processes in the basin and combine to reverse the environmental impacts on Lake Tahoe. Road networks, pollution, grazing practices, vegetation management, and other impacts had been analyzed and are all being managed to reduce the impacts of visitors and residents alike so the Lake Tahoe Basin can continue to be enjoyed into the next century.

This is the social setting for roads decisions. The need for roads to access the public land for management of resources is great, but those roads need to be well designed, managed and maintained so they do not generate unacceptable impacts to the physical or biological environment.

Public involvement is a cornerstone of planning efforts in the LTBMU. Coordination among resource managers, local officials, State agencies, scientists, and other experts to effectively manage the land within the basin will contribute to common understanding and more efficient management of environmental risks.

Budget

The LTBMU receives road funding from two principal sources. The first source is appropriated funds from the federal budget process. These funds are identified by Congress for three categories of expenditures: general road maintenance, road decommissioning, and capital improvement projects. LTBMU primarily receives funding from the general maintenance category. This source provides the majority of funds used to fund the administration, operation, and maintenance of the road system managed by LTBMU. Appropriated funds for road operation and maintenance funding on the LTBMU have ranged from \$156,000 to \$624,000 per year from 2005-2011 with an average of \$299,000. Additional funds are periodically available for bridge replacement through a program administered by the Pacific Southwest Regional Office. LTBMU has obtained funding from the bridge program in past years.

The second road funding source for LTBMU is the Southern Nevada Public Lands Management Act (SNPLMA). This act provides for the sale of certain federal lands in Clark County, Nevada and use of the proceeds for acquisition and management of environmentally sensitive lands including funding of the Lake Tahoe Restoration Act. The LTBMU has benefitted from this act through funding of the Environmental Improvement Program which is a cooperative effort to preserve, restore, and enhance the unique natural and human environment of the Lake Tahoe Region. SNPLMA funds have been used for acquisition of land and right-of-way (ROW), and also to fund specific road maintenance and improvements to protect Lake Tahoe. More specific information about funding programs and annual funds available is included in Appendix B.

Installation of BMPs and other structural improvements to the road prism can be expensive. Installation of rolling dips, rock-lined ditches, or other native features are on the low range of the cost scale. Structures for aquatic passage such as bottomless arch culverts or bridges are examples of the middle and upper range of the cost scale. Figure 6 shows the recently constructed bridge on Barker Pass Road. In addition to the bridge, features of this construction include settlement ponds along the bridge approaches, armoring of streambanks, and engineered erosion protection structures.



Figure 6. New bridge on Barker Pass Road.

Chapter 3 - Identifying Issues

Purpose

This section identifies resource concerns and identifies key issues related to managing the existing road system.

Resource Concerns - Risks

Five categories of risks to resource values were identified for analysis of the road system: Wildlife, Botany, Fishery, Hydrology, and Heritage. They are introduced in this section and the criteria to determine risk rank is developed in Chapter 4.

Wildlife

While the Lake Tahoe watershed remains a significant area for wildlife, its fragile habitat areas have been adversely altered by human activity. Most of the critical habitats in the Lake Tahoe watershed occur in the lower montane forests (below 7,000 feet in elevation) where the majority of development is concentrated. Habitat and animal migration routes have been reduced, fragmented, and degraded by urbanization. Even in some areas of less intensive development, the natural landscape has been modified by roads, and trails. The risk-to-wildlife assessments considered habitats for bald eagle, golden eagle, goshawk, spotted owl, osprey, peregrine falcon, Townsend's big eared-bat, willow flycatcher, and mule deer fawning meadows. Nesting and Protected Activity Centers (PACs) for each of these species were available in existing GIS data.

Botany

The botanical risks were evaluated in consideration of invasive species, threatened and endangered species, sensitive species, and areas important for biodiversity. Vehicles and maintenance activities are known vectors for spread of invasive species and increase occurrence along established road corridors. The higher the traffic volume, the more likely the invasive species are being transported, including species from outside the LTBMU attached to tourist vehicles. The GIS layer for invasive species locations was used along with anticipated vehicle traffic. GIS layers for research natural areas, threatened and endangered species, fen, riparian vegetation, springs, seeps, and Lake Tahoe shoreline were used to determine road locations affecting threatened and endangered species, sensitive species, and biodiversity areas. Rankings of low, moderate, and high were assigned to the botanical risk ranking.

Fishery

The aquatic species concerns include Lahontan cutthroat trout (*Onchorynchus clarki henshawi*), native non-game fish, and amphibian species. Lahontan cutthroat trout is a federally listed threatened species (Federal Register Vol. 40, p.29864), and recovery is a priority on the LTBMU. The native non-game fish are mountain whitefish (*Prosopium williamsoni*), tui chub (*Gila bicolor sp.*), redband shiner (*Richardsonius egregius*), all suckers (*Catostomus sp.*), dace (*Rhinichthys osculus*), and Paiute sculpin (*Cottus beldingii*). Amphibian species include Sierra Nevada yellow-legged frog (*Rana sierra*), Pacific tree frog (*Pseudacris regilla*), western toad

(*Bufo boreas*), and long-toed salamander (*Ambystoma macrodactylum*). The Sierra Nevada yellow-legged frog is a Forest Service sensitive species, and has been determined to be warranted for listing as threatened under the Endangered Species Act, but is precluded now due to lack of funding ((Federal Register Vol. 72, No. 121). Roads most directly impact aquatic species if habitat is altered through stream channelization, increased erosion and sediment loading, and a change in watershed runoff characteristics as a result of road presence and construction; if organism passage through cross drainage systems is inhibited; and if amphibian migration is prevented due to habitat fragmentation by roads (Findlay et al. 2001).

Hydrology

Hydrology for the purposes of this report is defined by two factors: water quality and soils.

Water Quality

Lake Tahoe watersheds are the natural drainage systems that supply the lake with water. Precipitation that falls in the Lake Tahoe watershed (both rain and snow melt) flows through the ground to creeks and streams the empty into the lake. Water conveyed by an undisturbed watershed is typically clean, because the watershed's soil, plants, and organisms act as a natural water purification system. The deterioration in water quality has occurred partially because the Lake Tahoe watershed has been disturbed by the presence of roads and urban areas. Instead of being filtered by soil, water runs off the increasing number of impervious surfaces, rapidly creating surface runoff and causing soil erosion in ditches and gullies. When these greater-than-natural flows reach streams, increased streambank erosion occurs and transports sediments and nutrients such as nitrogen and phosphorus into streams and eventually into Lake Tahoe. (Murphy, 2000)

Soils

The key issues for soils and geology are erosion, high water tables, and geologic hazards such as rockfalls. Of these, the only issue significant enough to be factored into this analysis is erosion. Areas with high water tables were avoided where feasible during route location and road construction. Where it was not possible to avoid them, annual monitoring reports indicate that design and construction have mitigated most problem areas. (Best Management Practices Evaluation Program Reports) Geologic hazards that would present safety or construction and maintenance issues for roads are generally not common in the Lake Tahoe Basin. Although slumping is a major concern in much of California, the low clay contents of Tahoe Basin soils are not conducive to slumping. (Curren, 2011)

Conversely, high sand contents, lack of cohesion, and steep slopes make Tahoe Basin soils highly susceptible to erosion if adequate ground cover is not present. (Murphy, 2000) The NRCS Soil Survey rating for hazard of erosion on roads and trails gives 65 percent of the soils a “severe” rating, 22 percent “moderate,” and 13 percent “slight.” This rating considers slope and K factor (erodibility). Since the rating is based on the slope of the soils adjacent to the road and

not on the slope of the road itself, the rating is of limited usefulness in this analysis. It was not considered feasible to calculate the slope of LTBMU roads given the available GIS data so descriptive site factors were used instead of soil properties to address the risk of erosion and sedimentation. These factors are described in the Hydrology section in Chapter 4.

A watershed condition assessment (WCA) is being conducted for the LTBMU and a report will be available in the future. The WCA will inform future project proposals for roads. Information from the WCA will also be useful in future revisions of the TAP (Figure 7).



Figure 7. Rolling dip directs water off the road and rock lead-off ditch controls erosion.

Heritage

The watershed has a long history of Native American occupation and utilization for over 5,000 years, up through the last half of the 19th Century. Two Native American ethnographic groups, the Nisean or Southern Maidu and the Washoe Tribes, likely utilized the resources. Archaeological evidence documents seasonal use as indicated by bedrock milling features, lithic scatters, and petroglyphs.

During the 1848 Gold Rush and in subsequent years, miners and other groups of immigrants displaced Native American populations in the area. The discovery of gold in California caused a virtual population explosion of Euroamericans in the Lake Tahoe Basin. The growth of gold mining eventually led to the establishment and development of other business and industries in the area. Historical mining sites, cabins, adits, artifact scatters, ditches, tunnels, tailings, roads and trails associated with this era have been identified on the LTBMU. The exploitation of the timber resources also left historic sites.

Early recreation activity brought several notable personalities and families to the area. These individuals left a historical mark upon the land that is the focus of interpretation sites in several areas along the shoreline of Lake Tahoe.

Resource Concerns - Benefits

Five categories of benefits were identified for analysis of the road system: Land, Recreation, Fire, Vegetation Management, and Heritage. They are introduced in this section and the criteria to determine benefit rank is developed in Chapter 4.

Land and Special Uses

Road benefits to lands and land special uses are generally legal obligations of the LTBMU. Legislation such as Federal Land Policy and Management Act of 1976, Alaska National Interest Lands Conservation Act, and Federal Road and Trails Act provide authority to grant rights to others or obtain rights from others. These rights could be for access to adjacent private lands and public lands. Public use not only includes recreation access but also includes ski resorts, utility corridors, county roads, and other purposes. The federal government also has authority to acquire ROW from private or public owners.

Currently road management agreements are used to clarify jurisdiction and maintenance of routes that are of joint interest to the Forest Service and the County. The agreement format is available in the Forest Service Handbook Section 1509.11. There is a “Schedule A” attachment that tabulates the jurisdictional and maintenance responsibilities by road. Schedule A can be updated without modification of the agreement which allows flexibility to deal with unique road maintenance issues in partnership with the County road agency. These agreements provide important framework for providing a seamless transportation system by working with other agencies to manage and fund maintenance of the road systems serving the interests of the LTBMU and public road authorities. Road management agreements are not currently in use with all county and local public road authorities.

Agreements with California and Nevada State authorities responsible for the highway systems and Federal Highway Administration recognize the authorities and processes of Federal Highway Administration for development and maintenance of State and Federal highways. These roads provide important access to the Forest and are a key component of the transportation system serving the public.

Purposes for occupying National Forest System land

The following items are some of the specific purposes for ROW on the LTBMU:

- **Utility easements** (i.e., power, gas, communications) – Roads that provide access for construction and maintenance of utility improvements on National Forest System lands have not always been documented as part of the road system. An assessment has been initiated to verify the utility improvements that exist on the LTBMU and identify the

necessary access routes. Communication and research with the individual utilities is being done to complete this inventory. References to utility easements in the Road Management Objective worksheets are noted in the summary tables in Appendix A, but have not been verified.

- **Communication sites** – At the time of this report, there were two Forest Service communication sites on National Forest System Land in the LTBMU. The road needs for access to these sites will be defined in the future. Roads to communications sites are not required to be open to the public for vehicle access.
- **Private land access** – There are numerous private and other public lands within the boundaries of the unit that require access across the National Forest System lands. The LTBMU has compiled information on access rights and summarized in the road management objectives for use in project planning.
- **Highway Right-of-Way** – State and Federal highway ROW acquisition and management is identified in specific agreements between the Forest Service and Federal Highway Administration. These agreements are supplemented by agreements among the two federal agencies and the State jurisdiction.

Recreation and Special Uses

The Lake Tahoe Basin is one of the most popular recreation destinations in the National Forest System. There are almost 5 million visitors annually, with much of that use occurring during the summer months when most roadways are open. (Lane, 2010) Winter vehicle travel is also significant, particularly on weekends, weather and highway conditions permitting, as there are a number of popular ski areas around the Tahoe Basin; several, such as Squaw Valley and Heavenly Mountain Resort are world class. (Lane, 2010) Roadways provide essential access to National Forest developed facilities, trailheads, and general forest areas.

Recreational opportunities within the Tahoe Basin, whether in the public or private sector, require a reliable and accessible road network. Lake Tahoe is an internationally known scenic resort destination, offering summer and winter outdoor recreation activities in a relatively small land area that is 75 percent National Forest System land. On these public lands, summer recreational opportunities are also largely dependent upon available road or trail access. There are 23 recreation residence tracts serving over 594 permittees, 11 campgrounds, 15 day-use sites, 20 trailheads, 8 developed beaches, a visitor center, and 72 miles of lakeshore to drive around enjoying the scenery, along with miles of back-country roads to access remote areas of the National Forest (Figure 8). Road access is an essential element of the Lake Tahoe area's economy and recreational experience.



Figure 8. Aesthetic treatments of this retaining wall face was an important feature of the project to meet visual and scenic objectives.

Fire

Vegetation types in the watershed are dominated by fire adapted/resistant species. The exclusion of fire, along with other anthropogenic disturbances, has initiated a transition to a fire regime characterized by less frequent, high-intensity fire events and associated vegetation type changes. The urban areas of the LTBMU must be protected from wildland fire, which requires access for fire suppression. Routes are evaluated to determine those necessary for emergency equipment access and evacuation of residents. Planning for wildland fires has included establishing Community Wildfire Protection Plans (CWPP) and Wildland-Urban Interface zones (WUI) as priority areas to access in the event of a wildland fire.

Vegetation and Fuels

Management of vegetation and fuels is necessary for forest health and hazardous fuel reduction. Forest health treatments are used to manage vegetative species and habitats that meet the objectives in the Forest Plan, including associated resource benefits related to recreation, scenic, and watershed objectives. Urban areas within the LTBMU are vulnerable to wildland fire. Management of fuels adjacent to urban areas is a high priority for treatment among all jurisdictions. Access for managing vegetation and fuels has changed over time as equipment has evolved. Depending on the type of treatment, product processing, and transport, the need for roads in some areas is less than it has been in the past. However commercial log truck and chip vans have not changed much, and roads that can support typical full loading (25-30 tons/load plus curb weight) of product removal are necessary for those treatments. Maintenance level 1 roads are needed on a periodic basis that allows closures to motor vehicles for many years

between entries. When these roads are needed, their standard is increased to maintenance level 2 or greater because this is the most cost effective operation for these roads. Other roads are needed routinely because they provide access to many different areas. Evaluation of the road system anticipated the need for present and future access. Periodically, access will be needed in areas at higher elevations that currently do not have road access.

Heritage and Tribal Access

Historic and prehistoric features of the Lake Tahoe Basin are considered when determining appropriate access to the Forest. Protection and managing access of historic properties and features that are listed or eligible for listing on the National Register of Historic Places are a priority. Properties or areas important to the Washoe Tribe of Nevada and California are also a priority for protection and managing access. Criteria were developed to quantify the risks and benefits of roads to these interests. The Basin cooperates with the Washoe Tribe to develop access to Traditional Cultural Properties and traditional use areas while minimizing impacts of those routes to the natural resources.

Key Issues

Unauthorized Use Impacts of user defined, closed, and decommissioned roads

The LTBMU has been active in travel management, including designated routes, since 1976 (source: 1988 Forest Plan). Off-road travel has been prohibited since 1976 and there has been public involvement to identify routes necessary for public access. The LTBMU complies with national direction to publish and annually update a Motor Vehicle Use Map that displays the system routes open to public use.

Available resources for maintenance of system roads

The LTBMU needs adequate allocated funding to maintain the road system. In addition, partnerships and interaction with local public road authorities are essential to providing maintenance for a network of roads that provide access to public and private lands.

Right-of-Way for access to the Forest system lands

The LTBMU acquires and maintains ROW needed on roads crossing private land to provide public access to the LTBMU land. The intermixed private land, communities located adjacent to LTBMU land, and development issues increase the complexity of this work.

Special Uses Permits to occupy Forest system land

The Lands Group administers permits for utilities to cross Forest Service land to fulfill their mission of providing service to the public and private developments within the area. These permits allow access roads for maintenance to the various pipelines, power lines, communication lines, and other infrastructure property of these utilities.

Recreation access

Recreation access is a priority for the LTBMU to assure that both public and permitted uses are adequately served by the road system. Some of these roads are in sensitive areas to provide access to desirable areas such as Lake Tahoe.

Vegetation, Fuels, Fire Access

Forest Plan desired future conditions and Community Wildfire Protection Plans require access to the Forest for implementation purposes. The number and standard of roads needed to fulfill the needs for access for vegetation, fuels, and fire vary over time and depend on Forest Plan requirement for treatment of the habitat and adjacent development. Treatment methods and equipment also vary and can affect the necessary road system.

Access to Forest product gathering areas and Traditional Cultural Properties

The Washoe Tribe has historic and cultural interest in the area.

Environmental Impacts of Roads

Roads impact wildlife, plants, fish, water, soils, and historical sites in many ways. Addressing these impacts in planning, design, and maintenance of the road system is essential.

Chapter 4 - Assessing Benefits, Problems, and Risks

The Analysis Process

The analysis was conducted using existing data from the GIS database. Monitoring reports or other special reports were used to supplement the GIS data. Categories for risks and benefits were identified and criteria developed for each category. The criteria were applied to the GIS database to give an initial risk or benefit ranking. Specialists reviewed that ranking and applied professional judgments and site-specific information as needed to accurately reflect resource risks or benefits for each road.

The Infra database uses mile posts to accurately capture individual segments of varying lengths based on several engineering factors, such as surface type. A road may have several segments, none of which relate to any individual resource. Only 18 percent of the roads on the LTBMU are longer than 1.5 miles. Analysis of road segments is more useful and meaningful for the project-level analysis that must be conducted prior to any action being undertaken. For this analysis, segments were disregarded and the entire road length was assigned the same rank. This provided a conservative approach to ranking.

Criteria Used in Risk and Benefit Analysis Process

Criteria for risk were designed to be conservative so that risk was not underestimated. The roads were considered as a whole so that a high risk affecting one segment would rank the entire road as high risk. Benefits were ranked in a similar fashion. The rankings can assist with scoping and determining relative effects of projects, but additional site specific data will be needed to inform NEPA decisions. The following categories were selected for analysis for risk and benefit.

Table 5. Resource Categories for Roads

Risk	Benefit
Motorized use presents risks to resources in these categories	Motorized uses benefit these categories by providing opportunities
Botany (TES, Invasives)	Vegetation Management
Wildlife	Land and Special Uses
Fishery	Fire and Fuels
Hydrology and Soils	Heritage
Heritage	Recreation

Wildlife

The risk to wildlife was modeled using existing GIS nesting and PAC information for bald eagle, golden eagle, goshawk, spotted owl, osprey, peregrine falcon, Townsend's big eared-bat, willow

flycatcher, and mule deer fawning meadow habitats. Buffer distances from the nest or PAC are listed in the following table. The GIS intersects were assigned a value of low for no intersect, moderate for one intersect, and high for two or more intersects. The raw data were screened by a wildlife biologist and modified for known monitoring conditions that were not in the GIS layer.

Table 6. Wildlife buffer distances

Species	Distance
Bald Eagle	½-mile or within mapped winter area
Golden Eagle, Osprey, Peregrine Falcon	¼-mile of nest
Northern Goshawk, Spotted Owl	¼-mile of PAC
Townsend’s Big-eared Bat roost	300 feet
Willow Flycatcher nest	150 feet
Mule Deer fawning meadow	100 feet
Notes: Nest or PAC active within last two years Roads outside of a watershed do not impact nests in that watershed	

An additional factor for road maintenance activity above existing disturbance levels was not used in this analysis. That factor is more appropriately used to manage annual maintenance plans and maintenance schedules.

Botany

Existing GIS layers for invasive species, sensitive species, threatened and endangered species, and areas important for biodiversity were intersected with the road system to identify risks to roads. The risk ranking is a composite of two rankings: 1) risk of invasive plant species and 2) risk to existing species. The initial screening was for invasive species; if that screen was ranked high, the existing species screen was not evaluated for that road. For moderate or low invasive results, the existing species were evaluated and a higher risk assigned if indicated.

Invasive plant species are often spread by vehicles into disturbed soil along roads or in the roadbed. Higher volumes of traffic makes it more likely species are being transported. Sources of invasive species could be either those growing along the roadside or those from outside the LTBMU arriving on tourist vehicles. The risk factor was weighted toward movement of invasive species from existing infestations. The numbers of invasive species infestations within 100 feet of a road were identified and relative traffic volumes were used to further refine the risk rating for invasive species. For example, a road with only a few vehicles a day and few incidents of invasive species would rank low, but if that same road had high traffic volume, it would rank high. Roads with many incidents of invasive species were always ranked high. Rankings for invasive species were:

- Low: no access to private lands, recreation, or administrative sites, low volume, no sites
- Medium: moderate use where vehicle parking occurs frequently or high use
- High: roads within 100 feet of inventoried sites and high traffic volume public use

Existing botanical species were evaluated for all roads, but only considered in areas where invasive species rankings did not result in a high risk rank for the road. The species considered are listed in Table 7. There was no complete GIS inventory for these species so several GIS layers were used to estimate their presence. Species that influenced risk were indicated by current database layers such as Research Natural Area, threatened and endangered species, fen, riparian vegetation, springs, seeps, and Lake Tahoe shoreline. Roads that are in and near these areas generally impact species. A road with no invasive species that was within a polygon for research natural area, threatened and endangered species, fen, riparian vegetation, springs, seeps, or Lake Tahoe shoreline would also be ranked low or high based on the following:

- Low: roads more than 100 feet from mapped areas
- High: roads intersecting or within 100 feet of habitat
- There was no ranking for moderate risk in this factor



Figure 9. Tahoe Draba (*Draba asterophora var asterophora*)

Table 7. Listing status of special status plants species in the Lake Tahoe Basin (October 2006)

Sensitive Species								
Scientific Name	Common Name		FED List	CA/NV State List	CNPS	TRPA	Potential suitable habitats in Project area	Known to occur in Project area
<i>Arabis rigidissima var demote</i>	Galena Creek rock cress	S	SC		1B.2			
<i>Arabis tiehmii</i>	Tiehm's rock cress	S			1B.3			
<i>Botrychium ascendens</i>	Upswept moonwort	S	SC		2.3			
<i>Botrychium crenulatum</i>	Scalloped moonwort	S	SC		2.2			
<i>Botrychium lineare</i>	Slender moonwort	S			1B.3			
<i>Botrychium lunaria</i>	Common moonwort	S	SC		2.3			
<i>Botrychium minganense</i>	Mingan moonwort	S			2.2			
<i>Botrychium montanum</i>	Western goblin	S			2.1			
<i>Bruchia bolanderi</i>	Bolander's candle moss	S			2.2			
<i>Dendrocollybia racemosa</i>	Branched collybia	S						
<i>Draba asterophora var asterophora</i>	Tahoe draba	S	SC		1B.3	SI		
<i>Draba asterophora var macrocarpa</i>	Cup Lake draba	S			1B.3	SI		
<i>Epilobium howellii</i>	Subalpine fireweed	S			1B.3			
<i>Erigeron miser</i>	Starved daisy	S			1B.3			
<i>Eriogonum umbellatum var. torreyanum</i>	Torrey's or Donner Pass buckwheat	S	SC		1B.2			
<i>Helodium blandowii</i>	Blandow's bog moss	S			2.3			
<i>Hulsea brevifolia</i>	Short-leaved hulsea	S	SC		1B.2			
<i>Lewisia kelloggii ssp. hutchisonii</i>	Kellogg's lewisia	S			3.3			
<i>Lewisia kelloggii ssp. kelloggii</i>	Kellogg's lewisia	S						
<i>Lewisia longipetala</i>	Long-petaled lewisia	S			1B.3	SI		
<i>Meesia triquetra</i>	Three-ranked hump-moss	S	SC		2.2			
<i>Meesia uliginosa</i>	Broad-nerved hump-moss	S			2.2			
<i>Peltigera hydrothyria</i>	Veined water lichen	S						
<i>Rorippa subumbellata</i>	Tahoe yellow cress	S	CE	E / CE	1B.1	SI		
Special Interest								
<i>Arabis rectissima var simulans</i>	Washoe Trail rock cress	LSI						
<i>Meesia longiseta</i>	Meesia moss	LSI						
<i>Myurella julacea</i>	Myurella moss	LSI			2.3			
<i>Orthotrichum praemorsum</i>	Orthotrichum moss	LSI						
<i>Orthotrichum shevockii</i>	Shevrock's moss	LSI			1B.3			
<i>Orthotrichum spjutii</i>	Spjut's bristle-moss	LSI			1B.3			
<i>Pohlia tundra</i>	Tundrae pohlia moss	LSI			2.3			
<i>Sphagnum species</i>	Sphagnum species	LSI						

S = USFS Sensitive Species, Regional Forester's Sensitive Species List, Region 5

LSI = USFS Species of Interest

SI = TRPA Special Interest Species, Regional Plan for the: Goals and Policies (1986) and Code of Ordinances (1987)

State List

California - R = rare T = threatened E = endangered

Nevada - CE = Nevada Critically Endangered

Fed List:

CE = Candidate for Endangered SC = Species of concern

CNPS List

1A = presumed extinct in CA, 1B = Rare or Endangered in CA and elsewhere

2 = Rare or Endangered in CA but more common elsewhere

3 = Plants need more information - Review list

4 = Plants of limited distribution - Watch List

CNPS Threat Code extensions

.1 - Seriously endangered in CA (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 - Fairly endangered in CA (20-80% occurrences threatened)

.3 - Not very endangered in CA (less than 20% of occurrences threatened or no current threats known)

Fishery

Location of roads within or near aquatic habitat directly impact aquatic species, but impacts can be mitigated by road designs which allow aquatic organism passage, reduce or eliminate channelizing, and filter out sediment which could enter the stream. Mitigation measures for roads were not analyzed so that the risk factor for a well-designed road was similar to the risk factor for a poorly designed road in this analysis.

