CHAPTER 3
AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This chapter describes the general characteristics of the Plan Area. The affected environment defines the baseline of existing conditions from which possible impacts of the plan alternatives may be analyzed. Data sources include existing information from published and unpublished reports, maps, and geographic information system, (GIS).

3.2 GENERAL SETTING

The Plan Area includes approximately 18,680 acres located in Alpine County, California, thirty minutes southwest of the cities of Minden and Gardnerville, Nevada; ninety minutes south of Carson City and the Reno/Sparks metro area. The majority of the Alpine County population resides in or near the communities of Woodfords and Markleeville, California. The Woodfords Colony of the Washoe Tribe of Nevada and California is located five miles northeast of Woodfords. The Carson River dissects the county flowing southwest to northeast. There are three California State Highways (88, 89, and 4) that provide ingress and egress to Alpine County.

3.4 CRITICAL ELEMENTS OF THE HUMAN ENVIRONMENT AND OTHER RESOURCES

Appendix 5 of BLM's NEPA Handbook (H-1740-1) identifies Critical Elements of the Human Environment that are subject to requirements specified by statute or executive order and must be considered in all BLM environmental documents. The Critical Elements are:

Critical Element	Not Present *	Present/Not Affected *	Present/May Be Affected**
Air Quality			X
Areas of Critical Environmental Concern	X		
Cultural Resources			X
Farm Lands (prime or unique)	X		
Floodplains	X		
Native American Religious Concerns			X
Threatened or Endangered Species	X (Plants)		X (Animals)
Wastes, Hazardous or Solid	X		
Water Quality (Surface/Ground)	X (Ground)		X (Surface)
Wetlands/Riparian Zones		X	
Wild and Scenic Rivers	X (1)		
Wilderness	X (2)		
Invasive, Nonnative Species			X
Environmental Justice	X		

*Critical Elements determined to be Not Present or Present/Not Affected need not be carried forward or discussed further in the document.
**Critical Elements determined to be Present/May Be Affected must be carried forward in the document

1) WILD & SCENIC RIVERS

There is no federal designation of Wild and Scenic Rivers on the Carson River. The California Wild and Scenic Rivers Act was passed in 1972 and initially protected all or parts of eight California rivers. In 1989 the Act was amended to include a 20- mile portion of the East Fork of the Carson River from the Hangman's Bridge crossing of State Highway 89 to the California-Nevada border; approximately 2.2 miles of this stretch of river flows through lands administered by the BLM. Proposals have been brought forward to include the entire 47 mile reach of the river in California in the federal system of National Wild and Scenic Rivers, but they are still under study.

2) WILDERNESS/WILDERNESS STUDY AREAS

There is no designated Wilderness within the Plan Area, however, the Plan Area contains the Carson-Iceberg (550 acres) and Slinkard Wilderness Study Areas (6,268 acres). The Bishop Field Office, BLM, manages the eastern side of the Slinkard WSA. In 2000, BLM issued a memorandum that clarified policy for visual resource management (VRM) of Wilderness Study areas. All Wilderness Study Areas should be managed as Class I management objectives until such time as the Congress decides to designate the area as wilderness or release it for other uses. If a WSA is designated as wilderness, the area would continue to be managed as Class I. If these WSA's are released by Congress from further wilderness study the lands would be managed as Class II.

Critical Elements

3.4.1 AIR QUALITY

Air quality is generally good in the Plan Area. The California Air Resource Board (ARB) is responsible for air quality monitoring, regulation and enforcement in Alpine County. No monitoring data is available for pollutants in the County. Emission inventory data is estimated annually.

Alpine County does not exceed National standards for any criteria pollutants. The ARB makes State area designations for ten criteria pollutants: ozone, suspended particulate matter (PM10), fine suspended particulate matter (PM2.5), carbon monoxide, nitrogen dioxide, sulfur dioxide, sulfates, lead, hydrogen sulfide, and visibility reducing particles. The County exceeds the State standards for suspended particulate matter (PM10).

Federally designated Class I airsheds cover wilderness areas over 5,000 acres designated as wilderness prior to the enactment of the Clean Air Act in 1977. Class II airsheds cover all other forest lands, including wilderness areas designated after 1977, with the exception of new acres added to existing Class I areas. The 105,165 acre Mokelumne Wilderness was designated wilderness by Congress under the Wilderness Act in 1964 and the borders were expanded under the California Wilderness Act of 1984, making the Mokelumne Wilderness a Federally designated Class I airshed. The 161,181 acre Carson-Iceberg Wilderness was designated wilderness by Congress in 1984, making the Carson-Iceberg Wilderness a Class II airshed.