Aquatic risk values of high, medium, and low were assigned based on three factors. The first factor was habitat for Lahontan cutthroat trout, and the second factor was habitat for native non-game fish (tui chub, mountain whitefish, redbreasted sunfish, all suckers, dace, and sculpin). For these two factors, proximity of the road to perennial streams was used. Roads that cross or are within 50 feet of perennial streams are high risk, roads within 50 to 100 feet are moderate risk, and roads over 100 feet away are low risk. The third factor was amphibian species habitat, which was represented by current database layers of fen, wet meadows, moist meadows, perennial streams, springs, seeps, and all lakes except Lake Tahoe. Roads over 100 feet from amphibian habitat were low risk and all roads within 100 feet were high risk. The aggregate rating was the highest risk rank for any one of the three factors. This was considered the most conservative approach and many rankings were similar for all factors.

In addition, it appears that the conservative approach may reasonably predict aquatic organism passage risk and aquatic invasive species risk, but lack of current LTBMU data cannot confirm this. Studies for aquatic organism passage conducted in 2010 and subsequent years will enable the LTBMU to rank this factor using more specific information to update this document in the future. Also, current and future surveys for aquatic invasive species will enable the LTBMU to rank this factor using more specific information for future use in updating this Travel Analysis Process report. More importantly, the studies will inform NEPA decisions for projects involving aquatic organism passage and aquatic invasive species spread due to roads in more detail than is possible through the TAP.

Hydrology

Soil and water interaction in the Lake Tahoe watershed directly impacts the water quality and clarity of Lake Tahoe and its tributaries. The granitic soils on steep slopes are easily eroded and stabilizing vegetation takes many years to establish. Methods evaluated to determine risk rating included using the Water Quality Risk Assessment Protocols (WQRAP) and for selected projects the Water Erosion Prediction Project (WEPP) model runs. Lack of specific information in the GIS data ruled out effective use of these methods. Criteria based on BMP installation and maintenance was considered and determined to be incomplete. Annual hydrology monitoring reports and reconstruction over the past 10 years showed that soil and water interaction risks were being identified, corrected, and monitored effectively. The criteria chosen were a combination of stream crossings and proximity of roads to streams. Roads crossing perennial streams were given a high risk, intermittent streams a moderate risk, and ephemeral streams a

low risk. A factor of length of road within a stream environment zone (SEZ) provided an additional ranking. If the road length in the SEZ was less than ¼-mile long, the rank was low, more than ½-mile long the rank was high, with the remainder being moderate. These criteria could be evaluated with existing GIS coverage and provided a relatively reliable indicator of soil and water interaction from roads into watercourses. The elimination of the BMP criteria provided a more conservative measure of risk to the resources adjacent to a road that was already treated and factored out road maintenance variables.

Land and Special Uses

Roads provide a benefit to the lands and land special uses program by fulfilling legal obligations of the LTBMU for public and private access. Legislation such as Federal Land Policy and Management Act of 1976 and Alaska National Interest Lands Conservation Act provide for use of public lands to provide access to adjacent private lands. The Federal government also has authority to acquire ROW over private lands to provide access to public lands. Usually all of these purposes have roads associated with them.

Three criteria were identified for land and special uses.

- The first was access to private land which assigned a high rank to any road providing primary access to private land and a low rank to any road providing secondary access to private land.
- The second was utility access permits which assigned a high rank to any road providing access to a utility corridor and a low rank to roads without utility access
- The third was ROW through private land providing access to the Forest. A high rank was assigned where federal access existed or was needed and a low rank was assigned where no federal access was needed.

These three criteria were applied to the road system and an aggregate ranking for the road was developed for this category using the highest value for any of the three criteria. Most of the data for this category were not available in the GIS datasets. Various sources of information were used including ownership maps, land rights tabulations, and Road Management Objective Worksheets. There is no authoritative source of this information available without additional research in county records for recorded rights and LTBMU records for unrecorded permit rights. Additional work is in progress that will refine the ranking for this category.

Recreation and Special Uses

Developed recreation sites have been established to accommodate a concentrated amount of visitation; the sites are hardened and improved to allow public access to popular Forest destinations with minimal impact on the resources or the natural setting. The majority of developed recreation sites located on National Forest System lands are operated under a special use permit by designated permittees or concessionaires, who conduct daily operations and maintenance on the facility, with varying responsibilities for the interior roadways. The need for access to Forest recreation areas, trailheads, picnic grounds, and campgrounds, including roads

providing access to areas outside of the LTBMU, was used to develop the criteria. Maps of the recreation locations and road system were used to rank on a three-level scale as follows:

- Low benefit – no access to developed facilities or dispersed recreation areas
- Moderate benefit – access to regularly used dispersed recreation sites and areas where high clearance vehicles are acceptable for access
- High benefit – access to developed recreation areas where access by passenger car is encouraged

An additional criterion was used to incorporate the Recreation Opportunity Spectrum (ROS) criteria. A road was ranked low if not deemed consistent with its ROS classification and high if it was consistent.

Fire

Criteria to rate roads for wildland fire were developed to recognize critical needs for Wildland Urban Interface areas in conjunction with Community Wildfire Protection Plans as well as roads that provide the only access to remote areas. Maintenance level 3 and 4 roads are recognized to provide safe, efficient access when compared to level 1 and 2 roads. In general, spur roads less than ½-mile long are not as valuable for fire access. Parallel roads into an area were ranked based on maintenance level for safety and efficiency. A three-level ranking was completed as follows:

- Low benefit – roads that provide parallel access routes to unpopulated areas or where high clearance vehicles are acceptable for fire suppression
- Moderate benefit – roads providing secondary access to high benefit resource areas or areas that have intermittently occupied structures
- High benefit – access to WUI and CWPP areas. Roads providing the only access to general forest areas. Access roads to fire suppression facilities.

Vegetation and Fuels

The LTBMU has identified areas that can be treated in the Forest Plan and maintains a multi-year plan for vegetation management that is coordinated with all resource areas. Existing roads that will be required when treatments are undertaken can be generally predicted for treatment prescriptions and cannot be predicted for fire suppression. The actual areas treated during any one entry may be less than those designated as treatable and roads are modified to meet those needs by each project. Fuels treatments for compliance with CWPP and WUI standards may occur more frequently than vegetation treatments in general Forest areas because of the different management objectives for each type of project. The benefit of roads to vegetation and fuels was evaluated based on current and projected needs of these activities. Factors for vegetation management and fuels treatment were developed and the results aggregated into a single ranking for this category.

- Vegetation management ranked roads low for areas that were not treatable and high for access to treatable areas

- Fuels treatment ranked roads low in general forest areas, moderate for extended WUI areas, and high in urban core and defense zones of CWPP

Heritage and Tribal Access

There were elements of this factor that were risks and other elements that were benefits. It was decided to develop ranking criteria for both risks and benefits.

Heritage risks

Risk to heritage properties was defined by impacts to historical resources and Traditional Cultural Properties (TCP). Existing surveys to current standard were used where available. Sites likely to be damaged by vehicles or maintenance within the maintenance corridor were classified as impacted. GIS screening criteria included parameters for proximity to roadbed and type of survey available. Both higher numbers of sites and fewer surveys were criteria for increased risk. Risk to TCPs was assigned based on proximity to known uses that could be affected by existence of the road. Risks to sites were evaluated using four categories: 1) undetermined, 2) eligible for listing on the National Register of Historical Places, 3) listed on the National Register of Historical Places, and 4) Traditional Cultural Properties. Resource impacts were considered to be damage by vehicles or maintenance equipment and access that impacted use of a site. Construction activities were analyzed separately for each project so there was no factor ranked here. Sites that are outside the corridor for maintenance are not considered as impacted.

- Specific ranking criteria for the first three categories are described as follows. A risk of low was assigned if no site occurs within 60 feet of the corridor and 75 to 100 percent of the road is surveyed. A risk of moderate was assigned if sites occur within 60 feet of the corridor, surveys are not to standard, or only 50 to 75 percent of the road is surveyed. Risk was considered high if sites were within the road corridor or the road is not surveyed for cultural resources.
- Risk ranking for TCP was low where no site or use is identified, moderate where the road is in the vicinity of a known TCP, and high where Tribes have identified impacts to a TCP.

Heritage benefits

Benefits to heritage properties were assigned based on access needs and physical features of historic value or locations of cultural value. Access for historic properties and for TCP is necessary and is a separate issue from impacts of roads in these areas. The LTBMU has numerous historic sites open to the public that are preserved and interpreted. TCP access is important to the Tribes for their use of these resources. There are also roads that contain physical features of historic value, such as railroad grades, road prisms, and cross drainage structures.

- Benefit ranking for access to historic and TCP sites was low where no identified site or use existed, moderate where there was known use by the Tribe, but not an identified site, and high where the road accessed a historic site, TCP, or traditional use area.

- Benefit ranking for historic physical features was low where there was no feature, moderate where only some elements remained, and high where most or all of the feature was present, such as a historical prism, cross drainage, or retaining walls.

Composite Ranking

Once the individual resources risk rankings and resource benefit rankings were completed, each road had a composite ranking for risk and a composite ranking for benefit which was the sum of the resource rankings. The composite ranking for each road fell between five (all resources ranked one) and twenty-five (all resources ranked five) for both risk and benefit. There is one exception for road 1327 which was assigned a zero value for recreation so the composite benefit ranking is a four.

The composite rankings for risk and benefit were assigned to categories of low, moderate, and high based on their composite score. Histograms display these results in Table 4, Appendix A. Since the five resource areas were ranked using a 1, 3, or 5, all numerical composite rankings should be odd numbers. This is true except for a few select cases where the heritage resource score is an even number and one instance where no value could be assigned by recreation.

Category composite scores are as follows:

- Low – 5, 7, and 9,
- Moderate – 11, 13, 15, and 17,
- High – 19, 21, 23, and 25.

The smaller scoring range of 5 to 9 for the low category was intentional to identify roads with the greatest risk.

Previous analysis for the LTBMU ATM identified roads for resource risk versus benefit and as a result the highest risk, lowest benefit roads were removed. Therefore, the current relative risk for the road system is less than prior to the ATM program. The existing road system contributes less resource risk than the road system in 1998.

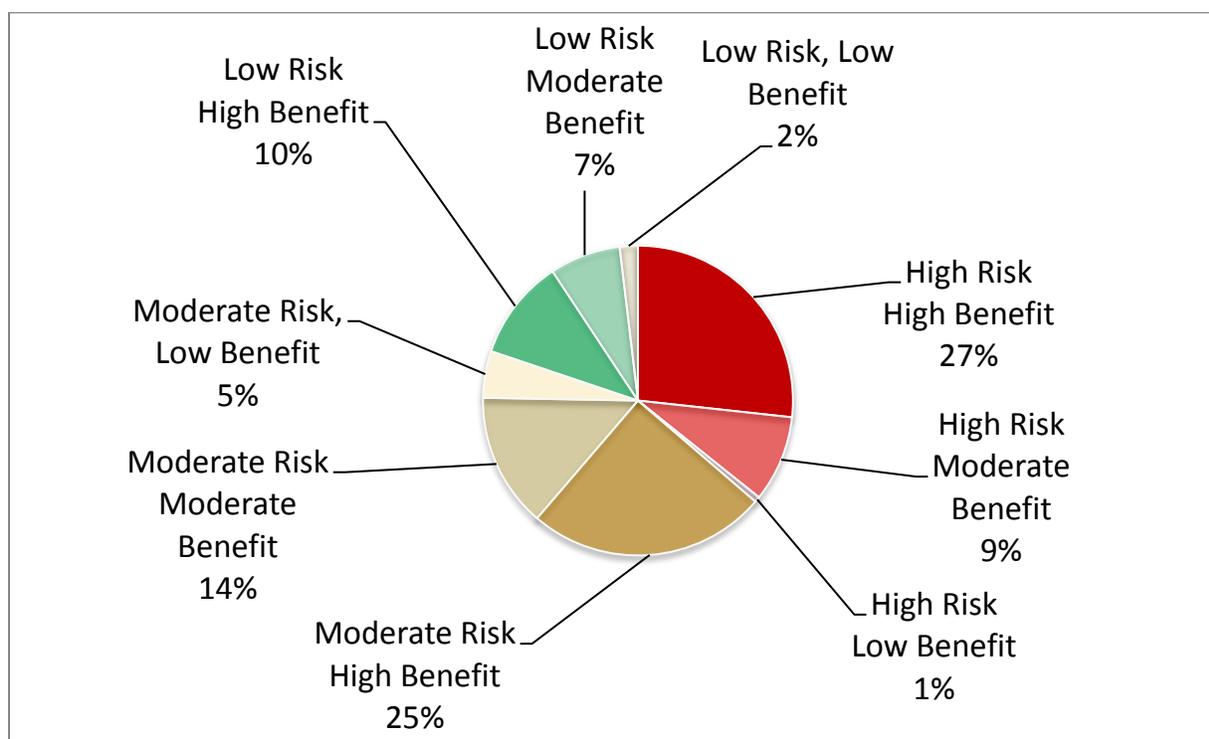
Ranking Matrix

Together, the risk and benefit rankings placed each road into one of nine categories that describe the final ranking status for each road. Table 8 displays the data for each of the nine categories. Figure 10 displays the ranking category by miles in a pie chart.

Table 8. Ranking Category Matrix – Number and Length of Roads by Category

	Low Benefit		Moderate Benefit		High Benefit	
	Number	Miles	Number	Miles	Number	Miles
High Risk	1	1.50	13	23.20	28	68.81
Moderate Risk	8	12.57	40	36.06	92	64.27
Low Risk	7	4.87	35	19.04	82	27.15

Figure 10. Percent of Miles in each Ranking Category



The miles of roads in the low benefit column (8 percent) shows the effectiveness of implementing the ATM program which identified resource issues caused by roads and reduced impacts by decommissioning unneeded roads in sensitive areas. The miles of roads in the high risk row (37 percent) and moderate risk row (44 percent) shows that the LTBMU must be proactive in construction and maintenance of Best Management Practices to control resource impacts of roads that are required to fulfill its mission. The miles of roads in the low risk category (19 percent) shows that only a minority of the roads are in areas where resource impacts could be minimal.

Details of the resource ranking for each road are contained in Appendix A. The data is sorted in several ways. Table 9 provides a description of the summary tables in Appendix A.

Table 9. Description of Summary Tables in Appendix A

Table	Title	Description
1	Risk and Benefit Assessment Summary by Road Number	Lists system roads by number with their individual resource rankings and the summary ranking that places them into one of nine road management categories.
2	Risk and Benefit Assessment Summary by Category	Groups the roads by road management category and displays individual resource rankings for each road
3	Minimum Road System Recommendations	Lists the recommended minimum road system and lists the roads recommended to be removed from the road system subject to future study and NEPA decision. Both lists are by road number
4	Histograms	Displays the histograms for the road management categories.
5	Roads Removed from Analysis	Displays roads that were removed from the analysis because they are not Forest Service jurisdiction or had been decommissioned.

Chapter 5 – Opportunities and Priorities

This chapter will focus on describing opportunities to improve the transportation system on the LTBMU. The issues identified in Chapter 3 will be addressed and general recommendations made from observations of the study. The roads have all been assigned risk and benefit rankings that place them in one of nine road management categories. The road management categories can be used to set priorities for implementing the minimum road system.

Minimum Road System

The recommended minimum road system is listed in Appendix A, Table 3 and shown in Appendix E, Map 3. The table and map also display the roads that could be removed from the system after further study, public involvement, and NEPA decisions verify these recommendations are valid.

The minimum road system needed for safe and efficient travel and for administration, utilization, and protection of the National Forest System land within the LTBMU strikes a balance between the benefits of public access and the resource impacts. Consideration for public safety, affordability, and management efficiency must also be weighed with ecosystem values.

The minimum road system also addresses jurisdiction issues. By working with State, county, and local road managers (including homeowners groups with road authority), appropriate jurisdiction can be identified. In some circumstances, agreements for sharing road maintenance costs among multiple users should be negotiated. In cases where reciprocal easements exist, it is important that jurisdiction be clearly identified and multiple parties may hold jurisdiction for sections of the road.

The National Forest transportation system on the LTBMU was evaluated to determine opportunities to reduce the miles of road and therefore the cost of maintenance of the roads. Even though the LTBMU has been able to fund road improvements and BMP work on the existing road system, there is no assurance that adequate funds will be available for future years. The tables in Appendix A list the resource risk and benefit rankings for each road. Appendix B discusses economics of the road system and discusses opportunities for reduction of the road system costs. The opportunities to reduce cost include:

- roads to be evaluated for removal from the system
- roads that serve a required purpose and will remain part of the road system
- partnerships for maintenance costs
- reduction in maintenance levels

Strategic Framework

The following two sections discuss a strategic framework to manage the road system based on the scientific information, issues identified, analysis in the TAP, and understanding of access needs. This strategic framework is presented as a group of actions that respond to the issues identified in the TAP process and a set of recommendations for future management actions. As a result of prior public involvement, implementation of BMPs, and emphasis on the active management of the current road system has resulted in low deferred maintenance and very few miles of unauthorized routes.

Funding availability influences the road system that can be supported by LTBMU. Maintenance schedules and associated costs are developed and reviewed annually to make decisions on maintenance priorities. Roads that cannot be maintained to standard should be considered for removal from the system or action taken to maintain the road at a lower cost to serve required purposes.

Some roads on the system may be better managed by other organizations, including roads that provide access to private residences and property of other agencies. Discussions with the primary beneficiary of the road to either transfer all road jurisdiction and maintenance or a portion of the maintenance responsibility could either remove the road from the system or reduce the funding necessary. This action would benefit the LTBMU on roads that are needed primarily by other organizations and used incidentally by LTBMU. An example is a road to a subdivision that is also needed for fuels treatment, but not designated as open for motorized access once it leaves the subdivision.

Actions that Respond to the Issues

Unauthorized Use Impacts of user defined, closed, and decommissioned roads

Authorized motorized vehicle travel is designated as shown on the MVUM per 36 CFR 212 Subpart B effective in 2008, and revised annually or as needed. Motorized vehicle travel has been designated since 1976 under Forest Orders per 36 CFR 261 Subpart B. The purpose of this document is to analyze existing system roads and provide recommendations for a minimum road system. This TAP does not further analyze or include routes that are not a part of the road system. Addition of roads to the system will be done through project analysis using specific needs to consider additional roads necessary for management of the LTBMU.

Available resources for maintenance of system roads

The economic analysis in Appendix B shows that LTBMU has adequate funds to continue operation of the current road system. The LTBMU road system was not entirely constructed by the Forest Service due to the large amounts of private land that has been acquired. Therefore, an extensive amount of decommissioning has been accomplished over the past 12 years. Reconstruction of roads is also a large portion of the program since the original construction of

roads on acquired land was generally not to Forest Service standards and did not include Best Management Practices. The funds are used for decommissioning, reconstruction, and maintenance activities. The LTBMU uses appropriated funds for the majority of road maintenance activities. Other funding is available from Southern Nevada Public Lands Management Act (SNPLMA) to assist in acquiring access by either purchasing ROW or land as well. In addition, SNPLMA authority can fund road decommissioning, reconstruction, construction or maintenance activities.



Figure 11. Decommissioned road recontoured to the hillside.

The LTBMU has access to Force Account maintenance crews and equipment that are shared among several forests. These crews are used effectively for projects that require more complex, non-standard work. The crews understand Forest Service requirements and offer flexibility in changing conditions involving critical resource protection requirements.

Private contractors provide valuable services for use on roads that require routine maintenance, well-defined specifications with little risk for major changes, and standard construction practices. Contractors provide cost effective means to change program scale as maintenance budgets change or large construction projects are funded. They also provide crews with skills for bridges, pavement, and other specialized work.

The backlog of work is being reduced and the LTBMU is beginning to have the ability to inventory and maintain 20 percent of its roads annually. Acquisition of land and roads is slowing because the amount of land available is declining. Application of BMPs is slowing the need for reconstruction. Decommissioning is still a high priority since some of the land

previously acquired had been platted for subdivisions and road systems were developed to serve the planned subdivision and not forest access, however since 1998 approximately 106 miles of roads were decommissioned. Opportunities for future decommissioning are relatively small.

The next challenge for LTBMU is to improve cooperation with local road management jurisdictions and permittees. Effective use of Road Maintenance Agreements with counties, municipalities, and possibly other local jurisdictions will assist in transferring jurisdiction of some roads to other organizations. The LTBMU will be able to assist with funding of maintenance of those roads to the extent the roads are used for Forest purposes in accordance with commensurate use policies. In addition, LTBMU will be working with local partners to identify cost share partners for roads that remain the jurisdiction of LTBMU, but are extensively used by the public or permittees. There are already a number of road maintenance agreements with permittees.

Developing relationships with local authorities, homeowners, permittees, and other partners to develop and maintain an efficient, cost effective road system within the Lake Tahoe area will continue to be a priority for the LTBMU.

Right-of-Way for access to the Forest system lands

Management of ROW and special use permits requires continuous attention to ensure all use of federal land is properly documented and monitored and trespass is resolved. The LTBMU is completing an update of all road ROW acquisitions to determine where there are deficiencies.

The LTBMU has an aggressive land acquisition program and has made significant progress in acquiring both undeveloped and semi-developed land. As these lands are acquired, road systems are analyzed to determine future needs. ROW is acquired for roads that are added to the road system. Roads unneeded for Forest purposes are either decommissioned or transferred to other jurisdictions if a critical need such as utility access exists.

Special Uses Permits to occupy Forest system land

Roads associated with special use permits are not all required for the road system serving the LTBMU. The roads that are not part of the road system but are necessary for permits should be monitored as part of the permits and roads engineers involved to assist in making recommendations on design or maintenance. Under existing Special Use Permits for which profit is generated, the use of Granger-Thye(GT) funds for road maintenance or reconstruction is appropriate. For Special Use Permits that do not generate profit such as a utility, General Improvement District (GID) or Recreation Tract, a road maintenance agreement is appropriate where the share of road maintenance costs shall be commensurate with road use. Other specialists may also need to be involved in monitoring where impacts to resources could occur.

Recreation access

Roads serving recreation destinations were given high priority for benefits in the TAP. Where these roads also impact resources, mitigation and monitoring is required to deal with those impacts. Road relocation to avoid impacts should also be considered.

The recreation group administers permits for both public and private facilities. Public facilities such as campgrounds, historic sites, and resorts are permitted to operators who are corporations, non-profit organizations, and tribes. Private facilities are Recreation Tracts with cabins owned by individuals and on National Forest System lands under lease. All of these permitted uses require road access. Specific provisions addressing resource mitigation should be included in the permits. Road use by permittees should include provisions for cost sharing for maintenance.

Vegetation, Fuels, Fire Access

Roads to access the general forest area for vegetation treatment, fuels, and wildland fire suppression are essential in Wildland Urban Interface areas and other locations which are determined in the Forest Plan for these purposes. The portion of the road system serving these areas is a combination of roads open and closed to public motor vehicle access. Many of these roads are short spurs that are not suitable for public traffic and may be level 1 roads closed to all traffic when not in use depending on access frequency and other access needs. The portion of these roads that could be used by the public may be alternately opened or closed to public motor vehicle use depending on resource issues, maintenance needs, or other factors. Administrative use may occur for management and monitoring. However, maintenance level 1 roads are closed to administrative use with the exception of emergency access.

Access to forest product gathering areas and Traditional Cultural Properties

The Washoe Tribe used the Lake Tahoe area as part of its land base in a hunter-gatherer society. Religious sites and food sources are located around the lake. The continued access and use of these sites is valued by the Tribe to teach traditions to their young members. Tribal access is supported by LTBMU.

Environmental Impacts of Roads

The TAP assembled existing data for each resource area to generate a resource risk for each road. Those risks were assembled into an aggregate risk ranking used to identify the roads with the highest potential to impact resources. During NEPA analysis for projects, the TAP individual resource risk ranking and aggregate ranking provide information that helps focus the analysis.

Roads impact the environment including wildlife, plants, fish, water and soil, and historical sites in many ways. Reduction of impacts or mitigation is accomplished during planning, design, and maintenance of the road. Effective techniques to control impacts are eliminating routes, changing location, or implementation of Best Management Practices. The LTBMU has a very

proactive approach to planning and managing the road system to minimize environmental impacts (Figure 12). Monitoring is performed to evaluate the effectiveness of road management and adjustments are made to increase effectiveness.



Figure 12. Rock-lined ditch controls erosion along a steep section of asphalt roadway.

Recommendations

Continue Public Involvement

The LTBMU has an active public involvement process for NEPA actions which has achieved results. An excellent example is the 1998 ATM plan that resulted in an organized plan for decommissioning and BMP improvements to enhance the road system. The ATM plan is nearly completed and individual project planning has continued to build on the ATM success.