3.4.2 CULTURAL RESOURCES

The known cultural resources in and immediately adjacent to the Plan Area provide information on prehistoric use from over 8000 years ago through historic-period logging operations, trails, roads, and buildings associated with ranching or homesteads. Washoe tribal use appears to span this entire period, with the members of the Washoe Tribe of Nevada and California remaining both an active part of today's Alpine County communities and users of public lands in a traditional manner, with Washoe place names, cemeteries, and sacred sites located throughout the county.

Although some prehistoric sites are of considerable antiquity, archaeologists place most of Alpine County's known seasonal camps, resource use areas, and base residences into two general periods:

Martis Complex, dating from about 4000 to 1500 years ago, exhibited a preference for certain material items such as basalt for stone tools, use of milling gear for seed grinding, and larger stone-tipped darts and an atl atl (throwing stick) for hunting. People were generally dispersed and mobile, but with some settlement in winter base villages in areas of high population density on valley margins adjacent to a broad array of natural resources, in both pit houses and conical structures.

Kings Beach Phase, dating from about 1500 years ago to the historic period, during which there appeared to be a preference for chert and obsidian stone tools, use of bedrock mortars for seed grinding, small stone tipped arrows and a bow for hunting, and an

increased emphasis on fishing. This period saw an increase in population size, resource stress and increased use of sedentary winter villages throughout the region.

Historical use of the area by non-Native Americans began as travelers and explorers passed through, including Jedediah Smith in 1827, the 1841 Bartleson-Bidwell party from Independence, Missouri, and military Captain John Fremont in 1844-45. In what would eventually be Alpine County, roads, trails, and the first white settlement in 1847—at Woodfords but known at that time by several names—were established primarily to serve to the needs of numerous travelers. Tens of thousands of emigrants used a variety of routes through Alpine County to reach California from the late 1840s through the early 1860s, with some returning from the west over the Sierra Nevada to the Comstock. Other mining ventures of the late 1850s through the early 1870s occurred such as the Leviathan Mine, Silver Mountain, Silver King, and West Carson Consolidated Mines. In 1860 the Pony Express crossed the Sierra Nevada through Hope Valley and Woodfords.

Settlement in Alpine County has never been substantial, and it remains California's least populated county. Important early historical locations include development of John Carey's (later Daniel Woodford's) water-powered lumber mill in 1853-1854; "Snowshoe" Thompson's cabin, in Diamond Valley in the late 1850s; and Jacob Marklee's 1861 cabin. With hope of mineral developments, Alpine County was created in 1864 out of portions of Amador, El Dorado, Calaveras, Tuolumne and Mono counties. The original county seat was Silver Mountain City but it moved in 1875 to Markleeville after the collapse of the local mining industry. Agriculture and ranching fueled minor settlement of southern Carson Valley in the 1850s through 1890s, with some development of historic ditches. Logging, however, has had a greater impact in local economic development. In addition to Carey's Mill in what is now Woodfords, Ira Luther's 1858 mill in Luther Canyon, and the 1864 mills of Frederick Frevert near Fredricksburg and Peter Curtz north of Markleeville, numerous mills, roads, flumes, and other logging features date to this period and supported the lumber demands of a vibrant Comstock economy. By 1870 Alpine County's population was below 700 people, and remained at that level for the next century.

NATIVE AMERICAN RELIGIOUS CONCERNS

The Washoe Tribe of Nevada and California and individual tribal members expressed concerns for sacred and ancestral areas within the Plan Area. Government to government consultation has occurred and will continue. Each action that is proposed would continue to be brought forward and consultation as well as individual communication would occur.

3.4.3 INVASIVE NON-NATIVE PLANTS

The spread of noxious and invasive weed plant species contributes to the loss of habitat productivity, reduced water quality and quantity, reduced structure and species diversity, and loss of wildlife-specific habitat. In some instances, these species are hazardous to human health and welfare as emphasized in the Federal Noxious Weed Act (Public Law 93-629) and Executive Order 13112, Invasive Species. To minimize the potential of non-native seeds being brought into the area, California Department of Fish & Game (DFG) has issued guidance to hunters on horseback regarding the use of animal feed.

Most, if not all, non-native plant infestations begin as small outbreaks in disturbed areas, such as utility corridors, trails, range improvement footprints, roadsides, ROWs, and mining disturbances. Seeds of non-native plants may have been transported to the area in feed for pack animals, re-vegetation grass mixtures, or blown in from distant sources. As non-native plants find disturbed areas with no natural competition, they quickly spread, overtaking native vegetation and reducing the biological diversity and ecologic viability of the ecosystem. An initial noxious weed survey was completed in 2001 for public lands in Alpine County. Three locations of noxious weed infestations (yellow starthistle, tall whitetop, and diffused knapweed), were located and treated using integrated management techniques; both chemical and manual. Treatment is ongoing and a few infestations have been eradicated. Other species likely to invade the area include Russian knapweed, spotted knapweed, Canada thistle, and hoary cress.

3.4.4 THREATENED, ENDANGERED, PROPOSED FOR LISTING, AND CANDIDATE (ANIMALS)

In April 2006 the CCFO reviewed a Master List of federally listed threatened, endangered, proposed for listing and candidate species that occur, may occur or have potential habitat within the Plan Area. Table 3.1 lists known or potential species of federally listed threatened, endangered and candidate species associated with the Plan Area. There are no listed or proposed for listing species in the Plan Area.

Lahontan cutthroat trout (LCT) occurs in the Carson River portion of the Plan Area. These LCT of the Independence Lake strain did occur at Heenan Lake at one time. This population, however, is thought to have interbred with rainbow trout to the point to where LCT no longer exists in this lake. A detailed discussion of this species can be found in Biological Assessment Evaluation (BAE) #004-06.

Paiute cutthroat trout do not currently occur within the Plan Area. This fish's historic range included the Silver King Creek system. It was introduced above Llewellyn Falls from downstream in settlement days. Later, the population below the falls hybridized with introduced rainbow trout. These hybrids may be found within the Silver King system that occur on across public lands. These fish are not considered threatened. Paiute Cutthroat Trout do not currently occur within the Plan Area. A detailed discussion of this species can be found in BAE #004-06.

Threatened, Endangered, and Candidate Species

Common Name	Scientific Name	Federal Listing Status
Lahontan Cutthroat Trout	Onchorhynchus* clarki henshawi	Threatened
Paiute Cutthroat Trout	Onchorhynchus* clarki seleniris	Threatened
Bald Eagle	Haliaeetus leucocephalus	Threatened
Yosemite Toad	Bufo canorus	Candidate
Mountain Yellow-legged Frog	Rana muscosa	Candidate
Fisher	Martes pennanti	Candidate

* Onchorhynchus was formerly Salmo

Table 3.1

Bald eagles occur within the Plan Area and have been sighted near Indian Creek Reservoir, Stevens Lake and at upland sites near these water bodies. Bald eagle nesting occurs on State of California managed lands near Heenan Lake; adjacent BLM lands supply foraging areas for these eagles. Bald eagles winter in Fay-Luther Canyon on USFS and public lands. Nesting has occurred within the Plan Area as well. This bird uses fish but will also utilize carrion and will catch species such as sage grouse. A detailed discussion of this species can be found in BAE #004-06.

Yosemite toad key habitat consists of wet mountain meadows and borders of forests. The toad obtains shelter in rodent burrows as well as in dense vegetation. It breeds in shallow edges of snow melt pools and ponds or along edges of lakes and slow-moving streams. Threats to this toad are not been fully quantified but appear to be a combination of drought, degraded habitat and disease. This toad is known to occur in the Blue Lakes region north of Ebbetts Pass. It occurs on all USFS administered lands surrounding the project area and occurs in other areas of Alpine County. Its historic range included the Blue Lakes Region of Ebbetts pass and toads persist in that area. It has the potential to occur at the highest elevation lands administered by the BLM. Habitat management for this species is under the umbrella of the Paiute Cutthroat Trout Recovery Plan.

Mountain Yellow-legged frog key habitats include riparian/riverine corridors, wetlands, and wetland/upland mosaics often found in association with sub-alpine forests. Sierran frogs are most abundant in high elevation lakes and slow-moving portions of streams. This frog seldom is found away from water, but it may cross upland areas in moving between summer and winter habitats. Wintering sites include areas near shore under ledges and in deep underwater crevices. It also includes any upland habitat regularly used for feeding or wintering (e.g., mesic forest). Threats to this frog come primarily from introduced fish as well as bullfrogs, chytrid fungus, dewatering, water quality impacts and impoundment of water. This frog occurs on all USFS administered lands surrounding the project area and occurs in Alpine County. It has the potential to occur on lands administered by the CCFO. Based on the approximately 1% riparian land cover in Nevada are approximately 190 acres of frog habitat on public lands. Habitat management for this species is under the umbrella of the Paiute Cutthroat Trout Recovery Plan.

Population densities for the Fisher are naturally low as they are solitary hunters. This mammal is found in habitat that has high canopy closure (50 %+), large trees and snags, large woody debris, large hardwoods, and multiple canopy layers. It avoids areas lacking overhead canopy cover. Riparian areas may be important to fishers because they provide important rest site elements, such as broken tops, snags, and coarse woody debris. They generally avoid areas with significant human disturbance, are shy and secretive and prefer large areas of contiguous interior forest. When inactive, they occupy a den in a tree hollow, under a log, or in the ground or a rocky crevice, or they rest in branches of conifer (warmer months). Large snags are important as maternal den sites. Adults and young are carnivores and feed on mammals up to raccoon size, in addition to carrion. Nevada Natural Heritage states that there have been scattered sightings of fisher in Alpine County and the California Department of Fish and Game indicates the Plan Area is within yearlong range for this species. Habitat loss and fragmentation, especially

through timber harvest, appear to be significant threats to the fisher. Fisher habitat could occur on public land.