Continued involvement of the public will assure information is shared with interested individuals, additional ideas are gathered, and decisions are well informed. Refer to Appendix C for additional discussion of public involvement processes on the LTBMU.

Develop and Implement Broad Scale Road Goals

Much of the success of the LTBMU road management is attributable to the vision provided by the ATM in 1998. As that vision is realized, the LTBMU should identify the next set of long-term goals for the road system. Partnerships and public involvement will be important in building that plan. The LTBMU will continue to implement the ATM strategy to reduce road impacts and will make decisions that increase the efficiency of the road system.

Build Partnerships

The LTBMU will continue cooperation with other road authorities at municipal, county, State and federal levels:

- Partnership with transportation entities to leverage funds from Forest Highway programs
- Cooperate with the local municipal transportation district (Tahoe Transportation District) to partnership and leverage funds
- Implement Federal Highway Administration national and State agreements to build partnerships and working relationships that can be used to resolve resource issues associated with highways
- Initiate road agreements with Schedule A lists with public road authorities to identify roads of common interest and strategies to cooperate in planning, construction, and maintenance. These road agreements are authorized by Federal Land Policy Management Act (FLPMA) and guidance is provided in FSM 7732.23 and FSH 1509.11)

The LTBMU will identify and cooperate with parties with direct interest in road maintenance such as:

- Landowners who need Special Use Permits for road access to private land
- Recreation Residence Permittees with interests in use of system roads
- Homeowners associations or General Improvement Districts which use system roads to access private land

Resolve Jurisdictional Issues

The LTBMU will investigate jurisdictional issues and work to resolve them. Some roads may not be under the appropriate jurisdiction. Forest roads may not be appropriate jurisdiction because they serve primarily private landowners. Some roads may have been local jurisdiction, but now are primarily access to the Forest after land acquisitions. While assessing jurisdiction, the LTBMU will discuss the interests of each entity requiring the road and determine appropriate cost share measures for maintenance and improvements. If jurisdiction changes to a local road authority, it is still possible for the LTBMU to either fund portions of work or support funding of work through various programs for BMP and other improvements.

Special Use Permits

The LTBMU will use special use permits or other agreements to cooperatively maintain roads with Homeowners Associations and General Improvement Districts which use system roads or where the LTBMU uses private roads. This cooperation reduces road miles by allowing use of Forest roads by these organizations or allowing access to the Forest using roads of these organizations instead of maintaining separate roads. These permits are authorized by FLPMA and guidance is provided in FSM 7732.25 and 7731.31.

The LTBMU will continue to issue commercial use permits to authorize commercial haul on system roads. The permit should collect appropriate fees for maintenance. Road Use Permits are authorized by FLPMA and guidance is provided in FSM 7731.17.

Right-of-Way Acquisition

The LTBMU will continue ROW acquisition to obtain legal access to all LTBMU lands. In some cases, ROW is obtained by purchase of land. ROW for access to the National Forest System Land is obtained, documented, and tracked with methodology developed to keep records current.

Partnerships can assist in ROW acquisition. For instance, Old Glenbrook Highway (1451) was abandoned by the State and is still used by the Forest Service periodically by verbal agreement with the Glenbrook Homeowners Association. It may be possible to develop a long-term access with the homeowners, but there was a missed opportunity to obtain permanent rights by working with the State and the homeowners association prior to abandonment of the State's ROW.

Monitoring

Reviewing roads on a priority basis will determine effective mitigation measures such as:

- Decommissioning
- Closure, with retention for future use (level 1)
- Relocation and/or reconstruction with BMP emphasis
- Seasonal closures
- Other strategies to mitigate risks

A suggested priority would be all roads with high composite risk first, then all roads with low benefit second. These two categories include about 13 percent of the road system. Some of these roads have already been evaluated and BMP treatments completed which will reduce the work on this task. Roads with high risk for hydrology and fishery could be the third priority because those risks impact water quality directly. Other roads with rankings of medium and low would follow.

Annual Update of MVUM

The LTBMU has established a MVUM to identify roads that are open to public motorized use. These roads may pass through exclusive use areas such as recreation permittee areas, but provide access to general forest areas or specific recreation developments open to the public. The remaining roads in the system are closed to public motorized use. On some of these roads, public use is accepted such as the access roads to recreation residence permits which provide access only to these permit areas. These roads may not have gates and public access has not been specifically restricted. Other roads that are closed to the public are gated such as the access to the Tallac Historic site administrative parking. These roads are managed by the permittee for the operation of the site.

Enforcement and Education

The LTBMU will continue to emphasize education of road users and enforcement of regulations prohibiting use of motorized vehicles off the road system designated on the MVUM.

Environmental impacts from unauthorized, user-defined roads are occurring in spite of the efforts of the past 25 years to control motorized use.

Control Invasive Plants

The LTBMU will continue implementation of projects to control invasive species of plants as they are detected within road corridors and work with their partners to treat invasive species along other road systems. These are transported easily along the roads and spread to new areas.

The predominant threat of weed spreading occurs as a result of construction or maintenance activities. As a result the LTBMU follows Forest Service policies and use of BMPs for equipment cleaning and weed free materials.

Setting Priorities

Table 10 shows a priority matrix of the road management categories and number of roads in each category. This information can be used to prioritize road projects. The road matrix also shows some recommendations for future road maintenance and transportation management decisions. These are general recommendations. Project-level analysis teams will analyze the roads in site-specific NEPA projects. The project analysis would include detailed data gathering to support the resource risks and benefits of the road, site specific conditions that require mitigation, and other information that can only be obtained by field investigation and public scoping.

Alternative methods to address issues can then be developed and the best alternative for access, resource protection, economics, and other factors may be presented to the line officer for decision and subsequent implementation.

Table 10. Benefit/Risk Analysis Priority Matrix - Road Management Categories

		Benefits			
Scores		High	Moderate	Low	Totals
Risks	High	Category 1 Mitigate, Maintain 28 Roads 68.81 Miles	Category 2 Mitigate, Maintain 13 Roads 23.20 Miles	Category 3 Mitigate, Restrict, Close, Decommission 1 Road 1.50 Miles	93.51 Miles
	Moderate	Category 4 Mitigate, Maintain 92 Roads 64.27 Miles	Category 5 Mitigate, Maintain 40 Roads 36.06 Miles	Category 6 Mitigate, Restrict 8 Roads 12.57 Miles	112.90 Miles
	Low	Category 7 Maintain 82 Roads 27.15 Miles	Category 8 Maintain 35 Roads 19.04 Miles	Category 9 Evaluate Need 7 Roads 4.87 Miles	51.06 Miles
	Totals	160.23 Miles	78.30 Miles	18.94 Miles	257.47 Miles

Roads in the high risk category represent those roads causing the most resource impacts. The benefit rating of a road indicates the access value to resource managers, the recreating public, private access, or other purpose. Even roads with low benefit ratings may be required to remain in use because of access for a specific purpose that cannot be terminated.

Within each road management category, there are possible management alternatives.

Descriptions of possible actions for four of the nine categories are as follows:

- Category 7 High Benefit, Low Risk – The ideal situation
 - Maintain to standard by focusing road maintenance funds on these roads.
 - Review for potential resource concerns.
 - These roads form an important, lower cost part of the minimum road system.
- Category 1 High Benefit, High Risk – Priorities for investment
 - These roads are a high priority for project analysis to identify opportunities to reduce the high risk of the road.
 - Investment in the road using capital improvement, deferred maintenance, cooperator cost share, or other funds is likely to be warranted.
 - Increased maintenance expenditures for these roads may be needed to keep resource risks from increasing.
- Category 3 Low Benefit, High Risk- Priorities for risk analysis
 - These roads are high priority for project scale analysis to identify opportunities to reduce risks or eliminate the benefits the road provides.
 - The roads have potential for reduced maintenance level.
 - Decommissioning is a possibility if benefits can be eliminated.
- Category 9 Low Benefit, Low Risk
 - These roads are lowest priority for expending annual road maintenance funds.
 - The roads have potential for decommissioning or reducing maintenance level.
 - Consider these for conversion to a trail, fire break, or linear wildlife opening.
 - Carefully review documents (RMOs, easements, Private access and Utility access) for specific access needs

The analysis method tends to skew the results to the high rankings for both risk and benefit. The longer roads are especially affected because they accumulate ranking factors that could be assigned to several small sections of the road, but the cumulative result places the entire road into a high or moderate category even though the bulk of the road would be a low ranking. The longer roads also tend to be more heavily travelled and warrant more detailed analysis than can be provided here. Therefore, more detailed project level analysis is necessary to determine the areas of the road that resulted in the ranking and methods to deal with those areas. There may be sections of roads that can be reconstructed or realigned to eliminate risk factors and result in the road having a low risk, but retaining its full benefits.

Chapter 6 Summary

The TAP provided an overview of issues related to the existing road system. Scientific information was compiled from GIS, publications, and specialist experience to rank each road for risk and benefit to resources and the management of the LTBMU programs. The information was analyzed to determine if there were roads that were unneeded in a minimum road system for LTBMU and a strategic framework was suggested to manage the road system and work with partners to fund access needs for the LTBMU and its neighbors. The scientific information helps with scoping of future actions to address environmental actions for access needs. Further public input and NEPA analysis will be necessary to implement recommendations from this report.

The TAP found that the LTBMU road system is very close to the minimum road system that can be achieved. Only ten roads totaling 10 miles of the 247 miles of system roads were recommended to be studied for future removal from the system using the NEPA process.

The implementation of the ATM strategy since 1998 has been very effective in decommissioning unnecessary roads as well as constructing BMP improvements to necessary roads and providing access for both the LTBMU and other right holders. Roads and access rights obtained during land acquisition projects are evaluated and retained as part of the road system only where necessary. Land acquisitions have also improved access and eliminated duplicate routes.

The funding has been available to achieve the ATM goals. However, future funding needs should be projected and sources of funding diversified if possible. More coordination with road users and potential cost share opportunities would be advantageous in the event of future funding shortfalls. Development of partnerships to share road maintenance will be advantageous to all users.

Priorities can be developed based on the ranking of each road by risk and benefit and incorporating other information from road logs, RMOs and monitoring reports. The scientific information developed for the TAP analysis can be used to inform the NEPA process and assist in developing necessary actions.

The goals of the ATM have nearly been realized and the LTBMU has benefitted from this long range plan to manage the road system. The next long range planning effort including public involvement and partnerships will inform managers to set goals for the future road system at Lake Tahoe.

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Appendix A

Existing System Roads Risk and Benefit Assessment Summary Tables

- Table 1. Risk and Benefit Assessment Summary by Road
- Table 2. Risk and Benefit Assessment Summary by Category
- Table 3. Minimum Road System Recommendations
- Table 4. Ranking Histograms
- Table 5. Roads Removed from Analysis
- Table 6. Symbol Definitions

Lake Tahoe Basin Management Unit

Travel Analysis Process

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APPENDIX A TABLE 1 - RISK AND BENEFIT ASSESSMENT SUMMARY BY ROAD

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments 1/		
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking	
																										R
03	Barker Pass Road	F	7.14	H	-	-	F	4	Y	H	H	5	5	5	5	3	23	H	5	5	5	5	1	21	H	PROW, utilities
1102	Echo Lakes Parallel	F	0.44	-	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	3	3	5	1	17	M	RecRes, Utility
1103	Echo Summit South	F	0.35	-	-	-	F	3	Y	L	H	1	1	1	1	3	7	L	5	3	5	5	5	23	H	Utility, AgmntG, Historical
1104	Echo Summit North	F	0.75	-	-	-	F	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	Utility, AgmntG
1104A	Echo Summit North A Spur	F	0.06	-	-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW
1104B	Echo Summit North B Spur	F	0.10	-	-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW
1105	Echo Lakes Road	F	1.20	-	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, AgmntG, Eldorado CO plow
1105A	Echo Lakes Road A Spur	F	0.24	-	-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1105B	Echo Lakes Road B Spur	F	0.21	-	-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1105C	Berkeley Camp	F	0.15	-	-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1105D	Echo Lakes Road D Spur	F	0.12	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, AgmntG
1106	Johnson Pass Road	F	1.34	-	-	Y	S/F	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	LS, RecRes, AgmntG wCA Hwy Bypass
1106A	Johnson Pass Road A Spur	F	0.15	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, AgmntG
1106B	Snow Park at Echo Summit	F	0.20	-	-	-	F	3	Y	L	H	1	3	1	1	1	7	L	5	5	3	5	1	19	H	Snow Park Trailhead
1107	Old Meyers Grade	F	1.51	-	-	Y	S	3	Y	M	H	1	5	5	3	3	17	M	5	1	3	5	5	19	H	LS, SUP-E, Utility, AgmntG, Historical
1110	Hawley Grade Access Road	F	0.30	A	-	-	P	3	Y	H	H	5	5	5	3	5	23	H	5	5	5	5	5	25	H	AgmntG, RecRes, Utility, Historical
1111	Bridge Tract Road	F	0.24	A	-	-	P	3	Y	H	H	5	5	5	1	3	19	H	5	5	5	5	5	25	H	AgmntG, RecRes, Utility, Historical
1112	Pack Station Road	F	0.11	A	-	-	F	3	Y	M	H	1	5	5	1	3	15	M	5	3	5	5	5	23	H	Historical, AgmntNG
11N13	Grass Lake Road	F	1.50	-	-	-	F	1	Y	H	L	1	3	5	5	5	19	H	1	1	1	5	1	9	L	closed
11N88	Grass Lake Creek Access	F	0.25	-	-	Y	-	F	1	N	M	1	1	5	5	3	15	M	1	1	1	5	5	13	M	closed, Tahoe Rim Trail, historical
1201	Fountain Place Road	F	4.33	H	-	-	F	3	Y	H	M	3	5	5	5	3	21	H	5	RUCP, Utility, historical	5	5	5	25	H	PROW, RUCP, Utility, historical
1203	Stanford Hill Tract	F	0.20	-	-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	RecRes, AgmntG, historical
1204	Old Meyers Landfill	F	0.82	-	-	-	F	3	Y	L	M	1	3	1	1	3	9	L	5	1	3	5	3	17	M	LS, Utility, FROWN, AgmntG
1205	Stanford Hill	F	0.29	-	-	-	P	3	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes
1205A	Stanford Hill A Spur	F	0.11	-	-	-	P	4	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes
1206	Meyers Administrative Site	F	0.14	-	-	-	F	4	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site
1206A	Meyers Admin Loop	F	0.07	-	-	-	F	3	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site
1207	Rainbow Tract	F	0.95	A	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	SUP, RecRes Mtce, AgmntG
1207A	Rainbow Tract A Spur	F	0.10	-	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG
1207B	Rainbow Tract B Spur	F	0.28	-	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG
1207C	Rainbow Tract C Spur	F	0.15	-	-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, AgmntG
1209	Pope Beach	F	1.10	H	-	-	F	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation, Utility
1212	Fredericks Road	F	0.23	H	-	-	F	3	Y	H	H	5	5	5	3	3	21	H	5	5	5	5	1	21	H	Recreation, SUP
1213	Old Luther Pass Highway	F	0.98	H	-	-	F	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	Utility, AgmntG, Historical
1213A	Big Meadow Trailhead	F	0.20	-	-	-	F	3	Y	L	M	1	1	1	1	1	5	L	1	5	5	5	1	17	M	Trailhead
1214	Angora Ridge Road	F	2.99	H	-	-	P	3	Y	H	H	5	3	5	3	3	19	H	5	5	5	5	5	25	H	Rec lookout, SUP-E, RecRes, AgmntNG
1215	Stanford Camp	F	0.56	-	-	Y	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H	LS, FROWE, RecRes, AgmntG
1216	Glen Alpine Trailhead	F	1.78	-	-	-	P	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	FROWN, PROWE, RecRes, utility, historical
1216A	Alpine Falls Tract	F	0.10	-	-	-	P	2	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	RecRes, utility, PROW, WR, historical
1226	Pope Marsh Pump Station	F	0.25	-	-	-	P	1	Y	M	M	1	3	5	1	1	11	M	5	1	5	5	1	17	M	Utility, closed
12N01A	Saxon Creek Road	F	2.20	A	-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	5	5	5	1	17	M	Dispersed Recreation Access
12N01D	Hellhole	F	1.95	A	-	-	F	2	Y	M	M	1	5	5	3	3	17	M	1	3	5	5	1	11	M	Dispersed Recreation Access
12N02	STPUD Storm Drain Access	F	0.60	-	-	-	P	2	Y	L	M	1	1	1	1	1	5	L	5	1	5	5	1	17	M	LS, Utility access needed
12N08	Powerline Road	F	2.65	A	-	-	F	2	Y	H	H	5	3	5	5	3	21	H	5	5	5	5	3	23	H	LS, FROWN, partial Utility access
12N14A	Angora Resort Service Road	F	0.60	-	-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, RecRes
12N15	Trout Creek Slope	F	1.73	-	-	-	P	2	Y	M	M	3	1	1	3	3	11	M	5	1	5	5	1	17	M	Utility, closed
12N16	Glen Alpine Springs	F	1.79	-	-	-	F	2	Y	H	H	3	5	5	3	5	21	H	5	5	5	5	5	25	H	LS, RecRes, Utility, PROWE, FROWE, Historical
12N16A	Fish Hatchery Tract	F	0.18	-	-	-	P	2	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, Utility, PROW, FROW
12N17	Saxon Tie Road	F	0.60	A	-	-	F	2	Y	L	H	1	1	3	1	3	1	5	L	5	5	5	1	21	H	Utility
12N18	Spray Road	F	1.43	-	-	-	F	2	Y	M	H	1	3	1	3	3	11	M	5	1	5	5	5	21	H	Utility

APPENDIX A TABLE 1 - RISK AND BENEFIT ASSESSMENT SUMMARY BY ROAD

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING					Comments 1/			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels		Heritage and Tribal Access	Overall Benefit Total	Overall Benefit Ranking
12N19	Tahoe Mountain Road	F	1.90	-	-	F	2	Y	M	M	1	3	1	3	3	11	M	5	1	3	5	1	15	M	Utility
12N19A	Tahoe Mtn Water Tank Road	F	0.25	-	-	P	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility
12N20	Osgood Road	F	2.31	-	-	F	1	Y	M	M	3	1	5	5	1	15	M	5	1	5	5	1	17	M	Maintenance Level Error?
12N20C	Osgood Road C Spur	F	0.20	-	-	F	2	Y	M	M	3	3	5	1	1	13	M	5	1	5	5	1	17	M	Maintenance Level Error?
12N21	High Meadows Road	F	3.21	A	-	F	2	Y	H	H	5	3	5	5	1	19	H	5	5	5	5	1	21	H	FROW, PROW, Utility, AgmntG
12N21A	High Meadows Ridge Road	F	1.50	-	-	F	2	Y	H	M	5	3	5	5	1	19	H	1	1	3	5	1	11	M	LS, Forest Service ownership
12N21B	High Meadows East Road	F	0.70	-	-	F	2	Y	M	M	1	3	5	5	1	15	M	1	1	3	5	1	11	M	
12N21C	ROW - powerline access	F	2.98	-	-	P	1	Y	M	L	1	5	5	5	1	17	M	5	1	1	1	1	9	L	LS, ROW powerline
12N23	Pyramid Circle Spur	P	0.46	-	-	P	2	Y	M	M	1	1	5	5	5	17	M	1	1	3	5	1	11	M	Utility
12N24	Quartz Creek Extension	F	0.38	Y	-	F	1	N	M	M	1	3	1	3	5	13	M	1	1	5	5	5	17	M	closed, Historical
12N27	Tahoe Mountain Meadows	F	1.63	-	-	F	1	N	M	M	1	3	5	3	2	14	M	1	1	5	5	1	13	M	closed
12N28	Sand Pit Access Road	F	0.30	A	-	F	2	Y	L	M	1	1	1	3	1	7	L	1	5	3	5	1	15	M	Trailhead
12N28A	Sand Pit OHV Area	F	0.11	A	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	Trailhead
12N30	Sawmill Pond Parking Area	F	0.17	A	-	F	3	Y	L	M	1	3	1	1	1	7	L	1	5	5	5	1	17	M	Trailhead
12N30A	Twin Peaks Road	F	1.42	A	-	F	2	Y	L	M	1	3	1	3	1	9	L	1	5	3	5	1	15	M	4X4 Recreation road
12N30B	Twin Peaks Rock Climb	F	0.35	A	-	F	2	Y	L	M	1	3	1	1	1	7	L	1	5	1	5	1	13	M	4X4 Challenge Route
12N30C	Twin Peaks Lower Lookout	F	0.48	A	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	1	5	1	13	M	4X4 Recreation road
12N30D	Twin Peaks Loop Road	F	0.10	A	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	4X4 Recreation road
12N31	High School Road	F	0.39	Y	-	F	2	N	M	L	1	3	5	3	2	14	M	1	1	1	5	1	9	L	No RMO available
12N40	Roundabout Road	F	5.13	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Comm site, Ski Area Permit, FROWN, FROWE, PROWE
12N40A	West Roundabout Road	F	0.62	-	Y	P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	5	1	21	H	LS, Heavenly Ski Area Permit, FROWN, PROWN
12N40B	A/C Cache Road	F	0.08	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Heavenly Ski Area Permit
12N40C	Water Quality Road	F	0.44	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40D	Swing Road	F	0.46	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40E	Roundabout Road E Spur	F	0.21	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40F	Roundabout Road F Spur	F	0.15	-	-	P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41	Grove Shop Road	F	0.50	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41A	677 Road	F	0.15	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41B	Top of the Tram Road	F	0.17	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
1301	Fallen Leaf Campground	F	1.35	H	-	P	4	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	1	21	H	Recreation, Utility
1301A	Fallen Leaf CG Spur A	F	0.16	H	-	P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301B	Fallen Leaf CG Spur B	F	0.25	H	-	P	4	Y	M	H	1	5	1	3	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301C	Fallen Leaf CG Spur C	F	0.30	H	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301D	Fallen Leaf CG Spur D	F	0.30	H	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301F	Fallen Leaf CG Spur F	F	0.47	H	-	P	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301G	Fallen Leaf CG Spur G	F	0.30	H	-	P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301H	Fallen Leaf CG Spur H	F	0.11	H	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1302	Tallac Historic Site	F	0.45	H	-	F	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Historical, AgmntNG, Utility
1303	Baldwin Administrative Site	F	0.11	-	-	F	4	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1303F	Baldwin Administrative Spur	F	0.10	-	-	F	3	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1304	Cathedral Road	F	2.75	H	-	F	3	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	3	23	H	LS, SUP-E, Utility, RecRes, PROWN, FROWN, Historical
1304A	Taylor Creek Parking Lot	F	0.25	-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	1	21	H	Trailhead, Utility
1304B	Fallen Leaf Dam Access	F	0.17	-	-	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility
1304C	Old Mill Road	F	0.27	-	-	F	3	Y	L	H	1	3	1	1	3	9	L	5	3	3	5	3	19	H	Utility, closed, Historical
1304D	Gauge Road	F	0.17	H	-	P	3	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	LS, RecRes, Utility, SUP-E, PROWN, FROWN
1305	Baldwin Beach	F	0.90	H	-	F	4	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	Recreation, Utility
1305A	Baldwin Beach Spur	F	0.05	H	-	F	4	Y	M	H	3	5	5	5	1	15	M	5	5	5	5	1	21	H	Recreation, Utility, SUP-E