3.4.5 WATER QUALITY (SURFACE)

The State of California is responsible for managing water quality under the federal Clean Water Act, and has created regional boards to accomplish water quality goals in the state. Lands within the Plan Area are administered by Lahontan Regional Water Quality Control Board (LRWQCB).

The LRWQCB (1) designates beneficial uses for individual water bodies, (2) establishes water quality objectives to achieve those uses, and (3) conducts assessments to determine whether the objectives are being met. Water quality objectives are written as narratives and numeric criteria, and they address physical, chemical, and biological parameters. Water quality objectives can pertain to all surface waters, individual water bodies, or specific designated uses (LRWQCB, 1994). In addition to various wetlands and "minor surface waters," beneficial uses and associated water quality objectives have been established for the following water bodies in the Plan Area.

- Carson River, West and East Forks
- Heenan Creek
- Heenan Reservoir
- Indian Creek
- Indian Creek Reservoir
- Markleeville Creek
- Millberry Creek
- Stevens Lake

When a water body does not meet water quality standards, the LRWQCB may establish a Total Maximum Daily Load (TMDL) for the pollutant. A TMDL for total phosphorus was established for Indian Creek Reservoir because the reservoir became eutrophic in the 1970's. Only nonpoint sources of total phosphorous have been identified, and internal sources from bed sediments make up about 76 percent of the current load. External sources, primarily direct surface runoff and tributary inflow along with a small amount of precipitation, comprise the remaining 24 percent. Public lands in the watershed could contribute external sources of total phosphorous, mainly through sedimentation to the reservoir. Animal and human waste products are also potential sources. Map 3.1 shows the reservoir drainage area covering 1,583 acres, which includes 1,314 acres of public land (83 percent) and 269 acres of private land (17 percent).

Other Resources

The following Other Resources have been identified as being present within the Plan Area and are brought forward for analysis:

- Lands and Realty
- Livestock Grazing
- Migratory Birds
- Recreation
- Socio-economic
- Trails and Travel Management

- Wildlife

The following Other Resource (Geology/Minerals/Locatable and Saleable Materials) has been identified by Bureau specialists as being present in the Plan Area but would not be affected by either alternative:

GEOLOGY/MINERALS/LOCATABLE AND SALEABLE MATERIALS

There are no recognized mining districts within the Plan Area. The nearest known mining districts are located five miles southeast of the Plan Area; known as the Webster Mining District and the Monitor-Mogul Mining District. Little is known about these Districts; however, the Monitor-Mogul Mining District was responsible for the most important mineral production in Alpine County. Discovered shortly after the Comstock Lode, it is believed that between three and five million dollars in gold and silver were recovered from mines in the Monitor-Mogul Mining District.

There is no evidence of geologic structures, alteration, or mineralization typically associated with economic ore deposits within or adjacent to the Plan Area. Therefore, potential for development of locatable mineral deposits is low, as is the potential for any strategic or critical mineral deposits. The andesite breccias, tuffs, and flows exposed on the Plan Area lands do not possess the appropriate hardness, soundness or durability that would make them desirable for common-variety applications. The potential for economic development of salable – mineral deposits is also low. There are no mining claims, minerals leases, or mineral material sales within the Plan Area.

3.4.6 LANDS AND REALTY

RECREATION AND PUBLIC PURPOSE

There is currently one R&PP land patent (04-70-0212) issued to Alpine County for Turtle Rock Park. The park comprises 140 acres. Alpine County has two existing community service structures located on these lands that are in need of upgrading and enlargement. There is public demand to expand these county facilities.

LAND USE AUTHORIZATIONS – RIGHTS OF WAY

The South Tahoe Public Utility District (STUPD) owns and operates the South Tahoe Public Utility District Wastewater Recycling Plant which has an annual peak-day, dry weather flow capacity of 7.7 million gallons per day (mgd). The right-of-way (CA-13255) consists of a dam, reservoir, and pipelines and comprises about 268 acres and is known as Harvey Place Reservoir. The right-of-way was granted for a term of 30 years and subject to renewal upon expiration in December 2014. The facility consists of a filtered-secondary treated wastewater treatment plant, a 58 million-gallon emergency retention basin and an approximately 25-mile long wastewater effluent pipeline export system.

The CCFO holds an easement (CAS-5792) on approximately one-half mile through the Alpine County airport patent that allows for public access to Indian Creek Recreation Area and lands beyond. There are numerous other rights-of-way affecting the planning area including overhead and underground utility lines, pipelines, and roads. No major electric transmission lines or natural gas pipelines traverse the planning area.

WITHDRAWALS

Indian Creek Recreation Area Withdrawal

A protective withdrawal (Public Land Order 7112 (CA-940-1430-01; CACA-24052)) comprising approximately 2,104 acres of public land, including the original authorization under CA-2451 and other lands surrounding the recreation area, was established in January 1995 for a term of 20 years (*Federal Register* Vol.60, No. 11, Pg 3555, January 18, 1995). The withdrawal protects the recreation improvements and resources in the Indian Creek Recreation Area. The withdrawal precludes settlement, sale, location, or entry under the general land laws and mining laws. The lands are not withdrawn from leasing under the mineral leasing laws and are subject to valid existing rights. Currently, there are no existing mining claims or mineral leases on these withdrawn lands.

Land tenure actions precluded by the withdrawal would include disposal by sale or exchange, Recreation & Public Purposes (R&PP) leases or patents, desert land entries, and mining claim location. The withdrawal made by the referred order does not alter the applicability of those public land laws governing the use of the land under lease, license, or permit, or governing the disposal of their mineral or vegetative resources other than the mining laws. The order will expire in January 2015, unless as a result of a review conducted before the expiration date pursuant to Section 204(f) of the Federal Land Policy and Management Act of 1976, 43 USC 1714 (f) (1988), the Secretary determines that the withdrawal shall be extended.

Bureau of Reclamation/BLM Withdrawals

The Bureau of Reclamation (BOR) maintains two withdrawals compromising 80 acres as part of the Newlands Reclamation Project for a segment of the Snowshoe Thompson Ditch northeast of Woodfords within Section 25, T. 11 N. R. 19 E. Concurrently, BLM also holds a withdrawal on the same lands for federal power site purposes (in the 1980's a dam in the area was proposed). As withdrawals are no longer needed for power purposes, both BOR and BLM have indicated an interest in pursuing revocation of the withdrawals. Upon revocation, the land would then be restored to the operation of the public land laws and general mining laws under the administration of the Bureau of Land Management in a manner consistent with adjacent lands within the Indian Creek Recreation Lands (ICRL) boundary.

Pending Federal Land Use Authorizations

The U.S. Forest Service will pursue an administrative withdrawal of 15 acres of land for a guard station and headquarters adjacent to Turtle Rock Park.

3.4.7 LIVESTOCK GRAZING

There are currently seven livestock grazing allotments within the Plan Area. These seven allotments are depicted on map 2.4 for convenience of the reader. The only allotments to be discussed below are those proposed to be amended for livestock grazing.

The Indian Creek, Harvey Flat, Millberry Canyon, and Bagley Valley allotments are heavily timbered, and this results in low quantities of livestock forage. Livestock numbers on these allotments are historically low, and interest in grazing these areas has fallen off in the past several years. There are no applications pending for livestock grazing on Indian Creek, Harvey Flat or Millberry Canyon allotments. There is no

application pending for cattle on the Bagley Valley allotment. There is one permit authorized for sheep on Bagley Valley allotment

INDIAN CREEK ALLOTMENT

The Indian Creek Allotment consists of 346 acres of public land and is adjudicated for 59 Animal Unit Months (AUMs). There are mixed private and public lands within the grazing allotment and the property boundaries are not fenced. The private lands within the allotment were owned by the previous livestock operator who had the BLM grazing permit. These private lands within the allotment were also designated as base property for the livestock operation. There is currently no permittee on the allotment, as the base property for this grazing preference was disposed of some time ago. The new private property owners have not applied for the grazing preference or a grazing permit. Grazing within this allotment without use of the private lands is impractical due to the mixed land status and unfenced property boundaries.

HARVEY FLAT ALLOTMENT

The Harvey Flat Allotment has a total of 4,312 acres of public land, and a grazing preference of 300 AUMs. There is currently no permittee or active application for a permit on this allotment. There are concerns about the presence of livestock on the southern portion of the allotment due to the Indian Creek Recreation Area and the airport that are located there. A large part of the northern portion of the allotment is private property and the property boundaries are not fenced. Historically the private lands within the allotment were owned by the livestock operator who had the BLM grazing permit and the private lands within the allotment were also designated as base property for the grazing operation. The new private property owners have not applied for the grazing preference or a grazing permit.

There is periodic use of the airstrip owned by Alpine County located within the allotment and unauthorized livestock wandering onto the airstrip is a safety concern. These unauthorized livestock are also a concern when they breach fencing that surrounds the Indian Creek Campground.

MILLBERRY CANYON ALLOTMENT

The Millberry Canyon Allotment contains 1,480 acres public land, but has only 40 AUMs of grazing preference associated with it. These AUMs are based on a very low quantity of livestock forage in the area. There is currently no grazing permit on this allotment. A large portion of the allotment is private property and owned by several individuals, and the property boundaries are not fenced. Historically, the private lands within the allotment were owned by the livestock operator who held the BLM grazing permit and the private lands within the allotment were also designated as base property. The new private property owners have not applied for the grazing preference or a grazing permit.