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Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING					Comments ^{1/}				
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels		Heritage and Tribal Access	Overall Benefit Total	Overall Benefit Ranking	
																										R
1306	Mt. Tallac Trailhead	F	0.83	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Trailhead, Utility, SUP-E
1306A	Camp Concord	F	0.30	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Recreation, Utility, SUP-E
1307	Spring Creek Road	F	0.95	H	-	-	P	4	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307A	Hupa Road	F	0.05	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307B	Karok Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307C	Wiyot Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307D	Yurok Road	F	0.38	H	-	-	P	4	Y	M	H	5	5	5	1	1	17	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1308	Inspiration Point Vista	F	0.10	H	-	-	F	4	Y	M	M	5	5	1	1	1	13	M	1	5	3	5	1	15	M	Emerald Bay Overlook
1309	Bayview Campground	F	0.25	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1309A	Bayview Campground A Spur	F	0.10	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1310	Eagle Falls Parking	F	0.06	F	-	-	F	4	Y	M	M	1	5	5	1	1	13	M	1	5	3	5	1	15	M	Trailhead
1311	Tallac Point	F	0.54	H	-	-	F	4	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1311A	Tallac Point A Spur	F	0.12	F	-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1316	Vahalla Estate	F	0.38	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317	Baldwin Museum	F	0.31	H	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317A	Pope Estate Service Road	F	0.10	F	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1318	Jamison Beach Road	F	0.25		-	-	P	4	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	5	25	H	LS, Recreation, PROWE, FROWE, Historical
1319	Camp Richardson Trailer Camp	F	0.40		-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1320	Camp Richardson	F	0.44	H	-	-	P	3	Y	L	H	1	5	1	1	9	L	5	5	5	5	5	1	21	H	Recreation, Utility
1321	Camp Richardson	F	0.58	H	-	-	P	3	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	1	21	H	Recreation, Utility
1322	Camp Richardson Corral	F	0.09	H	-	-	P	3	Y	M	H	1	5	1	1	5	13	M	5	5	5	5	5	25	H	Recreation, Historical
1327	Cascade Stables	P	0.70		-	-	P	4	N	L	L	1	1	1	1	5	L	1	0	1	5	1	8	L	LS, Private road, Administrative ROW, No RMO	
1330	Upper Emerald Bay Road	F	0.38	H	-	-	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	3	23	H	RecRes, SUP-E, Historical
1332	Lower Emerald Bay Road	F	0.12		-	-	P	3	Y	M	H	5	5	1	1	3	15	M	5	5	5	5	3	23	H	RecRes, SUP-E, Historical
1334	Lane's Lane	F	0.19		-	Y	P	3	Y	L	H	1	1	1	1	5	L	5	5	5	5	5	1	21	H	Recreation, PROW
1335	Lake Tahoe Visitors Center	F	0.37	H	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335A	Visitor Parking Spur A	F	0.12		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335B	Visitor Parking Spur B	F	0.06		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335C	Visitor Parking Spur C	F	0.06		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1336	Taylor Creek Flats	F	0.21		-	-	F	3	Y	M	H	3	3	1	1	3	11	M	5	1	3	5	5	19	H	Utility, Historical, closed
1337	Nevada Beach Campground	F	0.56	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337C	Nevada Beach CG Spur C	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation
1337D	Nevada Beach CG Spur D	F	0.10	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337E	Nevada Beach CG Spur E	F	0.16	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337F	Nevada Beach CG Spur F	F	0.04	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337G	Nevada Beach CG Spur G	F	0.10	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338	Nevada Beach	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338A	Nevada Beach Picnic Spur A	F	0.20		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338B	Nevada Beach Picnic Spur B	F	0.29		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338C	Nevada Beach Picnic Spur C	F	0.06		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1339	Roundhill Pines Resort	F	0.42	H	-	-	P	4	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, SUP
1339A	Highway 50 Parallel	F	0.82		Y	Y	P	2	N	M	M	1	3	5	1	1	11	M	5	1	5	5	1	17	M	LS, PROWN
1339B	Roundhill Pines Lodge	F	0.14		-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Recreation, Historical
1340	Zephyr Cove Resort	F	0.05		-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1340A	Zephyr Cove Resort A Spur	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	LS, Recreation, Utility
1340B	Zephyr Cove Resort B Spur	F	0.29		-	-	P	3	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Recreation, Utility
1340C	Zephyr Cove Resort Parking	F	0.10		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1340D	Zephyr Cove Resort Parking	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341	Zephyr Cove Resort	F	0.25		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341A	Campground Spur A	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility

APPENDIX A TABLE 1 - RISK AND BENEFIT ASSESSMENT SUMMARY BY ROAD

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING						Comments 1/			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access		Overall Benefit Total	Overall Benefit Ranking	
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1341B	Campground Spur B	F	0.07		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341C	Campground Spur C	F	0.11		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341D	Campground Spur D	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341E	Campground Spur E	F	0.07		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341F	Campground Spur F	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341G	Campground Spur G	F	0.10		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341H	Campground Spur H	F	0.13		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341I	Campground Spur I	F	0.05		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341J	Campground Spur J	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341K	Campground Spur K	F	0.15		-	-	P	3	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1341L	Campground Spur L	F	0.25		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341W	Boat Parking	F	0.06		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1342A	Zephyr Cove Stables Parking	F	0.04		-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1342B	Zephyr Cove Stables Picnic Acc	F	0.06		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1379	Camp Shelly Campground	F	0.52	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1379A	Camp Shelly Campground A	F	0.21	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility
1379B	Old Lutheran Camp	F	0.43	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility
1393	Alliikik Road	F	0.19	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E
1393A	Cahuilla Road	F	0.07	H	-	-	P	3	Y	M	H	5	5	3	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E
1394	Mattole Road	F	0.59	H	-	-	P	3	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	RecRes, SUP-E
1394A	Maidu Road	F	0.08		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
1394B	Mattole Court	F	0.05		-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E
1395	Nicoleno Road	F	0.20	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
1395A	Nicoleno Court	F	0.04		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
1395B	Palwin Road	F	0.05		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
1395C	Wiyot Road	F	0.04		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
1396	Pomo Road	F	0.39	H	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E
1396A	Pomo Court	F	0.05		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E
13N07E	Spring Creek Road E Spur	F	0.29		Y	-	F	2	N	M	M	5	1	1	3	1	11	M	5	1	3	5	1	15	M	closed
13N20	Rabe Meadows	F	0.31		-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed
13N20A	Rabe Meadows A Spur	F	0.31		-	-	F	1	Y	M	M	1	3	5	1	1	11	M	1	1	3	5	1	11	M	closed
13N20B	Rabe Meadows B Spur	F	0.63		-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed
13N28	Old Bayview Pit	F	0.16		-	-	F	2	Y	L	M	3	1	1	1	1	7	L	1	1	3	5	1	11	M	closed
13N29	Cascade Lake Road	P/F	1.14		-	Y	P/F	2	Y	M	H	5	1	5	1	5	17	M	5	1	3	5	5	19	H	LS, PROWE, FROWE, Historical
13N42	Zephyr Cove Water Tank	F	0.49		-	-	P	1	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, closed
13N52	Upper Mt. Road	P	4.91		-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52A	Top of Galaxi Road	F	0.07		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52B	Top of Mott Canyon Road	F	0.35		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52D	Comet Road	F	0.03		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52F	Upper Mt. Road F Spur	F	0.34		-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52H	Upper Mt. Road H Spur	F	0.65		-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52I	Powder Bowl Loop	F	0.15		-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53	Way Home Road	F	2.26		-	-	P	2	Y	L	H	1	3	1	1	3	9	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53A	Wells Fargo Road	F	0.22		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit
13N53B	Nevada Water Tank Road	F	0.11		-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53C	Top of Bolder Road	F	0.28		-	-	P	2	Y	M	H	1	3	5	1	1	11	M	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit
13N53D	Tower Road	F	0.70		-	-	P	2	Y	M	H	1	1	5	5	3	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53E	Mott Canyon Base Road	F	0.95		-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N54	Pepi's Crossover	F	1.77		-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N54A	Georges Road	F	0.30		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N55	East Peak Loop	F	0.32		-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N78	Skyland Water Tank	F	0.55		-	-	P	2	Y	M	M	5	3	5	1	2	16	M	5	1	5	5	1	17	M	Utility, closed

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Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments 1/		
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking	
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13N81	Fallen Leaf Water Tower	F	0.20		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation, Utility, closed
13N82	Kingsbury Sewerline	F	1.52		-	-	F	2	Y	M	H	1	3	5	5	3	17	M	5	1	5	5	5	21	H	LS, PROWE, FROWE, Utilities, Historical
13N82A	Kingsbury Sewerline A Spur	F	0.55		-	-	P	1	Y	H	M	3	3	5	5	3	19	H	5	1	5	5	1	17	M	closed
1414	Meeks Bay Beach Access	F	0.30	H	-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities
1414A	Meeks Bay Campground	F	0.45	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities
1414B	Meeks Bay Point House	F	0.14	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities
1414C	Meeks Bay Campground Spur	F	0.08	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities
1414D	Meeks Bay Beach Parking	F	0.11	H	-	-	P	3	Y	L	H	1	3	3	1	1	9	L	5	5	5	5	1	21	H	Recreation, utilities
1418	Meeks Bay Resort	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utilities, RecRes
1418A	Meeks Bay Campground	F	0.39		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, utilities
1451	Old Glenbrook Highway	F	1.33		-	-	F	2	Y	M	H	1	1	5	3	5	15	M	5	1	3	5	5	19	H	LS, closed, Utility, Historical, FROWN
1453	Spooner Snowplay	F	0.21		-	-	F	4	Y	M	M	1	1	5	3	5	15	M	1	1	5	5	3	15	M	Historical
1472	Snow Valley Peak Trailhead	L	0.07		-	-	F	4	Y	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	Trailhead
1475	Spooner Guard Station	F	0.12	H	-	-	F	3	Y	M	M	1	5	5	3	3	17	M	5	1	5	5	1	17	M	Administrative Site
14N30	Slaughterhouse Canyon	F	1.72		-	-	F	2	Y	M	H	3	3	5	3	2	16	M	5	1	5	3	5	19	H	LS, FROWN, closed, Utility, Historical
14N30A	Slaughterhouse RR Grade Road	F	1.50		-	-	F	2	Y	M	M	1	1	5	5	5	17	M	1	1	5	3	5	15	M	LS, Reciprocal ROW w/ State, Utility, Historical
14N32	Genoa Peak Road	F	9.51	A	-	-	F	2	Y	M	H	1	3	5	3	5	17	M	5	5	5	1	5	21	H	LS, Utility, FROWN, PROW, Historical, WR
14N32A	White Hill	F	0.60	A	-	-	F	2	Y	L	H	1	1	1	1	5	9	L	5	1	5	5	5	21	H	Utility, Historical, WR
14N32B	Genoa Peak Road B Spur	F	2.40		Y	Y	F	2	N	L	L	1	3	1	1	1	7	L	1	1	3	1	1	7	L	HTNF
14N32C	Genoa Peak Road C Spur	F	0.49	A	-	-	F	2	Y	M	M	3	1	1	1	5	11	M	1	1	3	1	5	11	M	Historical
14N32D	Genoa Peak Road D Spur	F	0.51		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	3	1	1	11	M	PROW
14N33	Logan House Loop	F	6.58	A	-	-	F	2	Y	H	H	1	5	5	5	21	H	5	5	3	1	5	19	H	Utility, PROW, Historical	
14N33A	Logan House Loop A Spur	F	0.63		-	-	F	2	Y	H	M	1	5	5	3	5	19	H	5	3	3	1	5	17	M	Utility, Historical
14N34A	Noonchester Mine Road	F	2.47	A	-	-	F	2	Y	H	H	1	3	5	5	5	19	H	1	5	5	3	5	19	H	Historical
14N37	West Tahoe Water Company	F	1.50		-	-	P	1	Y	L	M	3	1	5	3	1	13	L	5	1	5	5	1	17	M	LS, Inactive SUP to Jewel Water Co., closed
14N38	Lonely Gulch Reservoir	F	0.11		-	-	P	3	N	M	M	1	1	5	1	3	11	M	5	1	5	5	1	17	M	No RMO available, PROW
14N40	Ellis Lake Road	F	2.57	A	-	-	F	2	Y	H	M	1	5	5	3	5	19	H	1	5	5	1	5	17	M	Historical
14N40A	Bucks Lake Road	F	0.27	A	-	-	F	2	Y	M	M	1	3	1	1	5	11	M	1	3	5	1	5	15	M	Historical
14N40B	Ellis Peak Road	F	0.69	A	-	-	F	2	Y	L	M	1	1	1	1	5	9	L	1	3	5	1	5	15	M	Historical
14N42	Meeks Creek North	F	1.89		-	-	F	1	Y	M	H	1	3	5	3	3	15	M	5	3	5	3	3	19	H	LS, FROWE, PROWE, Utility, Historical
14N43	Lonely Gulch Pit	F	0.10		-	-	F	2	Y	M	M	5	3	1	1	1	11	M	1	1	3	5	1	11	M	
14N44	Meeks Creek South	F	1.61		-	-	F	1	Y	M	H	1	5	5	1	5	17	M	5	5	5	3	1	19	H	LS, FROWE, Utility, closed
14N45	Shakespeare Point	F	0.86		-	Y	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	LS, FROWE, FROWN, Utility
14N46	Spooner Burn	F	0.95		-	-	F	2	Y	M	M	1	1	1	3	5	11	M	1	1	3	5	5	15	M	Utility, Historical
14N57	Lake Bigler Toll Road	F	0.75		-	Y	F	2	Y	H	H	1	5	5	5	5	21	H	5	1	5	5	5	21	H	LS, PROW, FROWN, Historical
1503A	Kaspiam Campground	F	0.04		-	-	P	4	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation
1503B	Blackwood Mill Spur	F	0.15		-	-	F	2	Y	M	M	1	3	5	1	1	11	M	5	1	1	5	1	13	M	Stockpile Site
1507	Tahoe Tavern Road	F	0.27		-	-	P	4	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	Recreation, RecRes, Utility, FROW, PROW
1508	Truckee River Access	F	0.51	H	-	-	P	4	Y	M	M	1	5	5	5	1	17	M	5	5	1	5	1	17	M	RecRes, Utility
1509	Chimney Beach Parking	F	0.10	H	-	-	F	4	Y	M	H	3	5	1	1	1	11	M	5	5	3	5	1	19	H	Trailhead
1528	William Kent Campground	F	0.71	H	-	-	P	4	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	FROW, Recreation, utility
1528A	WM Kent Spur A	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528B	WM Kent Spur B	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528C	WM Kent Spur C	F	0.24	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528D	WM Kent Spur D	F	0.17	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1529	William Kent Beach Access	F	0.03		-	-	P	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation
1530	Twin Crags	F	0.76	H	-	-	P	4	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility

APPENDIX A TABLE 1 - RISK AND BENEFIT ASSESSMENT SUMMARY BY ROAD

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments 1/			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking		
																										R	B
1530A	Twin Crags A Spur	F	0.19		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility	
1532	Truckee River Summer home	P	0.13		-	-	P	3	Y	M	H	3	1	5	1	5	15	M	5	5	5	5	5	25	H	RecRes, Utility, Historical	
1546	Fir Crags	F	0.35		-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, Utility	
1546A	Fir Crags A Spur	F	0.20		-	-	P	3	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	RecRes, Utility	
1565	Secret Harbor Parking	F	0.09	H	-	-	F	3	Y	L	H	3	1	1	1	3	9	L	1	5	5	5	3	19	H	Historical	
1566	Secret Harbor Road	F	1.20		-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead	
1566A	Secret Harbor Road A Spur	F	0.90		-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead	
15N09A	Mine Shaft Road	F	0.59		-	-	F	2	Y	H	M	3	5	5	5	1	19	H	1	1	5	5	1	13	M	PROW	
15N35	Stanford Rock	F	4.70		-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	1	5	1	3	11	M	closed, Historical	
15N38	Blackwood Creek - Middle	F	3.74	A	-	-	F	3	Y	H	H	3	5	5	5	3	21	H	5	5	5	5	1	21	H	Recreation, Utility	
15N38A	Blackwood Creek OHV Stating	F	0.10	A	-	-	F	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Trailhead, Utility	
15N60	Paige Meadows Road	F	1.50	A	-	-	F	2	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	LS, Utility, FROWN	
15N60A	Landa Camp Road	F	0.38		-	-	F	2	Y	L	M	1	1	1	3	1	7	L	5	1	3	3	1	13	M	Dispersed Recreation Access	
15N62	Ward Creek Road	F	3.11		-	-	F	2	Y	H	M	1	5	5	5	3	19	H	5	1	1	3	1	11	M	PROW, Utility	
15N64A	Snow Valley Peak	F	1.14		-	-	F	2	Y	M	L	1	1	5	5	3	15	M	5	1	1	1	1	9	L	LS, FROWN or HTNF, Comm Site Access	
15N67	Skunk Harbor Road	F	1.55		-	-	F	2	Y	H	H	5	5	5	5	5	25	H	5	1	3	5	5	19	H	LS, FROWE, PROWE, Tribal access	
1601	Stataline Lookout	F	0.64		-	-	F	4	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	LS, FROWE, Rec lookout, Utility	
16N48	Deer Park	F	2.99		-	-	F	2	Y	M	M	3	3	5	5	1	17	M	5	1	3	5	1	15	M	FROW	
16N48A	Scott Peak	F	2.75		-	-	F	1	Y	M	L	3	3	5	5	1	17	M	1	1	3	1	1	7	L	closed	
16N49	Watson Creek Road	F	2.70	H	-	-	F	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H		
16N49A	Watson Creek Road A Spur	F	0.35		Y	-	F	2	N	M	M	1	5	1	1	3	11	M	5	1	3	5	1	15	M		
16N50	Watson Lake Road	F	1.55	A	-	-	F	3	Y	M	H	3	5	1	3	3	15	M	5	5	5	5	1	21	H	LS, No rights to record or needed	
16N50A	Watson Lake Road A Spur	F	0.17		-	-	F	2	Y	M	M	3	1	5	1	3	13	M	1	5	5	5	1	17	M		
16N52	Gas Line Road	F/C	3.90	A	-	Y	F/C	2	Y	H	H	5	3	5	5	1	19	H	5	3	5	5	1	19	H	LS, County road through CTC, Sec6	
16N53	Deer Creek Road	F	1.29		-	-	F	2	Y	M	L	3	1	5	3	1	13	M	5	1	1	1	1	9	L	TNF	
16N53A	Deer Creek Road A Spur	F	0.06		Y	-	F	2	N	L	M	1	1	1	1	5	L	5	1	1	1	1	1	9	L		
16N54	Martis Slope Sec 6 Rd	C	1.54	A	-	Y	C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS, County Road, Sec6	
16N55	Martis Slope	F/C	2.68	A	-	Y	F/C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS, Part County Rd, Utility, Comm Site,Sec6	
16N56	Martis Tie	F	2.06	A	-	-	F	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	PROW, Utility, Comm Site	
16N57	Red Cedar Overlook	F	0.41	A	-	-	F	2	Y	M	H	5	3	1	1	1	11	M	5	5	5	5	1	21	H	Utility, PROW	
16N57A	Red Cedar Overlook A Spur	F	0.19	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility	
16N57B	Red Cedar Overlook B Spur	F	0.62	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility	
16N58	North Avenue Extension	F	0.82		Y	Y	F	1	N	M	L	1	3	5	1	1	11	M	1	1	1	1	5	1	9	L	closed
16N63	Carnelian Road	F	1.54	A	-	-	F	3	Y	M	H	3	3	1	3	3	13	M	5	5	5	5	1	21	H	PROW, Utility	
16N66	Lake Vista Road	C	0.39	A	-	Y	C	2	Y	H	M	1	3	5	5	19	H	1	5	5	1	1	1	13	M	County Road,Sec6	
16N71	Mt. Watson Access	F/S	1.86	A	-	Y	F/S	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	LS, FROWN, PROW, Utility,	
16N73B	Section 9 East Spur	F	0.83		-	-	F	2	Y	L	M	3	1	1	1	3	9	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF	
16N73C	Section 9 Middle Spur	F	1.26		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF	
16N73D	Section 9 West Spur	F	1.75		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF	
16N73E	Watson Peak	F	2.11	A	-	-	F	2	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	3	23	H	LS, TNF	
16N73G	Painted Rock North	F	0.62		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	FROW, Utility, TNF	
16N74	Sawmill Flat	F	2.95	A	-	-	F	3	Y	H	H	3	3	5	5	3	19	H	5	5	5	5	1	21	H	FROW, Utility, TNF	
16N74A	Sawmill Flat A Spur	F	0.50		Y	-	F	2	N	L	M	1	1	1	3	3	9	L	5	1	1	5	1	13	M		
16N76	Mt. Pluto	F	1.38		-	-	P	1	Y	L	L	3	1	1	1	1	7	L	1	1	1	5	1	9	L	LS, FROWN, PROWE, Comm Site, Ski Area	
16N77	Hanes Flat	F	2.14		-	-	F	1	Y	M	L	3	1	1	3	3	11	M	1	1	1	5	1	9	L	closed	
16N77B	Hanes Flat B Spur	F	0.06		Y	-	F	1	N	L	L	1	1	1	1	5	L	1	1	1	1	5	1	9	L	closed	
16N77D	Hanes Flat D Spur	F	0.20		Y	-	F	1	N	L	L	1	1	1	1	5	L	1	1	1	1	5	1	9	L	closed	
16N86	Beaver Street Extension	F/C	1.61	H/A	-	-	F/C	2	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	FROW, PROW, Utility,Sec6	

APPENDIX A TABLE 1 - RISK AND BENEFIT ASSESSMENT SUMMARY BY ROAD

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING						BENEFIT RANKING						Comments 1/			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Risk/Benefit Category		Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels		Heritage and Tribal Access	Overall Benefit Total	Overall Benefit Ranking
										R	B															
16N87	Old Grist Mill Road	P/F	0.96	A	-	-	P/F	2	Y	H	M	5	5	5	3	5	23	H	1	1	5	5	5	17	M	SUP-E, Historical
16N90	Griff Creek Parallel	F	1.06		Y	-	F	1	N	M	L	5	3	1	3	1	13	M	1	1	1	3	1	7	L	closed, PROW, FROW
16N91	Stateline Powerline	F	0.77		-	-	P	1	Y	L	M	3	1	1	3	2	10	L	1	1	1	5	3	11	M	closed, Utility
16N92	Martis Peak Road	F	4.30	H	-	-	F	3	Y	M	M	1	3	1	1	5	11	M	5	5	5	1	1	17	M	LS, FROWE, PROWE, Utility, Comm Site
16N92B	Martis Peak Lookout	F	0.64	H	-	-	F	3	Y	M	M	5	3	1	3	1	13	M	5	5	5	1	1	17	M	TNF, PROW
16N93	Regency Extension	F	0.59	A	-	-	F	2	Y	M	H	3	3	3	3	1	13	M	5	5	5	5	1	21	H	FROW, Utility
16N95	Shivagiri Extension	F	0.62	A	-	-	F	2	Y	H	H	3	3	5	5	5	21	H	5	5	5	5	5	25	H	AqmntG, Utility, Historical
17N84	Juniper Creek Road	F	0.98		-	-	F	2	Y	L	M	1	1	1	1	1	5	L	5	1	3	1	1	11	M	TNF
17N85	Radio Tower Access Road	F	3.90		-	-	P	2	Y	H	M	1	3	5	5	5	19	H	5	1	5	5	1	17	M	AqmntNG, HTNF
17N89	Old Mt. Rose Highway	F	2.97		-	-	F	2	Y	M	M	3	3	3	3	5	17	M	5	1	1	5	5	17	M	SUPC, Utility, Historical, PROW
17N89A	Old Mt. Rose Highway A Spur	F	0.83		-	-	F	1	Y	M	M	3	1	1	1	5	11	M	1	1	1	5	5	13	M	closed, Historical
73	Mt Watson Boulevard	F	14.25	H/A	-	-	F	3 and 2	Y	H	H	5	3	5	5	5	23	H	5	5	5	5	5	25	H	LS, Utility, Historical, PROWE
TOTAL MILES			257.47																							

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APPENDIX A TABLE 2 - RISK AND BENEFIT ASSESSMENT SUMMARY BY CATEGORY