BAGLEY VALLEY ALLOTMENT

The Bagley Valley Allotment contains 5,768 acres of public lands. The BLM permits 131 AUMs of sheep use on the east slope of Bagley Valley. Sheep are herded and trespass onto adjacent ungrazed lands does not occur. This low number of AUMs indicates that the BLM managed lands do not have an abundance of livestock forage or water. Public

lands on this allotment produce some forage and have a limited water supply (Snow Lake).

Bagley Valley also has an additional 1,731 AUMs of grazing preference for cattle, but no grazing permit. Historically, the Bagley Valley Allotment contained private property and 5,768 acres of land managed by the BLM. Most of the land within the valley bottom was privately owned. The slopes on the east side of the allotment were and continue to be managed by the BLM. The private lands were used as a base of operation for a cattle and sheep ranch. The majority of the livestock forage and all of the streams and springs for this operation were located on private lands in the valley bottom. Cattle and sheep were grazed on private lands in the valley bottom and the private land owner was also permitted to graze his livestock on the BLM managed lands.

In the early 1990's the private lands within the allotment were acquired by the Forest Service and the State of California for the purpose of watershed restoration. Once these lands were acquired, these entities decided not to graze livestock on the acquired lands and restored the riparian areas within the valley. When these bottom lands within the grazing allotment changed ownership, BLM recognized that permitted grazing associated with a cattle operation was conflicting with the goal of watershed restoration and cattle were no longer permitted on BLM managed lands.

3.4.8 RECREATION

Bureau of Land Management lands in Alpine County are recognized for their high recreational values. Overall, BLM management decisions reflect the public desire to enhance and protect these recreation values. Historically, these decisions have centered on facility/campground development and land acquisition and retention in an effort to preserve the character, setting and recreation resources and opportunities unique to this area.

Recreation opportunities present in the county include dispersed (undeveloped and unstructured) recreation activities such as dry camping, hunting, exploring, horse-back riding, snowshoeing and cross-country skiing. Off-road vehicle (ORV) opportunities are limited due mainly to topography and are typically focused around exploring, hunting, and trail riding and occur on primitive roads and trails. Modes of motorized use are generally high ground clearance vehicles and all terrain vehicles. There is little documented cross-country motorized travel, however, recently the Carson Ranger District has documented increasing cross-country OHV travel adjacent to the Carson River. Other BLM recreation opportunities in the Carson-Iceberg and Slinkard Wilderness Study Areas offer more primitive experiences and solitude.

Fishing along the East Fork of the Carson River and white water boating access at Hangman's Bridge are also popular. Commercial outfitters and guides provide permitted fishing and seasonal boating opportunities on the East Fork. The Forest Service is the lead agency for permitting commercial white water boating use since the majority of the river corridor is located on Forest lands

In the 1960's, the South Lake Tahoe Public Utility District undertook a program to develop an advanced treatment process to handle waste disposal in the Lake Tahoe Basin. To ensure Lake Tahoe's preservation, the decision to export all sewage out of the

basin was implemented. A twenty-seven mile pipeline was installed from the treatment plant in South Lake Tahoe to what was to become Indian Creek Reservoir (ICR). The exported tertiary treated effluent was colorless and odorless. Indian Creek Reservoir was created out of this reclaimed water, becoming a focal point for recreational activities in the area.

Through joint efforts of the BLM, Alpine County, South Tahoe Public Utilities District, and the State of California, the Indian Creek recreation facilities were opened in 1974. Construction of the facilities was realized through grant monies obtained through State of California appropriations known as the Davis-Grunsky Act. Recognizing the increasing importance of recreation opportunities in the area, the following BLM actions were implemented to further protect recreational values:

- 1974 - Designated 562 acres of public land as the Indian Creek Recreation Site;
- 1977 - Designated 7,044 acres as Indian Creek Recreation Lands (ICRL);
- 1982 Management Framework Plan – Designated approximately 6,000 acres as *limited* to designated routes;
- 1986- Designated 6,065 acres around the Indian Creek and the East Fork of the Carson River as a Special Recreation Management Area;
- 1995 - Withdrew 2,104 acres of public land disposal under federal land laws.

The Indian Creek Recreation Site includes about 562 acres of land set aside for the development of public recreation facilities that include a developed campground, boat ramp, paved access and parking. The Indian Creek Recreation Lands are more extensive and delineate those lands that have high recreation value. The ICRL encompass Indian Creek Reservoir and Campground, Curtz Lake Environmental Study Area, maintained access roads and a system of hiking trails. Collectively, these lands and facilities provide developed recreation opportunities that include fishing, camping, hiking, bicycling, white water rafting, wildlife viewing, nature study, photography, boating, and sightseeing.

The ICRL are a destination spot for local and regional visitors that frequent the area throughout the year. Use levels increase in the spring and peak during the summer months with use tapering off by mid-fall. During the winter months recreation use levels are weather dependant, typically low and centered on day use. The average number of visits to the area has been estimated at 30,000 annually. Since 1970 there have been over one million visits to the area, a testimony to how attractive and popular the facilities are.

The Fay-Luther Canyon Area, located in the northern portion of the county, is a very popular recreation day-use area for non-motorized activities. This area straddles the Nevada/California border with all public lands in Nevada managed by the Forest Service. In 1999, the Forest Service constructed a formal trail-head for parking. There is pedestrian and equestrian access. There is also administrative access for authorized uses.

This area has deep loose decomposed granite and does not provide quality recreation opportunities for mountain bikes, however, it is frequently used by equestrians, hikers and walkers. Vegetation is easily disturbed in this soil type. In 1988, an Emergency Closure Order to protect 745 acres with sensitive resource values (cultural, vegetation/habitat) was published in the *Federal Register* (January 12, 2001, Vol. 66, No.

9). This notice specifically closed public lands to motorized vehicles in Sections 26, and 35, T. 12 N., R. 19 E., until such time as a resource management plan or plan amendment are completed.

3.4.9 SOCIO- ECONOMIC

Alpine County's economy is especially dependent on recreation tourism. Generally, the county's income is derived from visitors from the booming tourism communities of Lake Tahoe and western Nevada who seek out the county for its rich outdoor recreation opportunities. Fishing, camping, hiking, rafting, skiing and winter snow sports are the most popular activities.

Alpine County has the smallest population of all counties in California (about 1200 people in 2000), most of which is concentrated around the mountain communities of Markleeville, Woodfords, Bear Valley and Kirkwood. Residents enjoy a rural lifestyle, with the convenience of several city areas in the neighboring counties. Markleeville is the county seat, and home to many of the county's offices. Since Alpine County has no incorporated cities, most public services are provided by county departments and agencies. With 96 percent of its land in public ownership, opportunities for community growth and economic expansion are few. Despite its limitations, surveys suggest that residents of Alpine County are content in their relaxed rural lifestyle, even boasting of the fact that the County has no traffic light, bank, movie-theater, dentist, or supermarket.

3.4.10 TRAILS AND TRAVEL MANAGEMENT

Approximately 70 miles of roads, primitive roads, and trails exist on BLM managed lands in Alpine County. Road types range from paved to unimproved two track. Types of vehicle use range from recreational vehicles at Indian Creek Campground to all-terrain vehicles (ATVs) in the back country. Existing trail types are primarily non-motorized single track and used predominantly by pedestrians and equestrians. There are a limited number of motorized single-track trails being established. Current travel management designations on BLM managed lands in Alpine County are as follows:

Table 3.2

Area Identifier	Designation (acres)		
	Open	Limited	Closed
Bagley Valley	0	6,200 acres	0
Indian Creek Recreation Lands	0	6,065 acres	0
Fay-Luther Canyon	894	0	0
Other	5,521	0	0
Total	6,415	12,265	0

3.4.11 Wildlife

Although the Plan Area is located in California, the eastern Sierra Nevada region is more similar to Great Basin environments. The description of major Nevada wildlife habitat types is from the 2006 Wildlife Action Plan and describes general wildlife conditions in the Plan Area. The major types include:

Lower Montane Woodlands – Piñon-juniper dominate this habitat type. Sagebrush, mahogany, ceanothus and Manzanita can be found in the understory. Some conifers intermix at higher elevations. Wildlife species such as Western Scrub Jay, long-eared myotis and mountain kingsnake can be found in this habitat type.

Sierra Conifer Forests and Woodlands – Jeffrey pine is found on warmer, drier sites. In the plan area it occurs in dense stands to open park lands. White fir is found at the upper elevations in more moist, cool sites. In the Plan area, it is found on many north facing slopes and along deep canyons. Snowberry, wyethia and bitterbrush can be found in the understory. Wildlife species such as blue grouse, montane shrew and Sierra Nevada alligator lizard can be found in this habitat type.

Sierra Rivers and Streams – Mountain alder and cottonwood generally dominate these areas with aspen occasionally occurring. The understory contains willows, wild rose and other riparian species. These areas serve only as foraging areas, reproductive and seasonal use areas, as well as provide travel corridors for many species. Wildlife species such as Broad-tailed hummingbird, broad-foot mole, water shrew, Lahontan cutthroat trout and mountain yellow-legged frog can be found in this habitat type.

Lakes and Reservoirs – Indian Creek Reservoir is the dominant water body in the Plan Area. It contains emergent marshes, mud flats and an aquatic habitat that supports species such as Western grebe, northern leopard frog, Lahontan cutthroat trout and a variety of stone, caddis and mayflies.