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING						BENEFIT RANKING						Comments ^{1/}				
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access		Overall Benefit Total	Overall Benefit Ranking		
																										R	B
High Risk, High Benefit																											
03	Barker Pass Road	F	7.14	H	-	-	F	4	Y	H	H	5	5	5	5	3	23	H	5	5	5	5	1	21	H	PROW, utilities	
1110	Hawley Grade Access Road	F	0.30	A	-	-	P	3	Y	H	H	5	5	5	3	5	23	H	5	5	5	5	5	25	H	AgmtG, RecRes, Utility, Historical	
1111	Bridge Tract Road	F	0.24	A	-	-	P	3	Y	H	H	5	5	5	1	3	19	H	5	5	5	5	5	25	H	AgmtG, RecRes, Utility, Historical	
1201	Fountain Place Road	F	4.33	H	-	-	F	3	Y	H	H	3	5	5	3	21	H	5	5	5	5	5	5	25	H	PROW, RUPC, Utility, historical	
1212	Fredericks Road	F	0.23	H	-	-	F	3	Y	H	H	5	5	5	3	3	21	H	5	5	5	5	1	21	H	Recreation, SUP	
1213	Old Luther Pass Highway	F	0.98	H	-	-	F	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	Utility, AgmtG, Historical	
1214	Angora Ridge Road	F	2.99	H	-	-	P	3	Y	H	H	5	3	5	3	3	19	H	5	5	5	5	5	25	H	Rec lookout, SUP-E, RecRes, AgmtNG	
1215	Stanford Camp	F	0.56	-	-	Y	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H	LS, FROWE, RecRes, AgmtG	
1216	Glen Alpine Trailhead	F	1.78	-	-	-	P	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	FROWN, PROWE, RecRes, utility, historical	
12N08	Powerline Road	F	2.65	A	-	-	F	2	Y	H	H	5	3	5	5	3	21	H	5	5	5	5	3	23	H	LS, FROWN, partial Utility access	
12N16	Glen Alpine Springs	F	1.79	-	-	-	F	2	Y	H	H	3	5	5	3	5	21	H	5	5	5	5	5	25	H	LS, RecRes, Utility, PROWE, FROWE, Historical	
12N21	High Meadows Road	F	3.21	A	-	-	F	2	Y	H	H	5	3	5	5	1	19	H	5	5	5	5	1	21	H	FROW, PROW, Utility, AgmtG	
1305	Baldwin Beach	F	0.90	H	-	-	F	4	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	Recreation, Utility	
1307	Spring Creek Road	F	0.95	H	-	-	P	4	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E	
1307B	Karok Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E	
1307C	Wiyot Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E	
1330	Upper Emerald Bay Road	F	0.38	H	-	-	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	3	23	H	RecRes, SUP-E, Historical	
1394	Mattole Road	F	0.59	H	-	-	P	3	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	RecRes, SUP-E	
14N33	Logan House Loop	F	6.58	A	-	-	F	2	Y	H	H	1	5	5	5	5	21	H	5	5	3	1	5	19	H	Utility, PROW, Historical	
14N34A	Noonchester Mine Road	F	2.47	A	-	-	F	2	Y	H	H	1	3	5	5	5	19	H	1	5	5	3	5	19	H	Historical	
14N57	Lake Bigler Toll Road	F	0.75	-	-	Y	F	2	Y	H	H	1	5	5	5	5	21	H	5	1	5	5	5	21	H	LS, PROWN, FROWN, Historical	
15N38	Blackwood Creek - Middle	F	3.74	A	-	-	F	3	Y	H	H	3	5	5	5	3	21	H	5	5	5	5	1	21	H	Recreation, Utility	
15N67	Skunk Harbor Road	F	1.55	-	-	-	F	2	Y	H	H	5	5	5	5	5	25	H	5	1	3	3	5	5	19	H	LS, FROWE, PROWE, Tribal access
16N49	Watson Creek Road	F	2.70	H	-	-	F	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H		
16N52	Gas Line Road	F/C	3.90	A	-	Y	F/C	2	Y	H	H	5	3	5	5	1	19	H	5	3	5	5	1	19	H	LS, County road through CTC, Sec6	
16N74	Sawmill Flat	F	2.95	A	-	-	F	3	Y	H	H	3	3	5	5	3	19	H	5	5	5	5	1	21	H	FROW, Utility, TNF	
16N95	Shivagiri Extension	F	0.62	A	-	-	F	2	Y	H	H	3	3	5	5	5	21	H	5	5	5	5	5	25	H	AgmtG, Utility, Historical	
73	Mt Watson Boulevard	F	14.25	H/A	-	-	F	3 and 2	Y	H	H	5	3	5	5	5	23	H	5	5	5	5	5	25	H	LS, Utility, Historical, PROWE	
High Risk, High Benefit			68.81 Miles	28 Roads																							
High Risk, Moderate Benefit																											
12N01A	Saxon Creek Road	F	2.20	A	-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	5	5	5	1	17	M	Dispersed Recreation Access	
12N21A	High Meadows Ridge Road	F	1.50	-	-	-	F	2	Y	H	M	5	3	5	5	1	19	H	1	1	3	5	1	11	M	LS, Forest Service ownership	
13N82A	Kingsbury Sewerline A Spur	F	0.55	-	-	-	P	1	Y	H	M	3	3	5	5	3	19	H	5	1	5	5	1	17	M	closed	
14N33A	Logan House Loop A Spur	F	0.63	-	-	-	F	2	Y	H	M	1	5	5	3	5	19	H	5	3	3	1	5	17	M	Utility, Historical	
14N40	Ellis Lake Road	F	2.57	A	-	-	F	2	Y	H	M	1	5	5	3	5	19	H	1	5	5	1	5	17	M	Historical	
1566	Secret Harbor Road	F	1.20	-	-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead	
1566A	Secret Harbor Road A Spur	F	0.90	-	-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead	
15N09A	Mine Shaft Road	F	0.59	-	-	-	F	2	Y	H	M	3	5	5	5	1	19	H	1	1	5	5	1	13	M	PROW	
15N35	Stanford Rock	F	4.70	-	-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	1	5	1	3	11	M	closed, Historical	
15N62	Ward Creek Road	F	3.11	-	-	-	F	2	Y	H	M	1	5	5	5	3	19	H	5	1	1	3	1	11	M	PROW, Utility	
16N66	Lake Vista Road	C	0.39	A	-	Y	C	2	Y	H	M	1	3	5	5	5	19	H	1	5	5	1	1	13	M	County Road, Sec6	
16N87	Old Grist Mill Road	P/F	0.96	A	-	-	P/F	2	Y	H	M	5	5	5	3	5	23	H	1	1	5	5	5	17	M	SUP-E, Historical	
17N85	Radio Tower Access Road	F	3.90	-	-	-	P	2	Y	H	M	1	3	5	5	5	19	H	5	1	5	5	1	17	M	AgmtNG, HTNF	
High Risk, Moderate Benefit			23.20 Miles	13 Roads																							
High Risk, Low Benefit																											
11N13	Grass Lake Road	F	1.50	-	-	-	F	1	Y	H	L	1	3	5	5	5	19	H	1	1	1	5	1	9	L	closed	
High Risk, Low Benefit			1.50 Miles	1 Road																							

APPENDIX A TABLE 2 - RISK AND BENEFIT ASSESSMENT SUMMARY BY CATEGORY

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments ^{1/}		
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking	
																										R
Moderate Risk, High Benefit																										
1105	Echo Lakes Road	F	1.20	-	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, AgmntG, Eldorado CO plow
1105D	Echo Lakes Road D Spur	F	0.12	-	-	-	P	3	Y	M	H	3	5	1	1	11	M	5	5	5	5	1	21	H	RecRes, AgmntG	
1107	Old Meyers Grade	F	1.51	-	-	Y	S	3	Y	M	H	1	5	5	3	3	17	M	5	1	3	5	5	19	H	LS, SUP-E, Utility, AgmntG, Historical
1112	Pack Station Road	F	0.11	A	-	-	F	3	Y	M	H	1	5	5	1	3	15	M	5	3	5	5	5	23	H	Historical, AgmntG
1203	Stanford Hill Tract	F	0.20	-	-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	RecRes, AgmntG, historical
1207	Rainbow Tract	F	0.95	A	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	SUP, RecRes Mtce, AgmntG
1207C	Rainbow Tract C Spur	F	0.15	-	-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, AgmntG
1209	Pope Beach	F	1.10	H	-	-	F	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation, Utility
1216A	Alpine Falls Tract	F	0.10	-	-	-	P	2	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	RecRes, utility, PROW, WR, historical
12N14A	Angora Resort Service Road	F	0.60	-	-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, RecRes
12N16A	Fish Hatchery Tract	F	0.18	-	-	-	P	2	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, Utility, PROW, FROW
12N18	Spray Road	F	1.43	-	-	-	F	2	Y	M	H	1	3	1	3	3	11	M	5	1	5	5	5	21	H	Utility
12N40	Roundabout Road	F	5.13	-	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Comm site, Ski Area Permit, FROWN, FROWE, PROWE
12N40C	Water Quality Road	F	0.44	-	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40D	Swing Road	F	0.46	-	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40E	Roundabout Road E Spur	F	0.21	-	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41	Grove Shop Road	F	0.50	-	-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
1301	Fallen Leaf Campground	F	1.35	H	-	-	P	4	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	1	21	H	Recreation, Utility
1301B	Fallen Leaf CG Spur B	F	0.25	H	-	-	P	4	Y	M	H	1	5	1	3	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301C	Fallen Leaf CG Spur C	F	0.30	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301D	Fallen Leaf CG Spur D	F	0.30	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301H	Fallen Leaf CG Spur H	F	0.11	H	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1302	Tallac Historic Site	F	0.45	H	-	-	F	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Historical, AgmntG, Utility
1304	Cathedral Road	F	2.75	H	-	-	F	3	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	3	23	H	LS, SUP-E, Utility, RecRes, PROWN, FROWN, Historical
1304A	Taylor Creek Parking Lot	F	0.25	-	-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	1	21	H	Trailhead, Utility
1304D	Gauge Road	F	0.17	H	-	-	P	3	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	LS, RecRes, Utility, SUP-E, PROWN, FROWN
1305A	Baldwin Beach Spur	F	0.05	H	-	-	F	4	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	Recreation, Utility, SUP-E
1306	Mt. Tallac Trailhead	F	0.83	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Trailhead, Utility, SUP-E
1306A	Camp Concord	F	0.30	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Recreation, Utility, SUP-E
1307A	Hupa Road	F	0.05	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307D	Yurok Road	F	0.38	H	-	-	P	4	Y	M	H	5	5	5	1	1	17	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1311	Tallac Point	F	0.54	H	-	-	F	4	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1311A	Tallac Point A Spur	F	0.12	-	-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1316	Valhalla Estate	F	0.38	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317	Baldwin Museum	F	0.31	H	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317A	Pope Estate Service Road	F	0.10	-	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1318	Jamison Beach Road	F	0.25	-	-	-	P	4	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	5	25	H	LS, Recreation, PROWE, FROWE, Historical
1319	Camp Richardson Trailer Camp	F	0.40	-	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1321	Camp Richardson	F	0.58	H	-	-	P	3	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	1	21	H	Recreation, Utility
1322	Camp Richardson Corral	F	0.09	H	-	-	P	3	Y	M	H	1	5	1	1	5	13	M	5	5	5	5	5	25	H	Recreation, Historical
1332	Lower Emerald Bay Road	F	0.12	-	-	-	P	3	Y	M	H	5	5	1	1	3	15	M	5	5	5	5	3	23	H	RecRes, SUP-E, Historical
1335	Lake Tahoe Visitors Center	F	0.37	H	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335A	Visitor Parking Spur A	F	0.12	-	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335B	Visitor Parking Spur B	F	0.06	-	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335C	Visitor Parking Spur C	F	0.06	-	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1336	Taylor Creek Flats	F	0.21	-	-	-	F	3	Y	M	H	3	3	1	1	3	11	M	5	1	3	5	5	19	H	Utility, Historical, closed
1337C	Nevada Beach CG Spur C	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation
1339B	Roundhill Pines Lodge	F	0.14	-	-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Recreation, Historical

APPENDIX A TABLE 2 - RISK AND BENEFIT ASSESSMENT SUMMARY BY CATEGORY

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments ^{1/}			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking		
																										R	B
1340	Zephyr Cove Resort	F	0.05	-	-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility	
1340B	Zephyr Cove Resort B Spur	F	0.29	-	-	-	P	3	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Recreation, Utility	
1342A	Zephyr Cove Stables Parking	F	0.04	-	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility	
1379	Camp Shelly Campground	F	0.52	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility	
1393	Alitkik Road	F	0.19	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1393A	Cahuilla Road	F	0.07	H	-	-	P	3	Y	M	H	5	5	3	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1394A	Maidu Road	F	0.08	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1394B	Mattole Court	F	0.05	-	-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395	Nicoleno Road	F	0.20	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395A	Nicoleno Court	F	0.04	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395B	Palwin Road	F	0.05	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395C	Wiyot Road	F	0.04	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1396	Pomo Road	F	0.39	H	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1396A	Pomo Court	F	0.05	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
13N29	Cascade Lake Road	P/F	1.14	-	-	Y	P/F	2	Y	M	H	5	1	5	1	5	17	M	5	1	3	5	5	19	H	LS, PROWE, FROWE, Historical	
13N42	Zephyr Cove Water Tank	F	0.49	-	-	-	P	1	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, closed	
13N52	Upper Mt. Road	P	4.91	-	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N52H	Upper Mt. Road H Spur	F	0.65	-	-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N53C	Top of Bolder Road	F	0.28	-	-	-	P	2	Y	M	H	1	3	5	1	1	11	M	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit	
13N53D	Tower Road	F	0.70	-	-	-	P	2	Y	M	H	1	1	5	5	3	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N53E	Mott Canyon Base Road	F	0.95	-	-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N55	East Peak Loop	F	0.32	-	-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N82	Kingsbury Sewerline	F	1.52	-	-	-	F	2	Y	M	H	1	3	5	5	3	17	M	5	1	5	5	5	21	H	LS, PROWE, FROWE, Utilities, Historical	
1414	Meeks Bay Beach Access	F	0.30	H	-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414A	Meeks Bay Campground	F	0.45	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414B	Meeks Bay Point House	F	0.14	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414C	Meeks Bay Campground Spur	F	0.08	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1418	Meeks Bay Resort	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utilities, RecRes	
1451	Old Glenbrook Highway	F	1.33	-	-	-	F	2	Y	M	H	1	1	5	3	5	15	M	5	1	3	5	5	19	H	LS, closed, Utility, Historical, FROWN	
14N30	Slaughterhouse Canyon	F	1.72	-	-	-	F	2	Y	M	H	3	3	5	3	2	16	M	5	1	5	3	5	19	H	LS, FROWN, closed, Utility, Historical	
14N32	Genoa Peak Road	F	9.51	A	-	-	F	2	Y	M	H	1	3	5	3	5	17	M	5	5	5	1	5	21	H	LS, Utility, FROWN, PROW, Historical, WR	
14N42	Meeks Creek North	F	1.89	-	-	-	F	1	Y	M	H	1	3	5	3	3	15	M	5	3	5	3	3	19	H	LS, FROWE, PROWE, Utility, Historical	
14N44	Meeks Creek South	F	1.61	-	-	-	F	1	Y	M	H	1	5	5	1	5	17	M	5	5	5	3	1	19	H	LS, FROWE, Utility, closed	
1503A	Kaspian Campground	F	0.04	-	-	-	P	4	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation	
1509	Chimney Beach Parking	F	0.10	H	-	-	F	4	Y	M	H	3	5	1	1	1	11	M	5	5	3	5	1	19	H	Trailhead	
1529	William Kent Beach Access	F	0.03	-	-	-	P	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation	
1532	Truckee River Summer home	P	0.13	-	-	-	P	3	Y	M	H	3	1	5	1	5	15	M	5	5	5	5	5	25	H	RecRes, Utility, Historical	
1546	Fir Crags	F	0.35	-	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, Utility	
15N60	Paige Meadows Road	F	1.50	A	-	-	F	2	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	LS, Utility, FROWN	
16N50	Watson Lake Road	F	1.55	A	-	-	F	3	Y	M	H	3	5	1	3	3	15	M	5	5	5	5	1	21	H	LS, No rights to record or needed	
16N57	Red Cedar Overlook	F	0.41	A	-	-	F	2	Y	M	H	5	3	1	1	1	11	M	5	5	5	5	1	21	H	Utility, PROW	
16N63	Carnelian Road	F	1.54	A	-	-	F	3	Y	M	H	3	3	1	3	3	13	M	5	5	5	5	1	21	H	PROW, Utility	
16N86	Beaver Street Extension	F/C	1.61	H/A	-	-	F/C	2	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	FROW, PROW, Utility, Sec6	
16N93	Regency Extension	F	0.59	A	-	-	F	2	Y	M	H	3	3	3	3	1	13	M	5	5	5	5	1	21	H	FROW, Utility	
Moderate Risk, High Benefit			64.27 Miles	92 Roads																							

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																										R
Moderate Risk, Moderate Benefit																										
11N88	Grass Lake Creek Access	F	0.25		Y	-	F	1	N	M	M	1	1	5	5	3	15	M	1	1	5	5	13	M	closed, Tahoe Rim Trail, historical	
1226	Pope Marsh Pump Station	F	0.25			-	P	1	Y	M	M	1	3	5	1	11	M	5	1	5	5	1	17	M	Utility, closed	
12N01D	Hellhole	F	1.95	A	-	-	F	2	Y	M	M	1	5	5	3	17	M	1	3	5	1	1	11	M	Dispersed Recreation Access	
12N15	Trout Creek Slope	F	1.73		-	-	P	2	Y	M	M	3	1	1	3	11	M	5	1	5	5	1	17	M	Utility, closed	
12N19	Tahoe Mountain Road	F	1.90		-	-	F	2	Y	M	M	1	3	1	3	11	M	5	1	3	5	1	15	M	Utility	
12N20	Osgood Road	F	2.31		-	-	F	1	Y	M	M	3	1	5	5	1	15	M	5	1	5	5	1	17	M	Maintenance Level Error?
12N20C	Osgood Road C Spur	F	0.20		-	-	F	2	Y	M	M	3	3	5	1	13	M	5	1	5	5	1	17	M	Maintenance Level Error?	
12N21B	High Meadows East Road	F	0.70		-	-	F	2	Y	M	M	1	3	5	5	1	15	M	1	1	3	5	1	11	M	
12N23	Pyramid Circle Spur	P	0.46		-	-	P	2	Y	M	M	1	1	5	5	5	17	M	1	1	3	5	1	11	M	Utility
12N24	Quartz Creek Extension	F	0.38		Y	-	F	1	N	M	M	1	3	1	3	5	13	M	1	1	5	5	5	17	M	closed, Historical
12N27	Tahoe Mountain Meadows	F	1.63		-	-	F	1	N	M	M	1	3	5	3	2	14	M	1	1	5	5	1	13	M	closed
1308	Inspiration Point Vista	F	0.10	H	-	-	F	4	Y	M	M	5	5	1	1	1	13	M	1	5	3	5	1	15	M	Emerald Bay Overlook
1309	Bayview Campground	F	0.25	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1309A	Bayview Campground A Spur	F	0.10	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1310	Eagle Falls Parking	F	0.06		-	-	F	4	Y	M	M	1	5	5	1	1	13	M	1	5	3	5	1	15	M	Trailhead
1339A	Highway 50 Parallel	F	0.82		Y	Y	P	2	N	M	M	1	3	5	1	1	11	M	5	1	5	5	1	17	M	LS, PROWN
13N07E	Spring Creek Road E Spur	F	0.29		Y	-	F	2	N	M	M	5	1	1	3	1	11	M	5	1	3	5	1	15	M	closed
13N20	Rabe Meadows	F	0.31		-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed
13N20A	Rabe Meadows A Spur	F	0.31		-	-	F	1	Y	M	M	1	3	5	1	1	11	M	1	1	3	5	1	11	M	closed
13N20B	Rabe Meadows B Spur	F	0.63		-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed
13N78	Skyland Water Tank	F	0.55		-	-	P	2	Y	M	M	5	3	5	1	2	16	M	5	1	5	5	1	17	M	Utility, closed
1453	Spooner Snowplay	F	0.21		-	-	F	4	Y	M	M	1	1	5	3	5	15	M	1	1	5	5	3	15	M	Historical
1475	Spooner Guard Station	F	0.12	H	-	-	F	3	Y	M	M	1	5	5	3	3	17	M	5	1	5	5	1	17	M	Administrative Site
14N30A	Slaughterhouse RR Grade Road	F	1.50		-	-	F	2	Y	M	M	1	1	5	5	5	17	M	1	1	5	3	5	15	M	LS, Reciprocal ROW w/ State, Utility, Historical
14N32C	Genoa Peak Road C Spur	F	0.49	A	-	-	F	2	Y	M	M	3	1	1	1	5	11	M	1	1	3	1	5	11	M	Historical
14N38	Lonely Gulch Reservoir	F	0.11		-	-	P	3	N	M	M	1	1	5	1	3	11	M	5	1	5	5	1	17	M	No RMO available, PROW
14N40A	Bucks Lake Road	F	0.27	A	-	-	F	2	Y	M	M	1	3	1	1	5	11	M	1	3	5	1	5	15	M	Historical
14N43	Lonely Gulch Pit	F	0.10		-	-	F	2	Y	M	M	5	3	1	1	1	11	M	1	1	3	5	1	11	M	
14N46	Spooner Burn	F	0.95		-	-	F	2	Y	M	M	1	1	1	3	5	11	M	1	1	3	5	5	15	M	Utility, Historical
1503B	Blackwood Mill Spur	F	0.15		-	-	F	2	Y	M	M	1	3	5	1	1	11	M	5	1	1	5	1	13	M	Stockpile Site
1508	Truckee River Access	F	0.51	H	-	-	P	4	Y	M	M	1	5	5	5	1	17	M	5	5	1	5	1	17	M	RecRes, Utility
16N48	Deer Park	F	2.99		-	-	F	2	Y	M	M	3	3	5	5	1	17	M	5	1	3	5	1	15	M	FRON
16N49A	Watson Creek Road A Spur	F	0.35		Y	-	F	2	N	M	M	1	5	1	1	3	11	M	5	1	3	5	1	15	M	
16N50A	Watson Lake Road A Spur	F	0.17		-	-	F	2	Y	M	M	3	1	5	1	3	13	M	1	5	5	5	1	17	M	
16N54	Martis Slope Sec 6 Rd	C	1.54	A	-	Y	C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS, County Road, Sec6
16N55	Martis Slope	F/C	2.68	A	-	Y	F/C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS, Part County Rd, Utility, Comm Site, Sec6
16N92	Martis Peak Road	F	4.30	H	-	-	F	3	Y	M	M	1	3	1	1	5	11	M	5	5	5	1	1	17	M	LS, FROWE, PROWE, Utility, Comm Site
16N92B	Martis Peak Lookout	F	0.64	H	-	-	F	3	Y	M	M	5	3	1	3	1	13	M	5	5	5	1	1	17	M	TNF, PROW
17N89	Old Mt. Rose Highway	F	2.97		-	-	F	2	Y	M	M	3	3	3	3	5	17	M	5	1	1	5	5	17	M	SUPC, Utility, Historical, PROW
17N89A	Old Mt. Rose Highway A Spur	F	0.83		-	-	F	1	Y	M	M	3	1	1	1	5	11	M	1	1	1	5	5	13	M	closed, Historical
Moderate Risk, Moderate Benefit			36.06 Miles	40 Roads																						

APPENDIX A TABLE 2 - RISK AND BENEFIT ASSESSMENT SUMMARY BY CATEGORY

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING							BENEFIT RANKING							Comments 1/	
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total	Overall Benefit Ranking		
																										R
Moderate Risk, Low Benefit																										
12N21C	ROW - powerline access	F	2.98				P	1	Y	M	L	1	5	5	1	17	M	5	1	1	1	1	9	L	LS, ROW powerline	
12N31	High School Road	F	0.39		Y		F	2	N	M	L	1	3	5	3	14	M	1	1	1	5	1	9	L	No RMO available	
15N64A	Snow Valley Peak	F	1.14				F	2	Y	M	L	1	1	5	5	3	15	M	5	1	1	1	1	9	L	LS, FROWN or HTNF, Comm Site Access
16N48A	Scott Peak	F	2.75				F	1	Y	M	L	3	3	5	5	1	17	M	1	1	3	1	1	7	L	closed
16N53	Deer Creek Road	F	1.29				F	2	Y	M	L	3	1	5	3	1	13	M	5	1	1	1	1	9	L	TNF
16N58	North Avenue Extension	F	0.82		Y	Y	F	1	N	M	L	1	3	5	1	11	M	1	1	1	5	1	9	L	closed	
16N77	Hanes Flat	F	2.14				F	1	Y	M	L	3	1	1	3	11	M	1	1	1	5	1	9	L	closed	
16N90	Griff Creek Parallel	F	1.06		Y		F	1	N	M	L	5	3	1	3	1	13	M	1	1	1	3	1	7	L	closed, PROW, FROW
Moderate Risk, Low Benefit			12.57 Miles	8 Roads																						
Low Risk, High Benefit																										
1103	Echo Summit South	F	0.35				F	3	Y	L	H	1	1	1	1	3	7	L	5	3	5	5	5	23	H	Utility, AgmntG, Historical
1105A	Echo Lakes Road A Spur	F	0.24				P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1105B	Echo Lakes Road B Spur	F	0.21				P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1105C	Berkeley Camp	F	0.15				P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG
1106	Johnson Pass Road	F	1.34		Y		S/F	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	LS, RecRes, AgmntG wCA Hwy Bypass
1106A	Johnson Pass Road A Spur	F	0.15				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, AgmntG
1106B	Snow Park at Echo Summit	F	0.20				F	3	Y	L	H	1	3	1	1	1	7	L	5	5	3	5	1	19	H	Snow Park Trailhead
1205	Stanford Hill	F	0.29				P	3	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes
1205A	Stanford Hill A Spur	F	0.11				P	4	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes
1206	Meyers Administrative Site	F	0.14				F	4	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site
1206A	Meyers Admin Loop	F	0.07				F	3	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site
1207A	Rainbow Tract A Spur	F	0.10				P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG
1207B	Rainbow Tract B Spur	F	0.28				P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG
12N17	Saxon Tie Road	F	0.60	A			F	2	Y	L	H	1	1	3	1	3	9	L	5	5	5	5	1	21	H	Utility
12N40A	West Roundabout Road	F	0.62		Y		P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	5	1	21	H	LS, Heavenly Ski Area Permit, FROWN, PROWN
12N40B	A/C Cache Road	F	0.08				P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Heavenly Ski Area Permit
12N40F	Roundabout Road F Spur	F	0.15				P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41A	677 Road	F	0.15				P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41B	Top of the Tram Road	F	0.17				P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
1301A	Fallen Leaf CG Spur A	F	0.16	H			P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301F	Fallen Leaf CG Spur F	F	0.47	H			P	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301G	Fallen Leaf CG Spur G	F	0.30	H			P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1303	Baldwin Administrative Site	F	0.11				F	4	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1303F	Baldwin Administrative Spur	F	0.10				F	3	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1304C	Old Mill Road	F	0.27				F	3	Y	L	H	1	3	1	1	3	9	L	5	3	3	5	3	19	H	Utility, closed, Historical
1320	Camp Richardson	F	0.44	H			P	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1334	Lane's Lane	F	0.19		Y		P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation, PROW
1337	Nevada Beach Campground	F	0.56	H			P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337D	Nevada Beach CG Spur D	F	0.10	H			P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337E	Nevada Beach CG Spur E	F	0.16	H			P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337F	Nevada Beach CG Spur F	F	0.04	H			P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337G	Nevada Beach CG Spur G	F	0.10	H			P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338	Nevada Beach	F	0.09				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338A	Nevada Beach Picnic Spur A	F	0.20				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338B	Nevada Beach Picnic Spur B	F	0.29				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338C	Nevada Beach Picnic Spur C	F	0.06				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1339	Roundhill Pines Resort	F	0.42	H			P	4	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, SUP
1340A	Zephyr Cove Resort A Spur	F	0.09				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	LS, Recreation, Utility
1340C	Zephyr Cove Resort Parking	F	0.10				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1340D	Zephyr Cove Resort Parking	F	0.03				P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility

APPENDIX A TABLE 2 - RISK AND BENEFIT ASSESSMENT SUMMARY BY CATEGORY

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments ^{1/}			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking		
																										A	B
1341	Zephyr Cove Resort	F	0.25	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341A	Campground Spur A	F	0.09	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341B	Campground Spur B	F	0.07	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341C	Campground Spur C	F	0.11	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341D	Campground Spur D	F	0.03	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341E	Campground Spur E	F	0.07	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341F	Campground Spur F	F	0.09	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341G	Campground Spur G	F	0.10	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341H	Campground Spur H	F	0.13	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341I	Campground Spur I	F	0.05	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341J	Campground Spur J	F	0.03	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341K	Campground Spur K	F	0.15	-	-	-	P	3	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, Utility	
1341L	Campground Spur L	F	0.25	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1341W	Boat Parking	F	0.06	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1342B	Zephyr Cove Stables Picnic Acc	F	0.06	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
13N52A	Top of Galaxi Road	F	0.07	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N52B	Top of Mott Canyon Road	F	0.35	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N52D	Comet Road	F	0.03	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N52F	Upper Mt. Road F Spur	F	0.34	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N52I	Powder Bowl Loop	F	0.15	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N53	Way Home Road	F	2.26	-	-	-	P	2	Y	L	H	1	3	1	1	3	9	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N53A	Wells Fargo Road	F	0.22	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit	
13N53B	Nevada Water Tank Road	F	0.11	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N54	Pepi's Crossover	F	1.77	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N54A	Georges Road	F	0.30	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit	
13N81	Fallen Leaf Water Tower	F	0.20	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	21	H	Recreation, Utility, closed	
1414D	Meeks Bay Beach Parking	F	0.11	H	-	-	P	3	Y	L	H	1	3	3	1	1	9	L	5	5	5	5	1	21	H	Recreation, utilities	
1418A	Meeks Bay Campground	F	0.39	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, utilities	
14N32A	White Hill	F	0.60	A	-	-	F	2	Y	L	H	1	1	1	1	5	9	L	5	1	5	5	5	21	H	Utility, Historical, WR	
1528	William Kent Campground	F	0.71	H	-	-	P	4	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	FROW, Recreation, utility	
1528A	WM Kent Spur A	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation	
1528B	WM Kent Spur B	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation	
1528C	WM Kent Spur C	F	0.24	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation	
1528D	WM Kent Spur D	F	0.17	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation	
1530	Twin Crags	F	0.76	H	-	-	P	4	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility	
1530A	Twin Crags A Spur	F	0.19	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility	
1565	Secret Harbor Parking	F	0.09	H	-	-	F	3	Y	L	H	3	1	1	1	3	9	L	1	5	5	5	3	19	H	Historical	
15N38A	Blackwood Creek OHV Staging	F	0.10	A	-	-	F	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Trailhead, Utility	
1601	Staline Lookout	F	0.64	-	-	-	F	4	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	LS, FROWE, Rec lookout, Utility	
16N56	Martis Tie	F	2.06	A	-	-	F	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	PROW, Utility, Comm Site	
16N71	Mt. Watson Access	F/S	1.86	A	-	Y	F/S	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	LS, FROWN, PROWN, Utility,	
16N73E	Watson Peak	F	2.11	A	-	-	F	2	Y	L	H	1	3	1	3	9	L	5	5	5	5	5	3	23	H	LS, TNF	
Low Risk, High Benefit			27.15 Miles	82 Roads																							

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Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments 1/		
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																										R
Low Risk, Moderate Benefit																										
1102	Echo Lakes Parallel	F	0.44		-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	3	3	5	1	17	M	RecRes, Utility
1104	Echo Summit North	F	0.75		-	-	F	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	Utility, AgmntG
1104A	Echo Summit North A Spur	F	0.06		-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW
1104B	Echo Summit North B Spur	F	0.10		-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW
1204	Old Meyers Landfill	F	0.82		-	-	F	3	Y	L	M	1	3	1	1	3	9	L	5	1	3	5	3	17	M	LS, Utility, FROWN, AgmntG
1213A	Big Meadow Trailhead	F	0.20		-	-	F	3	Y	L	M	1	1	1	1	1	5	L	1	5	5	5	1	17	M	Trailhead
12N02	STPUD Storm Drain Access	F	0.60		-	-	P	2	Y	L	M	1	1	1	1	1	5	L	5	1	5	5	1	17	M	LS, Utility access needed
12N19A	Tahoe Mtn Water Tank Road	F	0.25		-	-	P	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility
12N28	Sand Pit Access Road	F	0.30	A	-	-	F	2	Y	L	M	1	1	1	3	1	7	L	1	5	3	5	1	15	M	Trailhead
12N28A	Sand Pit OHV Area	F	0.11	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	Trailhead
12N30	Sawmill Pond Parking Area	F	0.17	A	-	-	F	3	Y	L	M	1	3	1	1	1	7	L	1	5	5	5	1	17	M	Trailhead
12N30A	Twin Peaks Road	F	1.42	A	-	-	F	2	Y	L	M	1	3	1	3	1	9	L	1	5	3	5	1	15	M	4X4 Recreation road
12N30B	Twin Peaks Rock Climb	F	0.35	A	-	-	F	2	Y	L	M	1	3	1	1	1	7	L	1	5	1	5	1	13	M	4X4 Challenge Route
12N30C	Twin Peaks Lower Lookout	F	0.48	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	1	5	1	13	M	4X4 Recreation road
12N30D	Twin Peaks Loop Road	F	0.10	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	4X4 Recreation road
1304B	Fallen Leaf Dam Access	F	0.17		-	-	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility
1379A	Camp Shelly Campground A	F	0.21	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility
1379B	Old Lutheran Camp	F	0.43	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility
13N28	Old Bayview Pit	F	0.16		-	-	F	2	Y	L	M	3	1	1	1	1	7	L	1	1	3	5	1	11	M	closed
14N32D	Genoa Peak Road D Spur	F	0.51		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	3	1	1	11	M	PROW
14N37	West Tahoe Water Company	F	1.50		-	-	P	1	Y	L	M	3	1	5	3	1	13	L	5	1	5	5	1	17	M	LS, Inactive SUP to Jewel Water Co., closed
14N40B	Ellis Peak Road	F	0.69	A	-	-	F	2	Y	L	M	1	1	1	1	5	9	L	1	3	5	1	5	15	M	Historical
14N45	Shakespeare Point	F	0.86		-	Y	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	LS, FROW, FROWN, Utility,
1507	Tahoe Tavern Road	F	0.27		-	-	P	4	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	Recreation, RecRes, Utility, FROW, PROW
1546A	Fir Crags A Spur	F	0.20		-	-	P	3	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	RecRes, Utility
15N60A	Landa Camp Road	F	0.38		-	-	F	2	Y	L	M	1	1	1	3	1	7	L	5	1	3	3	1	13	M	Dispersed Recreation Access
16N57A	Red Cedar Overlook A Spur	F	0.19	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility
16N57B	Red Cedar Overlook B Spur	F	0.62	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility
16N73B	Section 9 East Spur	F	0.83		-	-	F	2	Y	L	M	3	1	1	1	3	9	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73C	Section 9 Middle Spur	F	1.26		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73D	Section 9 West Spur	F	1.75		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73G	Painted Rock North	F	0.62		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	FROW, Utility, TNF
16N74A	Sawmill Flat A Spur	F	0.50		Y	-	F	2	N	L	M	1	1	1	3	3	9	L	5	1	1	5	1	13	M	
16N91	Stateline Powerline	F	0.77		-	-	P	1	Y	L	M	3	1	1	3	2	10	L	1	1	1	5	3	11	M	closed, Utility
17N84	Juniper Creek Road	F	0.98		-	-	F	2	Y	L	M	1	1	1	1	1	5	L	5	1	3	1	1	11	M	TNF
Low Risk, Moderate Benefit			19.04 Miles	35 Roads																						
Low Risk, Low Benefit																										
1327	Cascade Stables	P	0.70		-	-	P	4	N	L	L	1	1	1	1	1	5	L	1	0	1	5	1	8	L	LS, Private road, Administrative ROW, No RMO
1472	Snow Valley Peak Trailhead	L	0.07		-	-	F	4	Y	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	Trailhead
14N32B	Genoa Peak Road B Spur	F	2.40		Y	Y	F	2	N	L	L	1	3	1	1	1	7	L	1	1	3	1	1	7	L	HTNF
16N53A	Deer Creek Road A Spur	F	0.06		Y	-	F	2	N	L	L	1	1	1	1	1	5	L	5	1	1	1	1	9	L	
16N76	Mt. Pluto	F	1.38		-	-	P	1	Y	L	L	3	1	1	1	1	7	L	1	1	1	5	1	9	L	LS, FROWN, PROWE, Comm Site, Ski Area
16N77B	Hanes Flat B Spur	F	0.06		Y	-	F	1	N	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	closed
16N77D	Hanes Flat D Spur	F	0.20		Y	-	F	1	N	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	closed
Low Risk, Low Benefit			4.87 Miles	7 Roads																						

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APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments 1/			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking		
																										R	B
03	Barker Pass Road	F	7.14	H	-	-	F	4	Y	H	H	5	5	5	5	3	23	H	5	5	5	5	1	21	H	PROW, utilities	
1102	Echo Lakes Parallel	F	0.44		-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	3	3	5	1	17	M	RecRes, Utility	
1103	Echo Summit South	F	0.35		-	-	F	3	Y	L	H	1	1	1	1	3	7	L	5	3	5	5	5	23	H	Utility, AgmntG, Historical	
1104	Echo Summit North	F	0.75		-	-	F	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	Utility, AgmntG	
1104A	Echo Summit North A Spur	F	0.06		-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW	
1104B	Echo Summit North B Spur	F	0.10		-	-	P	3	Y	L	M	1	1	1	1	1	5	L	5	1	3	5	1	15	M	RecRes, AgmntG, Utility, PROW	
1105	Echo Lakes Road	F	1.20		-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, AgmntG, Eldorado CO plow	
1105A	Echo Lakes Road A Spur	F	0.24		-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1105B	Echo Lakes Road B Spur	F	0.21		-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1105C	Berkeley Camp	F	0.15		-	-	P	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1105D	Echo Lakes Road D Spur	F	0.12		-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, AgmntG	
1106	Johnson Pass Road	F	1.34		-	Y	S/F	3	Y	L	H	3	3	1	1	1	9	L	5	5	5	5	1	21	H	LS, RecRes, AgmntG wCA Hwy Bypass	
1106A	Johnson Pass Road A Spur	F	0.15		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1106B	Snow Park at Echo Summit	F	0.20		-	-	F	3	Y	L	H	1	3	1	1	1	7	L	5	5	3	5	1	19	H	Snow Park Trailhead	
1107	Old Meyers Grade	F	1.51		-	Y	S	3	Y	M	H	1	5	5	3	3	17	M	5	1	3	5	5	19	H	LS, SUP-E, Utility, AgmntG, Historical	
1110	Hawley Grade Access Road	F	0.30	A	-	-	P	3	Y	H	H	5	5	5	3	5	23	H	5	5	5	5	5	25	H	AgmntG, RecRes, Utility, Historical	
1111	Bridge Tract Road	F	0.24	A	-	-	P	3	Y	H	H	5	5	5	5	1	3	19	H	5	5	5	5	5	25	H	AgmntG, RecRes, Utility, Historical
1112	Pack Station Road	F	0.11	A	-	-	F	3	Y	M	H	1	5	5	1	3	15	M	5	3	5	5	5	23	H	Historical, AgmntNG	
11N13	Grass Lake Road	F	1.50		-	-	F	1	Y	H	L	1	3	5	5	5	19	H	1	1	1	5	1	9	L	closed	
1201	Fountain Place Road	F	4.33	H	-	-	F	3	Y	H	H	3	5	5	5	3	21	H	5	5	5	5	5	25	H	PROW, RUPC, Utility, historical	
1203	Stanford Hill Tract	F	0.20		-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	RecRes, AgmntG, historical	
1204	Old Meyers Landfill	F	0.82		-	-	F	3	Y	L	M	1	3	1	1	3	9	L	5	1	3	5	3	17	M	LS, Utility, FROWN, AgmntG	
1205	Stanford Hill	F	0.29		-	-	P	3	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes	
1205A	Stanford Hill A Spur	F	0.11		-	-	P	4	Y	L	H	1	5	1	1	2	10	L	5	5	5	5	1	21	H	RecRes	
1206	Meyers Administrative Site	F	0.14		-	-	F	4	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site	
1206A	Meyers Admin Loop	F	0.07		-	-	F	3	Y	L	H	1	1	1	1	2	6	L	5	5	5	5	1	21	H	Administrative Site	
1207	Rainbow Tract	F	0.95	A	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	SUP, RecRes Mtce, AgmntG	
1207A	Rainbow Tract A Spur	F	0.10		-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1207B	Rainbow Tract B Spur	F	0.28		-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	RecRes, AgmntG	
1207C	Rainbow Tract C Spur	F	0.15		-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, AgmntG	
1209	Pope Beach	F	1.10	H	-	-	F	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation, Utility	
1212	Fredericks Road	F	0.23	H	-	-	F	3	Y	H	H	5	5	5	3	3	21	H	5	5	5	5	1	21	H	Recreation, SUP	
1213	Old Luther Pass Highway	F	0.98	H	-	-	F	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	Utility, AgmntG, Historical	
1213A	Big Meadow Trailhead	F	0.20		-	-	F	3	Y	L	M	1	1	1	1	1	5	L	1	5	5	5	1	17	M	Trailhead	
1214	Angora Ridge Road	F	2.99	H	-	-	P	3	Y	H	H	5	3	5	3	3	19	H	5	5	5	5	5	25	H	Rec lookout, SUP-E, RecRes, AgmntNG	
1215	Stanford Camp	F	0.56		-	Y	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H	LS, FROWE, RecRes, AgmntG	
1216	Glen Alpine Trailhead	F	1.78		-	-	P	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	5	25	H	FROWN, PROWE, RecRes, utility, historical	
1216A	Alpine Falls Tract	F	0.10		-	-	P	2	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	RecRes, utility, PROW, WR, historical	
1226	Pope Marsh Pump Station	F	0.25		-	-	P	1	Y	M	M	1	3	5	1	1	11	M	5	1	5	5	1	17	M	Utility, closed	
12N01A	Saxon Creek Road	F	2.20	A	-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	5	5	5	1	17	M	Dispersed Recreation Access	
12N01D	Hellhole	F	1.95	A	-	-	F	2	Y	M	M	1	5	5	3	3	17	M	1	3	3	5	1	11	M	Dispersed Recreation Access	
12N02	STPUD Storm Drain Access	F	0.60		-	-	P	2	Y	L	M	1	1	1	1	1	5	L	5	1	5	5	1	17	M	LS, Utility access needed	
12N08	Powerline Road	F	2.65	A	-	-	F	2	Y	H	H	5	3	5	3	21	H	5	5	5	5	5	3	23	H	LS, FROWN, partial Utility access	
12N14A	Angora Resort Service Road	F	0.60		-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, RecRes	
12N15	Trout Creek Slope	F	1.73		-	-	P	2	Y	M	M	3	1	1	3	3	11	M	5	1	5	5	1	17	M	Utility, closed	
12N16	Glen Alpine Springs	F	1.79		-	-	F	2	Y	H	H	3	5	5	3	5	21	H	5	5	5	5	5	25	H	LS, RecRes, Utility, PROWE, FROWE, Historical	
12N16A	Fish Hatchery Tract	F	0.18		-	-	P	2	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, Utility, PROW, FROW	
12N17	Saxon Tie Road	F	0.60	A	-	-	F	2	Y	L	H	1	1	3	1	3	9	L	5	5	5	5	1	21	H	Utility	
12N18	Spray Road	F	1.43		-	-	F	2	Y	M	H	1	3	1	3	3	11	M	5	1	5	5	5	21	H	Utility	
12N19	Tahoe Mountain Road	F	1.90		-	-	F	2	Y	M	M	1	3	1	3	3	11	M	5	1	3	5	1	15	M	Utility	
12N19A	Tahoe Mtn Water Tank Road	F	0.25		-	-	P	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility	

APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments ^{1/}		
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking	
																										R
12N20	Osgood Road	F	2.31				F	1	Y	M	M	3	1	5	5	1	15	M	5	1	5	5	1	17	M	Maintenance Level Error?
12N20C	Osgood Road C Spur	F	0.20				F	2	Y	M	M	3	3	5	1	1	13	M	5	1	5	5	1	17	M	Maintenance Level Error?
12N21	High Meadows Road	F	3.21	A	-	-	F	2	Y	H	H	5	3	5	5	1	19	H	5	5	5	5	1	21	H	FROW, PROW, Utility, AgmntG
12N21A	High Meadows Ridge Road	F	1.50		-	-	F	2	Y	H	M	5	3	5	5	1	19	H	1	1	3	5	1	11	M	LS, Forest Service ownership
12N21B	High Meadows East Road	F	0.70		-	-	F	2	Y	M	M	1	3	5	5	1	15	M	1	1	3	5	1	11	M	
12N21C	ROW - powerline access	F	2.98		-	-	P	1	Y	M	L	1	5	5	5	1	17	M	5	1	1	1	1	9	L	LS, ROW powerline
12N23	Pyramid Circle Spur	P	0.46		-	-	P	2	Y	M	M	1	1	5	5	5	17	M	1	1	3	5	1	11	M	Utility
12N28	Sand Pit Access Road	F	0.30	A	-	-	F	2	Y	L	M	1	1	1	3	1	7	L	1	5	3	5	1	15	M	Trailhead
12N28A	Sand Pit OHV Area	F	0.11	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	Trailhead
12N30	Sawmill Pond Parking Area	F	0.17	A	-	-	F	3	Y	L	M	1	3	1	1	1	7	L	1	5	5	5	1	17	M	Trailhead
12N30A	Twin Peaks Road	F	1.42	A	-	-	F	2	Y	L	M	1	3	1	3	1	9	L	1	5	3	5	1	15	M	4X4 Recreation road
12N30B	Twin Peaks Rock Climb	F	0.35	A	-	-	F	2	Y	L	M	1	3	1	1	1	7	L	1	5	1	5	1	13	M	4X4 Challenge Route
12N30C	Twin Peaks Lower Lookout	F	0.48	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	1	5	1	13	M	4X4 Recreation road
12N30D	Twin Peaks Loop Road	F	0.10	A	-	-	F	2	Y	L	M	1	1	1	1	1	5	L	1	5	3	5	1	15	M	4X4 Recreation road
12N40	Roundabout Road	F	5.13		-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Comm site, Ski Area Permit, FROWN, FROWE, PROWE
12N40A	West Roundabout Road	F	0.62		-	Y	P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	5	1	21	H	LS, Heavenly Ski Area Permit, FROWN, PROWN
12N40B	A/C Cache Road	F	0.08		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Heavenly Ski Area Permit
12N40C	Water Quality Road	F	0.44		-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40D	Swing Road	F	0.46		-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40E	Roundabout Road E Spur	F	0.21		-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N40F	Roundabout Road F Spur	F	0.15		-	-	P	2	Y	L	H	1	1	1	3	1	7	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41	Grove Shop Road	F	0.50		-	-	P	2	Y	M	H	1	1	5	5	1	13	M	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41A	677 Road	F	0.15		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
12N41B	Top of the Tram Road	F	0.17		-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	3	1	19	H	Heavenly Ski Area Permit
1301	Fallen Leaf Campground	F	1.35	H	-	-	P	4	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	1	21	H	Recreation, Utility
1301A	Fallen Leaf CG Spur A	F	0.16	H	-	-	P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301B	Fallen Leaf CG Spur B	F	0.25	H	-	-	P	4	Y	M	H	1	5	1	3	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301C	Fallen Leaf CG Spur C	F	0.30	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301D	Fallen Leaf CG Spur D	F	0.30	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1301F	Fallen Leaf CG Spur F	F	0.47	H	-	-	P	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301G	Fallen Leaf CG Spur G	F	0.30	H	-	-	P	4	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1301H	Fallen Leaf CG Spur H	F	0.11	H	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1302	Tallac Historic Site	F	0.45	H	-	-	F	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Historical, AgmntG, Utility
1303	Baldwin Administrative Site	F	0.11		-	-	F	4	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1303F	Baldwin Administrative Spur	F	0.10		-	-	F	3	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	1	21	H	Administrative, Utility
1304	Cathedral Road	F	2.75	H	-	-	F	3	Y	M	H	1	5	1	3	3	13	M	5	5	5	5	3	23	H	LS, SUP-E, Utility, RecRes, PROWN, FROWN, Historical
1304A	Taylor Creek Parking Lot	F	0.25		-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	1	21	H	Trailhead, Utility
1304B	Fallen Leaf Dam Access	F	0.17		-	-	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	Utility
1304C	Old Mill Road	F	0.27		-	-	F	3	Y	L	H	1	3	1	1	3	9	L	5	3	3	5	3	19	H	Utility, closed, Historical
1304D	Gauge Road	F	0.17	H	-	-	P	3	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	LS, RecRes, Utility, SUP-E, PROWN, FROWN
1305	Baldwin Beach	F	0.90	H	-	-	F	4	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	Recreation, Utility
1305A	Baldwin Beach Spur	F	0.05	H	-	-	F	4	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	Recreation, Utility, SUP-E
1306	Mt. Tallac Trailhead	F	0.83	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Trailhead, Utility, SUP-E
1306A	Camp Concord	F	0.30	H	-	-	F	3	Y	M	H	1	5	1	3	1	11	M	5	5	5	3	1	19	H	Recreation, Utility, SUP-E
1307	Spring Creek Road	F	0.95	H	-	-	P	4	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307A	Hupa Road	F	0.05	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307B	Karok Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307C	Wiyot Road	F	0.14	H	-	-	P	3	Y	H	H	5	5	5	5	1	21	H	5	5	5	5	1	21	H	RecRes, Utility, SUP-E
1307D	Yurok Road	F	0.38	H	-	-	P	4	Y	M	H	5	5	5	1	1	17	M	5	5	5	5	1	21	H	RecRes, Utility, SUP-E

APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING						BENEFIT RANKING						Comments ^{1/}			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access		Overall Benefit Total	Overall Benefit Ranking	
																										R
1308	Inspiration Point Vista	F	0.10	H	-	-	F	4	Y	M	M	5	5	1	1	1	13	M	1	5	3	5	1	15	M	Emerald Bay Overlook
1309	Bayview Campground	F	0.25	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1309A	Bayview Campground A Spur	F	0.10	H	-	-	P	3	Y	M	M	3	5	1	1	1	11	M	1	5	3	5	1	15	M	Recreation
1310	Eagle Falls Parking	F	0.06		-	-	F	4	Y	M	M	1	5	5	1	1	13	M	1	5	3	5	1	15	M	Trailhead
1311	Tallac Point	F	0.54	H	-	-	F	4	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1311A	Tallac Point A Spur	F	0.12		-	-	F	3	Y	M	H	3	5	1	1	3	13	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1316	Valhalla Estate	F	0.38	H	-	-	P	4	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317	Baldwin Museum	F	0.31	H	-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1317A	Pope Estate Service Road	F	0.10		-	-	P	3	Y	M	H	1	5	1	1	3	11	M	5	5	5	5	5	25	H	Recreation, Historical, Utility
1318	Jamison Beach Road	F	0.25		-	-	P	4	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	5	25	H	LS, Recreation, PROWE, FROWE, Historical
1319	Camp Richardson Trailer Camp	F	0.40		-	-	P	3	Y	M	M	1	5	1	1	3	11	M	5	5	5	5	1	21	H	Recreation, Utility
1320	Camp Richardson	F	0.44	H	-	-	P	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1321	Camp Richardson	F	0.58	H	-	-	P	3	Y	M	H	1	5	5	1	3	15	M	5	5	5	5	1	21	H	Recreation, Utility
1322	Camp Richardson Corral	F	0.09	H	-	-	P	3	Y	M	H	1	5	1	1	5	13	M	5	5	5	5	5	25	H	Recreation, Historical
1330	Upper Emerald Bay Road	F	0.38	H	-	-	P	3	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	3	23	H	RecRes, SUP-E, Historical
1332	Lower Emerald Bay Road	F	0.12		-	-	P	3	Y	M	H	5	5	1	1	3	15	M	5	5	5	5	3	23	H	RecRes, SUP-E, Historical
1334	Lane's Lane	F	0.19		-	Y	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation, PROW
1335	Lake Tahoe Visitors Center	F	0.37	H	-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335A	Visitor Parking Spur A	F	0.12		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335B	Visitor Parking Spur B	F	0.06		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1335C	Visitor Parking Spur C	F	0.06		-	-	F	4	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Visitor Center, Utility, Historical
1336	Taylor Creek Flats	F	0.21		-	-	F	3	Y	M	H	3	3	1	1	3	11	M	5	1	3	5	5	19	H	Utility, Historical, closed
1337	Nevada Beach Campground	F	0.56	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337C	Nevada Beach CG Spur C	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation
1337D	Nevada Beach CG Spur D	F	0.10	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337E	Nevada Beach CG Spur E	F	0.16	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337F	Nevada Beach CG Spur F	F	0.04	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1337G	Nevada Beach CG Spur G	F	0.10	H	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338	Nevada Beach	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338A	Nevada Beach Picnic Spur A	F	0.20		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338B	Nevada Beach Picnic Spur B	F	0.29		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1338C	Nevada Beach Picnic Spur C	F	0.06		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation
1339	Roundhill Pines Resort	F	0.42	H	-	-	P	4	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, SUP
1339B	Roundhill Pines Lodge	F	0.14		-	-	P	3	Y	M	H	1	3	1	1	5	11	M	5	5	5	5	5	25	H	Recreation, Historical
1340	Zephyr Cove Resort	F	0.05		-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility
1340A	Zephyr Cove Resort A Spur	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	LS, Recreation, Utility
1340B	Zephyr Cove Resort B Spur	F	0.29		-	-	P	3	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	1	21	H	LS, Recreation, Utility
1340C	Zephyr Cove Resort Parking	F	0.10		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1340D	Zephyr Cove Resort Parking	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341	Zephyr Cove Resort	F	0.25		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341A	Campground Spur A	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341B	Campground Spur B	F	0.07		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341C	Campground Spur C	F	0.11		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341D	Campground Spur D	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341E	Campground Spur E	F	0.07		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341F	Campground Spur F	F	0.09		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341G	Campground Spur G	F	0.10		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341H	Campground Spur H	F	0.13		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341I	Campground Spur I	F	0.05		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341J	Campground Spur J	F	0.03		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility
1341K	Campground Spur K	F	0.15		-	-	P	3	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	Recreation, Utility
1341L	Campground Spur L	F	0.25		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility

APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING							BENEFIT RANKING							Comments ^{1/}			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking		
																										R	B
1341W	Boat Parking	F	0.06	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1342A	Zephyr Cove Stables Parking	F	0.04	-	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility	
1342B	Zephyr Cove Stables Picnic Acc	F	0.06	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, Utility	
1379	Camp Shelly Campground	F	0.52	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utility	
1379A	Camp Shelly Campground A	F	0.21	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility	
1379B	Old Lutheran Camp	F	0.43	H	-	-	P	3	Y	L	M	3	1	1	1	1	7	L	5	1	3	5	1	15	M	Recreation, Utility	
1393	Alliklik Road	F	0.19	H	-	-	P	3	Y	M	H	5	5	1	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1393A	Cahuilla Road	F	0.07	H	-	-	P	3	Y	M	H	5	5	3	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1394	Mattole Road	F	0.59	H	-	-	P	3	Y	H	H	3	5	5	5	1	19	H	5	5	5	5	1	21	H	RecRes, SUP-E	
1394A	Maidu Road	F	0.08	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1394B	Mattole Court	F	0.05	-	-	-	P	3	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395	Nicoleno Road	F	0.20	H	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395A	Nicoleno Court	F	0.04	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395B	Palwin Road	F	0.05	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1395C	Wiyot Road	F	0.04	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1396	Pomo Road	F	0.39	H	-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, SUP-E	
1396A	Pomo Court	F	0.05	-	-	-	P	3	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	RecRes, SUP-E	
13N20	Rabe Meadows	F	0.31	-	-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed	
13N20A	Rabe Meadows A Spur	F	0.31	-	-	-	F	1	Y	M	M	1	3	5	1	1	11	M	1	1	3	5	1	11	M	closed	
13N20B	Rabe Meadows B Spur	F	0.63	-	-	-	F	1	Y	M	M	1	3	5	3	1	13	M	1	1	3	5	1	11	M	closed	
13N28	Old Bayview Pit	F	0.16	-	-	-	F	2	Y	L	M	3	1	1	1	1	7	L	1	1	3	5	1	11	M	closed	
13N29	Cascade Lake Road	P/F	1.14	-	-	Y	P/F	2	Y	M	H	5	1	5	1	5	17	M	5	1	3	5	5	19	H	LS, PROWE, FROWE, Historical	
13N42	Zephyr Cove Water Tank	F	0.49	-	-	-	P	1	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	1	21	H	Recreation, closed	
13N52	Upper Mt. Road	P	4.91	-	-	-	P	2	Y	M	H	1	3	5	5	1	15	M	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52A	Top of Galaxi Road	F	0.07	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52B	Top of Mott Canyon Road	F	0.35	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52D	Comet Road	F	0.03	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52F	Upper Mt. Road F Spur	F	0.34	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52H	Upper Mt. Road H Spur	F	0.65	-	-	-	P	2	Y	M	H	1	3	5	3	1	13	M	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N52I	Powder Bowl Loop	F	0.15	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53	Way Home Road	F	2.26	-	-	-	P	2	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53A	Wells Fargo Road	F	0.22	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit
13N53B	Nevada Water Tank Road	F	0.11	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53C	Top of Bolder Road	F	0.28	-	-	-	P	2	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	3	1	19	H	LS, Heavenly Ski Area Permit
13N53D	Tower Road	F	0.70	-	-	-	P	2	Y	M	H	1	1	5	5	3	15	M	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N53E	Mott Canyon Base Road	F	0.95	-	-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N54	Pepi's Crossover	F	1.77	-	-	-	P	2	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N54A	Georges Road	F	0.30	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N55	East Peak Loop	F	0.32	-	-	-	P	2	Y	M	H	1	3	5	1	3	13	M	5	5	5	5	3	1	19	H	Heavenly Ski Area Permit
13N78	Skyland Water Tank	F	0.55	-	-	-	P	2	Y	M	M	5	3	5	1	2	16	M	5	1	5	5	1	17	M	Utility, closed	
13N81	Fallen Leaf Water Tower	F	0.20	-	-	-	P	2	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation, Utility, closed	
13N82	Kingsbury Sewerline	F	1.52	-	-	-	F	2	Y	M	H	1	3	5	5	3	17	M	5	1	5	5	5	21	H	LS, PROWE, FROWE, Utilities, Historical	
13N82A	Kingsbury Sewerline A Spur	F	0.55	-	-	-	P	1	Y	H	M	3	3	5	5	3	19	H	5	1	5	5	1	17	M	closed	
1414	Meeks Bay Beach Access	F	0.30	H	-	-	P	4	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414A	Meeks Bay Campground	F	0.45	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414B	Meeks Bay Point House	F	0.14	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414C	Meeks Bay Campground Spur	F	0.08	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, utilities	
1414D	Meeks Bay Beach Parking	F	0.11	H	-	-	P	3	Y	L	H	1	3	3	1	1	9	L	5	5	5	5	1	21	H	Recreation, utilities	
1418	Meeks Bay Resort	F	0.29	H	-	-	P	3	Y	M	H	1	3	5	1	1	11	M	5	5	5	5	1	21	H	Recreation, Utilities, RecRes	
1418A	Meeks Bay Campground	F	0.39	-	-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	Recreation, utilities	
1451	Old Glenbrook Highway	F	1.33	-	-	-	F	2	Y	M	H	1	1	5	3	5	15	M	5	1	3	5	5	19	H	LS, closed, Utility, Historical, FROWN	
1453	Spooner Snowplay	F	0.21	-	-	-	F	4	Y	M	M	1	1	5	3	5	15	M	1	1	5	5	3	15	M	Historical	
1472	Snow Valley Peak Trailhead	L	0.07	-	-	-	F	4	Y	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	Trailhead	

APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING						BENEFIT RANKING						Comments ^{1/}			
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access		Overall Benefit Total	Overall Benefit Ranking	
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1475	Spoooner Guard Station	F	0.12	H	-	-	F	3	Y	M	M	1	5	5	3	3	17	M	5	1	5	5	1	17	M	Administrative Site
14N30	Slaughterhouse Canyon	F	1.72		-	-	F	2	Y	M	H	3	3	5	3	2	16	M	5	1	5	3	5	19	H	LS, FROWN, closed, Utility, Historical
14N30A	Slaughterhouse RR Grade Road	F	1.50		-	-	F	2	Y	M	M	1	1	5	5	5	17	M	1	1	5	3	5	15	M	LS, Reciprocal ROW w/ State, Utility, Historical
14N32	Genoa Peak Road	F	9.51	A	-	-	F	2	Y	M	H	1	3	5	3	5	17	M	5	5	5	1	5	21	H	LS, Utility, FROWN, PROW, Historical, WR
14N32A	White Hill	F	0.60	A	-	-	F	2	Y	L	H	1	1	1	1	5	9	L	5	1	5	5	5	21	H	Utility, Historical, WR
14N32C	Genoa Peak Road C Spur	F	0.49	A	-	-	F	2	Y	M	M	3	1	1	1	5	11	M	1	1	3	1	5	11	M	Historical
14N32D	Genoa Peak Road D Spur	F	0.51		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	3	1	1	11	M	PROW
14N33	Logan House Loop	F	6.58	A	-	-	F	2	Y	H	H	1	5	5	5	5	21	H	5	5	3	1	5	19	H	Utility, PROW, Historical
14N33A	Logan House Loop A Spur	F	0.63		-	-	F	2	Y	H	M	1	5	5	3	5	19	H	5	3	3	1	5	17	M	Utility, Historical
14N34A	Noonchester Mine Road	F	2.47	A	-	-	F	2	Y	H	H	1	3	5	5	5	19	H	1	5	5	3	5	19	H	Historical
14N37	West Tahoe Water Company	F	1.50		-	-	P	1	Y	L	M	3	1	5	3	1	13	L	5	1	5	5	1	17	M	LS, Inactive SUP to Jewel Water Co., closed
14N40	Ellis Lake Road	F	2.57	A	-	-	F	2	Y	H	M	1	5	5	3	5	19	H	1	5	5	1	5	17	M	Historical
14N40A	Bucks Lake Road	F	0.27	A	-	-	F	2	Y	M	M	1	3	1	1	5	11	M	1	3	5	1	5	15	M	Historical
14N40B	Ellis Peak Road	F	0.69	A	-	-	F	2	Y	L	M	1	1	1	1	5	9	L	1	3	5	1	5	15	M	Historical
14N42	Meeks Creek North	F	1.89		-	-	F	1	Y	M	H	1	3	5	3	3	15	M	5	3	5	3	3	19	H	LS, FROWE, PROWE, Utility, Historical
14N43	Lonely Gulch Pit	F	0.10		-	-	F	2	Y	M	M	5	3	1	1	1	11	M	1	1	3	5	1	11	M	
14N44	Meeks Creek South	F	1.61		-	-	F	1	Y	M	H	1	5	5	1	5	17	M	5	5	5	3	1	19	H	LS, FROWE, Utility, closed
14N45	Shakespeare Point	F	0.86		-	Y	F	2	Y	L	M	1	3	1	3	1	9	L	5	1	3	5	1	15	M	LS, FROWE, FROWN, Utility, Utility
14N46	Spoooner Burn	F	0.95		-	-	F	2	Y	M	M	1	1	1	3	5	11	M	1	1	3	5	5	15	M	Utility, Historical
14N57	Lake Bigler Toll Road	F	0.75		-	Y	F	2	Y	H	H	1	5	5	5	5	21	H	5	1	5	5	5	21	H	LS, PROWN, FROWN, Historical
1503A	Kaspian Campground	F	0.04		-	-	P	4	Y	M	H	3	5	1	1	1	11	M	5	5	5	5	1	21	H	Recreation
1503B	Blackwood Mill Spur	F	0.15		-	-	F	2	Y	M	M	1	3	5	1	1	11	M	5	1	1	5	1	13	M	Stockpile Site
1507	Tahoe Tavern Road	F	0.27		-	-	P	4	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	Recreation, RecRes, Utility, FROW, PROW
1508	Truckee River Access	F	0.51	H	-	-	P	4	Y	M	M	1	5	5	5	1	17	M	5	5	1	5	1	17	M	RecRes, Utility
1509	Chimney Beach Parking	F	0.10	H	-	-	F	4	Y	M	H	3	5	1	1	1	11	M	5	5	3	5	1	19	H	Trailhead
1528	William Kent Campground	F	0.71	H	-	-	P	4	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	FROW, Recreation, utility
1528A	WM Kent Spur A	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528B	WM Kent Spur B	F	0.07	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528C	WM Kent Spur C	F	0.24	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1528D	WM Kent Spur D	F	0.17	H	-	-	P	3	Y	L	H	1	1	1	1	1	5	L	5	5	5	5	1	21	H	Recreation
1529	William Kent Beach Access	F	0.03		-	-	P	4	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	Recreation
1530	Twin Crags	F	0.76	H	-	-	P	4	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility
1530A	Twin Crags A Spur	F	0.19		-	-	P	3	Y	L	H	1	3	1	1	1	7	L	5	5	5	5	1	21	H	RecRes, Utility
1532	Truckee River Summer home	F	0.13		-	-	P	3	Y	M	H	3	1	5	1	5	15	M	5	5	5	5	5	25	H	RecRes, Utility, Historical
1546	Fir Crags	F	0.35		-	-	P	3	Y	M	H	3	5	5	1	1	15	M	5	5	5	5	1	21	H	RecRes, Utility
1546A	Fir Crags A Spur	F	0.20		-	-	P	3	Y	L	M	1	5	1	1	1	9	L	5	1	5	5	1	17	M	RecRes, Utility
1565	Secret Harbor Parking	F	0.09	H	-	-	F	3	Y	L	H	3	1	1	1	3	9	L	1	5	5	5	3	19	H	Historical
1566	Secret Harbor Road	F	1.20		-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead
1566A	Secret Harbor Road A Spur	F	0.90		-	-	F	3	Y	H	M	3	3	5	5	3	19	H	5	1	3	5	1	15	M	LS, PROWE, Utility, Trailhead
15N09A	Mine Shaft Road	F	0.59		-	-	F	2	Y	H	M	3	5	5	5	1	19	H	1	1	5	5	1	13	M	PROW
15N35	Stanford Rock	F	4.70		-	-	F	2	Y	H	M	3	5	5	5	3	21	H	1	1	5	1	3	11	M	closed, Historical
15N38	Blackwood Creek - Middle	F	3.74	A	-	-	F	3	Y	H	H	3	5	5	5	3	21	H	5	5	5	5	1	21	H	Recreation, Utility
15N38A	Blackwood Creek OHV Staging	F	0.10	A	-	-	F	3	Y	L	H	1	5	1	1	1	9	L	5	5	5	5	1	21	H	Trailhead, Utility
15N60	Paige Meadows Road	F	1.50	A	-	-	F	2	Y	M	H	1	5	5	1	1	13	M	5	5	5	5	1	21	H	LS, Utility, FROWN
15N60A	Landa Camp Road	F	0.38		-	-	F	2	Y	L	M	1	1	1	3	1	7	L	5	1	3	3	1	13	M	Dispersed Recreation Access
15N62	Ward Creek Road	F	3.11		-	-	F	2	Y	H	M	1	5	5	5	3	19	H	5	1	1	3	1	11	M	PROW, Utility
15N64A	Snow Valley Peak	F	1.14		-	-	F	2	Y	M	L	1	1	5	5	3	15	M	5	1	1	1	1	9	L	LS, FROWN or HTNF, Comm Site Access
15N67	Skunk Harbor Road	F	1.55		-	-	F	2	Y	H	H	5	5	5	5	5	25	H	5	1	3	5	5	19	H	LS, FROWE, PROWE, Tribal access

APPENDIX A TABLE 3 - MINIMUM ROAD SYSTEM RECOMMENDATIONS

Lake Tahoe Basin Management Unit

ROAD SUMMARY											RISK RANKING							BENEFIT RANKING						Comments ^{1/}		
Route	Name	Jurisdiction	Length	Travel Management	Decommission	Jurisdiction Transfer	Maintenance Responsibility	Operational Maintenance Level	Minimum Road	Recommended Risk/Benefit Category	Wildlife	Botany	Fishery	Hydrology and Soils	Heritage	Overall Risk Total	Overall Risk Ranking	Land and Special Uses	Recreation and Special Uses	Fire	Vegetation and Fuels	Heritage and Tribal Access	Overall Benefit Total		Overall Benefit Ranking	
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1601	Stalene Lookout	F	0.64		-	-	F	4	Y	M	M	3	3	5	5	1	17	M	5	1	3	5	1	15	M	LS, FROWE, Rec lookout, Utility
16N48	Deer Park	F	2.99		-	-	F	2	Y	M	M	3	3	5	5	1	17	M	5	1	3	5	1	15	M	FROW
16N48A	Scott Peak	F	2.75		-	-	F	1	Y	M	L	3	3	5	5	1	17	M	1	1	3	1	1	7	L	closed
16N49	Watson Creek Road	F	2.70	H	-	-	F	2	Y	H	H	1	5	5	5	3	19	H	5	5	5	5	1	21	H	
16N50	Watson Lake Road	F	1.55	A	-	-	F	3	Y	M	H	3	5	1	3	15	M	5	5	5	5	1	21	H	LS, No rights to record or needed	
16N50A	Watson Lake Road A Spur	F	0.17		-	-	F	2	Y	M	M	3	1	5	1	3	13	M	1	5	5	5	1	17	M	
16N52	Gas Line Road	F/C	3.90	A	-	Y	F/C	2	Y	H	H	5	3	5	5	1	19	H	5	3	5	5	1	19	H	LS, County road through CTC, Sec6
16N53	Deer Creek Road	F	1.29		-	-	F	2	Y	M	L	3	1	5	3	1	13	M	5	1	1	1	1	9	L	TNF
16N54	Martis Slope Sec 6 Rd	C	1.54	A	-	Y	C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS, County Road, Sec6
16N55	Martis Slope	F/C	2.68	A	-	Y	F/C	2	Y	M	M	3	3	1	3	1	11	M	5	5	5	1	1	17	M	LS,Part County Rd, Utility, Comm Site,Sec6
16N56	Martis Tie	F	2.06	A	-	-	F	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	PROW, Utility, Comm Site
16N57	Red Cedar Overlook	F	0.41	A	-	-	F	2	Y	M	H	5	3	1	1	1	11	M	5	5	5	5	1	21	H	Utility, PROW
16N57A	Red Cedar Overlook A Spur	F	0.19	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility
16N57B	Red Cedar Overlook B Spur	F	0.62	A	-	-	F	2	Y	L	M	1	1	1	3	3	9	L	5	1	1	5	3	15	M	Utility
16N63	Carnelian Road	F	1.54	A	-	-	F	3	Y	M	H	3	3	1	3	3	13	M	5	5	5	5	1	21	H	PROW, Utility
16N66	Lake Vista Road	C	0.39	A	-	Y	C	2	Y	H	M	1	3	5	5	5	19	H	1	5	5	1	1	13	M	County Road,Sec6
16N71	Mt. Watson Access	F/S	1.86	A	-	Y	F/S	2	Y	L	H	1	3	1	3	1	9	L	5	5	5	5	1	21	H	LS, FROWN, PROWN, Utility,
16N73B	Section 9 East Spur	F	0.83		-	-	F	2	Y	L	M	3	1	1	1	3	9	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73C	Section 9 Middle Spur	F	1.26		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73D	Section 9 West Spur	F	1.75		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	LS, FROWN, Utility, TNF
16N73E	Watson Peak	F	2.11	A	-	-	F	2	Y	L	H	1	3	1	1	3	9	L	5	5	5	5	3	23	H	LS, TNF
16N73G	Painted Rock North	F	0.62		-	-	F	2	Y	L	M	1	1	1	1	3	7	L	5	1	1	5	3	15	M	FROW, Utility, TNF
16N74	Sawmill Flat	F	2.95	A	-	-	F	3	Y	H	H	3	3	5	5	3	19	H	5	5	5	5	1	21	H	FROW, Utility, TNF
16N76	Mt. Pluto	F	1.38		-	-	P	1	Y	L	L	3	1	1	1	1	7	L	1	1	1	5	1	9	L	LS, FROWN, PROWE, Comm Site, Ski Area
16N77	Hanes Flat	F	2.14		-	-	F	1	Y	M	L	3	1	1	3	3	11	M	1	1	1	5	1	9	L	closed
16N86	Beaver Street Extension	F/C	1.61	H/A	-	-	F/C	2	Y	M	H	5	5	1	3	1	15	M	5	5	5	5	1	21	H	FROW, PROW, Utility,Sec6
16N87	Old Grist Mill Road	P/F	0.96	A	-	-	P/F	2	Y	H	M	5	5	5	3	5	23	H	1	1	5	5	5	17	M	SUP-E, Historical
16N91	Stalene Powerline	F	0.77		-	-	P	1	Y	L	M	3	1	1	3	2	10	L	1	1	1	5	3	11	M	closed, Utility
16N92	Martis Peak Road	F	4.30	H	-	-	F	3	Y	M	M	1	3	1	1	5	11	M	5	5	5	1	1	17	M	LS, FROWE, PROWE, Utility, Comm Site
16N92B	Martis Peak Lookout	F	0.64	H	-	-	F	3	Y	M	M	5	3	1	3	1	13	M	5	5	5	1	1	17	M	TNF, PROW
16N93	Regency Extension	F	0.59	A	-	-	F	2	Y	M	H	3	3	3	3	1	13	M	5	5	5	5	1	21	H	FROW, Utility
16N95	Shivagiri Extension	F	0.62	A	-	-	F	2	Y	H	H	3	3	5	5	5	21	H	5	5	5	5	5	25	H	AgmntG, Utility, Historical
17N84	Juniper Creek Road	F	0.98		-	-	F	2	Y	L	H	1	1	1	1	1	5	L	5	1	3	1	1	11	M	TNF
17N85	Radio Tower Access Road	F	3.90		-	-	P	2	Y	H	M	1	3	5	5	5	19	H	5	1	5	5	1	17	M	AgmntNG, HTNF
17N89	Old Mt. Rose Highway	F	2.97		-	-	F	2	Y	M	M	3	3	3	3	5	17	M	5	1	1	5	5	17	M	SUPC, Utility, Historical, PROW
17N89A	Old Mt. Rose Highway A Spur	F	0.83		-	-	F	1	Y	M	M	3	1	1	1	5	11	M	1	1	1	5	5	13	M	closed, Historical
73	Mt Watson Boulevard	F	14.25	H/A	-	-	F	3 and 2	Y	H	H	5	3	5	5	5	23	H	5	5	5	5	5	25	H	LS, Utility, Historical, PROWE
TOTAL			247.45	Miles	290	Roads																				

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Lake Tahoe Basin Management Unit

ROAD SUMMARY										RISK RANKING								BENEFIT RANKING						Comments ^{1/}	
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ROADS RECOMMENDED TO BE REMOVED FROM THE FOREST ROAD SYSTEM

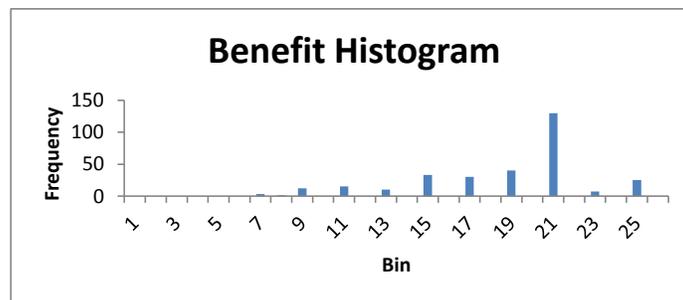
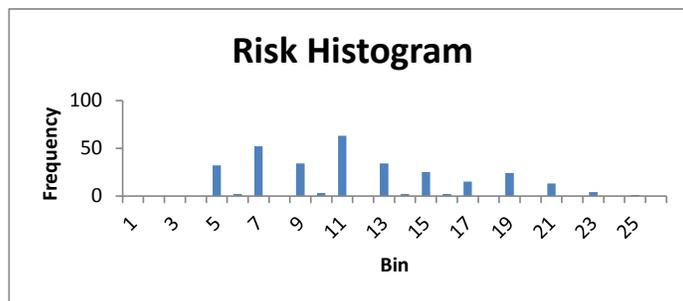
11N88	Grass Lake Creek Access	F	0.25		Y	-	F	1	N	M	M	1	1	5	5	3	15	M	1	1	1	5	5	13	M	closed, Tahoe Rim Trail, historical
12N24	Quartz Creek Extension	F	0.38		Y	-	F	1	N	M	M	1	3	1	3	5	13	M	1	1	5	5	5	17	M	closed, Historical
12N27	Tahoe Mountain Meadows	F	1.63		-	-	F	1	N	M	M	1	3	5	3	2	14	M	1	1	5	5	1	13	M	closed
12N31	High School Road	F	0.39		Y	-	F	2	N	M	L	1	3	5	3	2	14	M	1	1	1	5	1	9	L	closed, No RMO available
1327	Cascade Stables	P	0.70		-	-	P	4	N	L	L	1	1	1	1	1	5	L	1	0	1	5	1	8	L	LS, Private road, No RMO Retain Administrative ROW
1339A	Highway 50 Parallel	F	0.82		Y	Y	P	2	N	M	M	1	3	5	1	1	11	M	5	1	5	5	1	17	M	LS, PROWN
13N07E	Spring Creek Road E Spur	F	0.29		Y	-	F	2	N	M	M	5	1	1	3	1	11	M	5	1	3	5	1	15	M	closed
14N32B	Genoa Peak Road B Spur	F	2.40		Y	Y	F	2	N	L	L	1	3	1	1	1	7	L	1	1	3	1	1	7	L	Coordinate with HTNF
14N38	Lonely Gulch Reservoir	F	0.11		-	-	P	3	N	M	M	1	1	5	1	3	11	M	5	1	5	5	1	17	M	No RMO available, PROW
16N49A	Watson Creek Road A Spur	F	0.35		Y	-	F	2	N	M	M	1	5	1	1	3	11	M	5	1	3	5	1	15	M	low priority spur road
16N53A	Deer Creek Road A Spur	F	0.06		Y	-	F	2	N	L	L	1	1	1	1	1	5	L	5	1	1	1	1	9	L	Coordinate with TNF
16N58	North Avenue Extension	F	0.82		Y	Y	F	1	N	M	L	1	3	5	1	1	11	M	1	1	1	5	1	9	L	closed
16N74A	Sawmill Flat A Spur	F	0.50		Y	-	F	2	N	L	M	1	1	1	3	3	9	L	5	1	1	5	1	13	M	low priority spur road
16N77B	Hanes Flat B Spur	F	0.06		Y	-	F	1	N	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	closed
16N77D	Hanes Flat D Spur	F	0.20		Y	-	F	1	N	L	L	1	1	1	1	1	5	L	1	1	1	5	1	9	L	closed
16N90	Griff Creek Parallel	F	1.06		Y	-	F	1	N	M	L	5	3	1	3	1	13	M	1	1	1	3	1	7	L	closed, PROW, FROW
TOTAL			10.02	Miles	16	Roads																				