Wet meadows, springs, grassland meadows, marshes, cliffs and canyons occur as inclusions within the major habitat types. Plant species associated with these areas include cinquefoil, tufted hairgrass, yarrow, false hellbore and sedges. Some of these areas are large enough to support wildlife species such as pika, spotted bat, mountain beaver, frogs, and various shrews and hummingbirds. Some inclusions are very small and serve to enhance the surrounding habitat type.

Aquatic habitats include Indian Creek Reservoir which maintains water yearlong. Indian Creek Reservoir contains tui chub, Tahoe sucker and stocked rainbow and Lahontan cutthroat trout. Stevens Lake is adjacent to Indian Creek Reservoir, but has no fish since it is a secondary effluent treatment structure. Curtz Lake is a small pond that often dries in summer. It supports a high quality, late seral ephemeral wet meadow. Summit Lake has water yearlong and is stocked with rainbow trout as a put- and- take fishery. It supports a small wet meadow around the fringe of the lake. Several bat species would use the Reservoir and small ponds for insect foraging.

The East Fork of the Carson River flows through the area. It contains Lahontan cutthroat and brook trout, brown trout, mountain whitefish, a species of Tahoe sucker, speckled dace and Lahontan red-shiner.

Several streams occur in the Plan Area including Millberry Creek, Markleeville Creek, Indian Creek, Scott Creek and Luther Creek**.** Markleeville and Indian Creeks probably support game fish. Millberry, Scott, and Luther Creeks do not support game fish, but may support non-game species.

Each of the lakes supports emergent and floating aquatic vegetation as well as ephemeral wet meadow vegetation. The smaller streams support riparian vegetation including aspen cottonwoods and chokecherry. The Carson River supports riverine riparian habitat with gallery cottonwood and willows. Wildlife species such as California toad, Townsend's chipmunk and several species of hummingbirds can be found in the riparian habitat types.

Both timbered areas and higher elevations contain meadows dominated by grasses and forbs. These inclusions support wildlife species such as pocket gophers, night snake and Northern Rough-winged swallow.

Wild turkeys occur within the Plan Area; however, no roosting or gobbling sites have been identified. Meadows and selected Jeffery pine would be key habitat areas for this game bird. Mountain quail are present and recent wetter years have produced good populations of this species in montane habitats.

The Carson River deer herd uses the Plan Area at least part of the year. The area contains winter range, summer range and migration corridors. Critical deer winter range is located on the east bench of the Sierra Nevada range from Markleeville north. The Fay-Luther Area emergency closure order was in part enacted to protect this critical habitat. This deer herd is considered stable to declining, as are most western deer herds due in part to land management practices that have precluded fire.

Greater sage grouse is considered an upland game species by California Fish and Game and is hunted. Sage grouse found within the Plan Area belong to the Mono sub-population of sage grouse, a population whose genetics are in the process of being described and confirmed. No known use areas have been identified in the Plan Area, but grouse occur and the existence of lek areas is nearly certain. Prior to 2005, the USFWS received three petitions that triggered a review for federal listing. In January 2005, the USFWS determined that listing was not warranted at that time. Documented threats to this sub-population are located on other federal lands and do not include public lands in Alpine County.

Special Status Species (Animals)

BLM Sensitive Species

It is BLM policy to provide sensitive species with the same level of protection that is given federal candidate species. The major objective of this protection is to preclude the need for federal listing. The State of California 2006 list of sensitive species for BLM is extensive. Only a portion of these species has potential for occurring on the east slope of the Sierra Nevada Mountains. Because the Plan Area is located on the eastern side of the Sierra Nevada, its wildlife and plant habitats often resemble those of the Great Basin. Several Nevada BLM sensitive species are found in or near the Plan Area. The list of

Nevada and California BLM sensitive species that occur or are likely to occur in the Plan Area is shown in Appendix B.

Migratory Birds

On January 11, 2001, President Clinton signed Executive Order 13186—the Land Bird Strategic Plan, placing emphasis on conservation and management of migratory birds. Species are not protected under the Endangered Species Act, but most are protected under the Migratory Bird Treaty Act of 1918. No BLM policies have been developed to provide guidance on how to incorporate neotropical migratory (NTMB) birds into NEPA analysis. Advice based on past USFWS Memorandum of Understanding agreements list items the USFWS believes are fundamental for the analysis of impacts to and planning for these birds. These items are (1) effects to highest priority birds listed by Partners In Flight (PIF); (2) effects to important bird areas (IBA's); (3) effects to important over wintering areas.

Although located in California, the Plan Area's bird habitats most closely resemble the Intermountain West Avifaunal Biome described by PIF and PIF-Nevada. The Intermountain West is the center of distribution for many western birds. Over half of the biome's Species of Continental Importance have 75% or more of their population here. Many breeding species from this biome migrate to winter in central and western Mexico or in the Southwestern biome. The species of concern listed by PIF that could occur in the Plan Area are shown in Appendix A.