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APPENDIX A TABLE 4 - RANKING HISTOGRAMS
Lake Tahoe Basin Management Unit

Risk Ranking			
Bin	Frequency	Rank	Number of Roads
1	0	Low Risk	123
2	0		
3	0		
4	0		
5	32		
6	2		
7	52		
8	0		
9	34		
10	3		
11	63	Moderate Risk	141
12	0		
13	34		
14	2		
15	25		
16	2		
17	15		
18	0		
19	24	High Risk	42
20	0		
21	13		
22	0		
23	4		
24	0		
25	1		
More	0		

Benefit Ranking			
Bin	Frequency	Rank	Number of Roads
1	0	Low Benefit	16
2	0		
3	0		
4	0		
5	0		
6	0		
7	3		
8	1		
9	12		
10	0		
11	15	Moderate Benefit	88
12	0		
13	10		
14	0		
15	33		
16	0		
17	30		
18	0		
19	40	High Benefit	202
20	0		
21	130		
22	0		
23	7		
24	0		
25	25		
More	0		



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APPENDIX A TABLE 5 ROADS REMOVED FROM ANALYSIS

Lake Tahoe Basin Management Unit

ROAD SUMMARY				
Route	Name	Jurisdiction	Length	Comments <u>1/</u>
12N21D	"Star Lake Road"	-	1.00	Decommissioned long ago - delete analysis
14N34	McKinney Creek - Rubicon	C	4.06	County Road
15N64	North Canyon Campground	S	4.18	LS, State Park jurisdiction, FROWN
15N64B	Old Tunnel Creek Spur	S	2.33	LS, State Park jurisdiction
15N64C	North Canyon Campground	S	1.18	LS, FROWN, State Park jurisdiction, SUP
15N65	Jack Pine	S	0.97	LS, FROWN, State Park jurisdiction
FH1	Highway 28, FH 1	S	27.49	AgmntG, State Highway
FH2	Highway 431, FH2	S	8.73	AgmntG, State Highway
FH223	Fallen Leaf Road	C	3.84	LS, County Road
Total Length			53.78	

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APPENDIX A TABLE 6 SYMBOL DEFINITIONS LAKE TAHOE BASIN MANAGEMENT UNIT

Jurisdiction

F – Forest Service
S – State
C – County
P – Private/Other

Travel Management

H – highway legal vehicles only
A – all vehicles
S – special designation

Maintenance Responsibility

F- Forest Service
S – State
C – County
P – Private – partner possible

Comments Definitions

Administrative Site – Road accesses a Forest Service Administrative Site
AgmntG – Agreement with State or County or local government indicated
AgmntNG – Agreement with non-governmental organization indicated
Closed – Road is seasonally or permanently closed, indicated but not comprehensive
Comm Site – Communications Site access
CTC – California Tahoe Conservancy
FROW – ROW for federal access indicated but unknown – (E) Exists, (N) Needed
Historical – access to historic site managed for public use or significant historic component
HTNF – Humbolt Toiyabe National Forest also accesses road
LS – Land Summary for ROW
Maintenance Level Error? - Possible error in operational maintenance level designation
Mtce – Maintenance
RecRes – Recreation Residence permittees or other residences on NFS land
PROW – ROW for private access indicated but unknown – (E) Exists, (N) Needed
Recreation or Rec – Access to developed recreation site including resort or marina
Reciprocal ROW – ROW exists to benefit federal and other owner
RMO – Road Management Objectives
RUPC – Road Use Permit Commercial
Sec6 – Kingsview Subdivision Roads in Section 6
Ski Area Permit – Road is used for ski area access and maintenance. In general, the Forest Service does not hold any access rights for roads on land owned by ski areas
Stockpile Site – Site for temporary equipment and material staging
SUP – Special Use Permit (additional letter indicates permit class)
TNF – Tahoe National Forest also accesses road
Trailhead – Road exists to access a Forest Service Trailhead
Tribal Access – Washoe Tribe has access rights
Utility – Utility ROW or Permit
WR – Water Right listed

Jurisdiction Transfer

- – no transfer
Y – possible transfer options
SP – State Park Jurisdiction exists now

Decommission

Y – option to decommission
- – no decommission recommended

Private Maintenance includes:

Recreation Residence permit
General Improvement District or other owners
These may share maintenance with Forest Service

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Appendix B

Economic Analysis

Lake Tahoe Basin Management Unit

Travel Analysis Process

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Authorization, Objective, and Purpose

The Lake Tahoe Basin Management Unit (LTBMU) is authorized to acquire, construct, and maintain roads to permit the maximum economy in meeting requirements for management of the National Forest. Financing of these roads is accomplished through:

- Expenditure of appropriated funds
- Expenditure from Southern Nevada Public Lands Management Act (SNPLMA) monies
- Contractual requirements imposed on purchasers of forest products
- Cooperative financing with other public agencies, private entities, or individuals

The LTBMU objective for roads is to operate and maintain each road in a manner that meets the road management objective (RMO) and provide for:

- Safe and efficient travel
- Access for the administration, utilization, and protection of public land
- Protect the environment, adjacent resources, and public investment
- Stewardship of the capital investment in the road

The frequency and type of maintenance work accomplished is subject to the availability of funding and obligations under agreements.

The LTBMU road system serves the following purposes:

- Administration of Forest Service Lands
- Public use by visitors to the forest
- Noncommercial uses and activities related to ownership or occupancy of isolated parcels of private land within the LTBMU
- Commercial use which is either subject to cost recovery or not subject to cost recovery

Access Travel Management Program

The LTBMU has a very active program for road improvement and road maintenance that is coordinated with the public. During development of the Access and Travel Management Program (ATM) planning (completed in 1998), the LTBMU identified the work needed by the transportation system using geographical areas called transportation sheds. The ATM program reduced the road system by about 130 miles while adding 6 miles of needed road and 30 miles of recreational trail. The ATM program goals are shown in Table 1.

The ATM program goals are nearly completed and have been successful in modifying the road system to improve watershed protection and develop an efficient road system. The program has been funded from many sources and combines capital improvement and maintenance programs to effectively improve and maintain road condition. Funds from SNPLMA have been used to improve access by both purchasing lands with needed roads and acquiring necessary

rights-of-way (ROW). The result is a much more efficient road system portions of which are in good condition. If the LTBMU had relied on only maintenance funding and tried to maintain the road system that existed prior to 1998, most roads would likely be in poor condition. The current road system, as modified by the ATM program, is more efficient in meeting the needs of resource managers and the public than the road system that existed prior to 1998.

Table 1 – ATM Program Plan by Transportationshed in Miles

Transportationshed	BMP upgrades	Convert		Decommission	Cost Estimate (1998 dollars)
		User Defined to System Road	Road to Trail		
East Shore Beach	8.10	0	3.45	2.97	\$123,500
Genoa Peak	34.10	0	1.23	21.23	\$882,000
Powerline /Pioneer Trail	17.47	3.55	2.26	22.29	\$763,000
Angora/Twin Peaks	9.81	0.88	0.20	6.46	\$130,000
Camp Richardson Emerald Bay	23.87	1.42	2.86	7.25	\$614,000
McKinney Rubicon	14.68	0	3.10	5.43	\$498,000
Blackwood	11.97	0	5.43	3.42	\$659,000
Ward Creek	17.48	0	5.81	3.43	\$745,000
North Shore	49.10	0.29	5.69	17.83	N/A
Martis Peak	22.05	0.48	2.61	6.28	N/A
Mt. Rose	6.87	0	2.19	5.67	\$516,000
Total	215.50	6.62	34.83	102.26	N/A

Road Maintenance Levels

Maintenance levels are defined by the Forest Service Handbook (FSH) 7709.62 as the level of service provided by, and maintenance required for, a specific road. Maintenance levels must be consistent with RMO and maintenance criteria. The maintenance level is determined by considering the purpose and need for the road, forest plan objectives, funding, and many other factors. A road may be constructed to serve at a maintenance level which fulfills an immediate need (operational maintenance level), but planned to be modified and converted to another maintenance level to fulfill a future need (objective maintenance level).

There are five maintenance levels classified in the FSH. Levels 3, 4, and 5 are subject to the Federal Highway Safety Act and standards in the Manual of Uniform Traffic Control Devices (MUTCD). The levels are described as follows:

Maintenance Level 5 – roads that provide a high degree of user comfort and convenience. These roads are normally double-lane, paved facilities; some may be aggregate surfaced with dust abatement. These roads have the following characteristics:

- Highest traffic volume and speeds
- Typically connect to State and county roads
- Usually arterial and collector roads
- Drainage addressed by use of culverts

The LTBMU has no level 5 roads.

Maintenance Level 4 – roads that provide a moderate degree of user comfort and convenience at moderate speeds. Most are double lane and aggregate surfaced with the following characteristics:

- Moderate traffic volume and speeds
- May connect to county roads
- Usually a collector road
- Drainage addressed by use of culverts

Maintenance Level 3 – roads that are open and maintained for travel by prudent drivers in a standard passenger car. User comfort and convenience are low priorities. These roads are typically low speed, single lane with turnouts, and spot surfacing. They have the following characteristics:

- Low traffic volume and speed
- Typically local roads
- Typically connect to arterial and collector roads or are collector roads
- Combination of culverts and grade dips provide drainage
- Potholing or washboarding may occur

Maintenance Level 2 – roads that are open for use by high-clearance vehicles. Passenger car traffic is not a consideration. Traffic is normally minor, consisting of one or a combination of administrative, permitted, dispersed recreation or other specialized uses. The roads have the following characteristics:

- Low traffic volume and speed
- Typically local roads
- Typically connect collector and other local roads
- Drainage is accomplished with grading such as dips or sloped surfaces
- Surface smoothness is not a consideration
- Not subject to Highway Safety Act or MUTCD

Maintenance Level 1 – roads that are closed to vehicular traffic intermittently for periods exceeding 1 year. Basic custodial maintenance is performed to protect adjacent resources and enable the road to facilitate future management activities. Planned road deterioration may occur at this level, but the road could be open and suitable for non-motorized uses such as a trail for

hikers, equestrians, bicyclists, and such. Roads in this category may be of any class or construction standard and may be managed at any other maintenance level during the time they are open for traffic. They have the following characteristics:

- Vehicular traffic is eliminated including administrative traffic
- Entrance is physically blocked or otherwise disguised
- No maintenance other than a condition survey may be required as long as no potential for resource damage exists
- Not subject to Highway Safety Act or MUTCD when closed

Road Acquisition

The SNPLMA monies provide for acquisition of land within the LTBMU to increase federal ownership and efficiently manage the federal estate. When land is acquired, there is commonly a road or road network associated with that land. Each acquisition is analyzed to determine if the roads within the purchase area are needed for LTBMU purposes and if rights exist to adjacent property that would require the road to remain in use. Roads will be acquired in the future which will impact the economics of the road system. Many acquired roads are decommissioned after analysis determines they are unneeded.

Road Maintenance Frequency

The LTBMU uses Forest Service, State, and local Best Management Practices in road reconstruction to build roads that require minimal annual maintenance. The goal is to increase the time between surface disturbance to 5 to 10 years or longer. Less surface disturbance allows establishment of vegetation to reduce erosion and sediment transport as well as reduce spread of invasive plant species.

Road Maintenance Costs

Federally appropriated funds for road operation and maintenance funding on the LTBMU have ranged from \$156,000 to \$624,000 per year over the last 6 years with an average of \$299,000.

Besides the physical performance of maintenance related work, all road systems have fixed costs associated with management of the system. Management includes:

- Oversight of the road system and decision making
- Establishing and maintaining road management systems required by law (e.g., pavement management, bridge management, safety management, and congestion management)
- Collecting and maintaining data about the road system (e.g., conducting road condition surveys, gathering traffic count and vehicle accident information)
- Providing information services (e.g., maps, road condition reporting)
- Future year project planning (e.g., specialist surveys, engineering, reports)
- Office support (e.g., contracting officers, utilities, computer systems)

Road condition surveys are conducted on 20 percent of the road system annually to determine the maintenance and associated funding needed to maintain roads to the required safety standards and assigned maintenance levels. These surveys describe the features of the roads (e.g., surfacing, ditches, drainage dips, and culverts) and their conditions. The maintenance costs of those roads and features are calculated from the surveys using a standard cost guide.

Table 2 – Road Maintenance Funding FY 2005 to FY 2010

Year	CMRD	CMRDRM	SNPLMA	Total Funds	RAR	\$/mi
2005	\$224,713	\$12,308	*	\$224,713	108	\$2,081
2006	\$155,872	\$114,364	*	\$155,872	64	\$2,436
2007	\$294,509	\$96,151	*	\$294,509	57	\$5,167
2008	\$226,907	\$87,320	*	\$226,907	25	\$9,076
2009	\$268,253	\$79,815	*	\$268,253	26	\$10,317
2010	\$497,711	\$126,140	\$127,250	\$624,961	108	\$5,787
Totals	\$1,667,965		\$127,250			
Average		\$86,016		\$299,203	65	\$5,811

Notes: CMRDRM – Funds included in CMRD allocation directed to Force Account work

CMRDRM – Funds used for Force Account crews and equipment

SNPLMA – 2010 funds are for potholes, brushing, ditch cleaning

Force Account work is done by Most Efficient Organization (MEO)

- SNPLMA funds were used for capital improvement, not maintenance in these years

Over the past 6 years, the LTBMU has performed maintenance or reconstruction on an average of 24 percent of the road system annually. The road maintenance done by the LTBMU does not represent the needs of the future. The focus has been on eliminating unnecessary roads and implementing BMP improvements to the road system in critical habitat areas. Those activities will continue, but the next phase will be maintaining BMP structures, upgrading roads that are acquired, improving public safety, surface repairs, maintenance for protection of roads and adjacent resources, and partnerships with public road authorities and other users. Pavement repairs will be a significant future maintenance cost.

Resources for Accomplishing Maintenance Activities

The LTBMU has four funding sources available for performing maintenance on system roads:

- Federal Funds authorized for road maintenance
 - Forest Service maintenance crews
 - Contracts with private contractors
- SNPLMA funds
- Cooperative agreements
- Maintenance by non-federal property owners

Federal Funds

Federal funds authorized for road maintenance are used to perform maintenance on system roads to maintain them for uses intended by the Forest Service. When the road is used exclusively by the LTBMU, these funds account for 100 percent of the maintenance funds. The LTBMU uses two principal methods to accomplish maintenance work.

- The Forest Service maintenance crew is specifically trained for projects that require more complex, non-standard work. These crews have a deeper understanding of Forest Service requirements and methods so they require less oversight than contractor forces. They offer maximum flexibility to changing conditions because they consult closely with Forest Service engineers to adapt to changes, understand critical resource protection requirements, and are accustomed to remote areas.
- Private contractors provide valuable services for use on roads that require routine maintenance, well-defined specifications with little risk for major changes, and standard construction practices. Contractors provide cost effective means to change program scale as maintenance budgets change or large construction projects are funded. They also provide crews with skills for bridges, pavement, and other specialized work.

SNPLMA

SNPLMA funds can be made available to supplement funding for ROW acquisition and specific projects to improve BMP and road condition.

Cooperative Agreements

Cooperative agreements with counties or other road jurisdictions can provide for maintenance sharing as described in Forest Service Handbook 7709.59 and 1509.11 Section 31.2, Section 39.3, and Section 39.4. These agreements are used to deal with roads crossing National Forest Land that serve non-federal land or access both federal and non-federal lands. Jurisdiction can be assigned to the authority with the primary use and both the Forest Service and local authority can cooperate in funding maintenance of the roads for mutual benefit.

Non-Federal Property Owners

Access to owners of non-federal property can be authorized as provided in Forest Service Manual 7731.14 which includes provisions for those owners to fund maintenance and repair damages to the road caused by their use. Forest Service use of the road is allowed and the Forest Service is responsible for its share of maintenance. Roads where the principal use is access to private land and are only incidentally used by the Forest Service are not required to be system roads. Forest Service Manual 7732.25 allows maintenance by Homeowners Associations or Road Users Associations when a public road agency is not willing to take jurisdiction of a road, but non-federal owners want a higher standard of maintenance than the Forest Service requires.

Cost Reduction Strategies

Some possibilities to align the road system with the current and projected maintenance funding are:

- Decrease miles of roads
 - Decommission roads
 - Convert roads to trails for either motorized or non-motorized use
- Transfer responsibility to other appropriate jurisdictions
- Upgrade roads through sustainable design to reduce long-term maintenance
- Decrease maintenance levels of roads
- Collect fees from permittees where authorized

Decrease miles of roads

Continuing to use every means available to reduce the miles of road that LTBMU is responsible to maintain will be necessary. Table 1 shows the reduction of road miles by the ATM program over the past 12 years and the resulting annual cost reduction. The continued emphasis on removal of unneeded roads will further reduce annual costs. Because of continuing purchase of land by LTBMU, the analysis of acquired road systems, their relationship to existing road systems, and modifications to assure an effective, efficient road system will be components of transportation management into the future.

- The ATM program has decommissioned about 25 percent of the roads on the LTBMU over the past 12 years. The success was due to the large amount of roads that existed on acquired land that were duplicating access or not needed for resource management. The roads that could be readily identified as unneeded have been eliminated. The next set of roads to decommission will be neither as easily accomplished nor as large a mileage reduction. The roads that are candidates for decommissioning come primarily from the low benefit roads.
- The ATM program has made significant progress in the conversion of roads to trails. There will continue to be opportunities to convert roads to trails. Changing needs by resource areas for the road system should also evaluate the need for trails in those areas. Purchase of land by LTBMU has produced many changes in road needs and may be the single largest factor in allowing reduction of the road system. As land purchases occur, the need for the roads accessing those lands has been evaluated through NEPA processes and appropriate modifications of roads and changed management of the road corridors have occurred. Lack of funding to maintain all the system roads will also present opportunity for conversion of roads or use of those corridors for other purposes.

Transfer responsibility to other appropriate jurisdictions

The LTBMU has dealt with road jurisdiction in the past. Entities that are possible partners in jurisdiction changes are counties, municipalities, general improvement districts, and homeowners groups. These entities all have limited budgets and are reluctant to accept roads that are not of

high value to them. There will be some roads over which no one wants jurisdiction, but several organizations need for access. Maintenance of those roads will be a challenge to fund if some strategic partnerships cannot be negotiated.

Roads shared with State, county, and municipal public road authorities should have Cooperative Forest Road Agreements with Schedule A attachments specifying responsibility for maintenance of each road. An example of the Forest Road Agreement is located in Forest Service Handbook 1509.11 Section 39.3 with Schedule A. This agreement and the accompanying Project Agreement (1509.11 Section 39.4) allows cost sharing for road maintenance among the road authorities.

Roads used to access non-federal property such as residences or businesses should also be evaluated for transfer if not needed for access by LTBMU for resource management. These roads could become private roads maintained by the users.

Roads that cannot be transferred from LTBMU jurisdiction should be evaluated for partnerships with other users for sharing maintenance costs.

Upgrade roads through sustainable design to reduce long term maintenance

The LTBMU has been upgrading roads to meet current design and BMP requirements. Because of the large land acquisition program which has been accomplished, the road system designs were not standard. By improving design and incorporating BMP standards, the road system will be more sustainable in the future and result in reduced impact to resources. This work should continue.

Decrease maintenance levels of roads

Road costs vary by maintenance level. The more user comfort, higher speed, and amount of use the road sustains, the more the road will cost to maintain. The LTBMU has no level 5 roads which would be the most expensive to maintain and may be the most difficult to reduce maintenance level. The analysis of maintenance level needs will have to take into account the traffic volume, speed, user expectation, purpose of the road, and other factors identified for each road. The most feasible roads to convert to lower maintenance levels will be the least used roads.

Low benefit roads that are Level 3 and Level 2 may be assigned to Level 1 status to eliminate traffic for periods exceeding one year. Where it is possible to eliminate traffic for extended periods, it may result in lower cost of maintenance over several years. If the LTBMU funding does not allow adequate road maintenance, it may be necessary to identify groups of roads and the number of years they could be closed. If several groups could be identified, it may be possible to rotate access to areas by closing one or more groups for one or more years and then

opening use while closing another group of roads. This strategy could be effective for periods of low funding or periods when funds need to be directed to higher priorities.

Permittee Maintenance or Collections

Roads that access single purposes or provide private access should be considered for special use permits that include requirements for the beneficiaries of the road to share maintenance costs. The LTBMU can either perform maintenance and collect fees for commensurate use or have maintenance performed by permittees where they are principal users of the road. Where use is exclusive to the permit, maintenance should be required. This should be consistent across permit authorities such as land or recreation. Examples of uses to evaluate are single purpose roads for utility access, resorts, residences, and other permits on federal land or permits using federal roads to access private land.

The LTBMU could develop permits or other agreements to cooperate with Homeowners Associations and General Improvement Districts for use of roads. This cooperation reduces road miles by allowing access to the forest using roads of these organizations or allowing use of forest roads by the organizations instead of maintaining separate roads. These permits are authorized by FLPMA and guidance is provided in FSM 7732.23 and FSH 1509.11.

Commercial use permits could be issued to authorize commercial haul taking place on LTBMU roads. The permit should collect appropriate fees for maintenance as authorized in FSM 7730.

Conclusion

The LTBMU has followed the ATM plan developed in 1998, resulting in a road system that has been reduced by 30 percent. The smaller road system is being maintained and improved to manage risk to resources for roads that are necessary for management of the forest.

Because of the emphasis placed on implementing the ATM, most existing roads are necessary for management of the LTBMU or access to non-federal land. There are very few existing roads that can be decommissioned. Future road decommissioning will be driven by acquisition of land that includes duplicate or unneeded roads more than by elimination of existing unneeded roads.

Emphasis on improving roads to meet design and BMP standards will provide a more sustainable road system that minimizes resource impacts.

Developing partnerships with public road authorities and other significant users such as homeowners groups will distribute maintenance costs to the appropriate users. This will allow LTBMU to focus on areas where resource issues exist and work cooperatively to design and fund projects which address those impacts.

It is clear that creating a road system to match existing funding by simply closing roads will not result in a functional minimum sustainable road system for the public or Forest Service. Well developed combinations of existing policies and future creative ideas will be needed to provide a transportation system that will enable the LTBMU to fulfill the Forest Service mission of caring for the land and serving the people.

Appendix C

Public Involvement and Collaboration

Lake Tahoe Basin Management Unit

Travel Analysis Process

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APPENDIX C

Public Involvement and Collaboration

To prepare the TAP, previous public concerns related to motorized vehicle use and access on the Lake Tahoe Basin management Unit (LTBMU) were reviewed. The primary source was Access Travel Management Strategy comments and related project National Environmental Policy Act (NEPA) activities that were completed over the past 10 years.

Travel management planning has been a priority in the LTBMU since it was formed in 1973. Public participation in travel management planning has been continuous since that time. In 1997, LTBMU conducted several workshops to address methods to protect the extraordinary ecological and recreational resources in the Lake Tahoe region. These workshops initiated an analysis of unsurfaced roads. Over a period of years, roads were eliminated or Best Management Practices established to reduce impacts to lake clarity from roads. All of these actions included public input.

The LTBMU continues to maintain a strong public involvement process to scope projects and collect information for proposed projects. The NEPA process is used for making project decisions. The TAP is a “living” document and, therefore, will be updated as needed. The TAP will be one source for planning future projects. Since the TAP contains only recommendations, future projects will continue to receive public input that pertains to the Forest transportation system and specific input may recommend decisions which are not consistent with the initial recommendations of the TAP. Modifications to the TAP recommendations as a result of the final decision for a project will be incorporated. The appropriate NEPA procedures will continue to be completed for future actions.

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Appendix D

Bibliography

Lake Tahoe Basin Management Unit

Travel Analysis Process

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APPENDIX D

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Appendix E

Maps

- Map 1. Risk Ranking by Road
- Map 2. Benefit Ranking by Road
- Map 3. Recommended Minimum Road System

Lake Tahoe Basin Management Unit

Travel Analysis Process

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