4.0 ENVIRONMENTAL IMPACT ANALYSIS
C. BIOLOGICAL RESOURCES

INTRODUCTION

This section summarizes the Biological Resources Assessment (BRA) for the Trail System Master Plan and Parks and Recreation Master Plan performed by PCR Services Corporation (June 2011) and contained in Appendix E of this Draft EIR. The BRA provides a more detailed inventory of biological resources and serves as the basis for the impact findings contained herein. As described in Chapter II, *Project Description*, of this Draft EIR, the TSMP, SHARP, and Priority Projects are collectively referred to as the "Project," and are the focus of the impact analysis. With the exception of the TSMP's "Priority Projects", the recommendations and projects included in TSMP and SHARP are conceptual in nature and are therefore evaluated at a program-level. It is recognized with a programmatic study, that subsequent projects carried out under the long-term master plans may warrant site specific biological assessments and surveys once plans have been detailed and evaluated on a project-by-project basis.

1. ENVIRONMENTAL SETTING

a. Regulatory Framework

As part of the proposed Project's review and approval there are a number of performance criteria and standard conditions that must be met. These include compliance with all of the terms, provisions, and requirements of applicable laws that relate to Federal, State, and local regulating agencies for impacts to biological resources. The following provides an overview of the applicable regulations with regard to the biological resources that may be present within the Project Area.

(1) Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) and Fish and Game Code Section 3503 protect native bird species from destruction or harm. This protection extends to individuals as well as any part, nest, or eggs of any bird listed as migratory.

In practice, Federal permits potentially impacting migratory birds typically have conditions that require pre-disturbance surveys for nesting birds, and, in the event nesting is observed, a buffer area with a specified radius must be established, within which no disturbance or intrusion is allowed until the young have fledged and left the nest or it has been determined that the nest has failed. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography, etc), and is based on the professional judgment of a monitoring biologist.

(2) State of California Fish and Game Code, Section 1602

Section 1602 of the California Fish and Game Code requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river,

stream, or lake to notify the California Department of Fish and Game (CDFG) of the proposed project. In the course of this notification process, the CDFG will review the proposed project as it affects streambed habitats within the project area. The CDFG may then place conditions on the Section 1602 clearance to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFG jurisdictional limits.

(3) Federal Clean Water Act, Section 404

Section 404 of the Clean Water Act (CWA) regulates the discharge of dredged material, placement of fill material, or excavation within "waters of the U.S." and authorizes the Secretary of the Army, through the Chief of Engineers, to issue permits for such actions. "Waters of the U.S." are defined by the CWA as "rivers, creeks, streams, and lakes extending to their headwaters and any associated wetlands." Wetlands are defined by the CWA as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions." The permit review process entails an assessment of potentially adverse impacts to Army Corps of Engineers (ACOE) jurisdictional "waters of the U.S." and wetlands. In response to the permit application, the ACOE will also require conditions amounting to mitigation measures. Where a federally-listed species may be affected, they will also require an Endangered Species Act Section 7 consultation with the U.S. Fish and Wildlife (USFWS). Through this process, potentially significant adverse impacts within the federal jurisdictional limits could be mitigated to a level that is less than significant.

Over the years, the ACOE has modified its regulations, typically due to evolving policy or judicial decisions, through the issuance of Regulatory Guidance Letters, memorandum, or more expansive instruction guidebooks. These guidance documents help to update and define how jurisdiction is claimed, and how these "waters of the U.S" will be regulated. The most recent significant modification occurred on June 5, 2007, subsequently updated in December 2008 when the ACOE and the U.S. Environmental Protection Agency (EPA) issued a series of guidance documents outlining the requirements and procedures, effective immediately, to establish jurisdiction under Section 404 of the CWA and the Section 10 of the Rivers and Harbors Act 1899 (ACOE and EPA 2006). These documents are intended to be used for all jurisdictional delineations and provide specific guidance for the jurisdictional determination of potentially jurisdictional features affected by the United States Supreme Court rulings in *Rapanos v. the United States* and *Carabell v. the United States* 547U.S. 715 (2006) (jointly referred to as "*Rapanos*").

The *Rapanos* case outlines the conditions and criteria used by the ACOE to assess and claim jurisdiction over non-navigable, ephemeral tributaries. Under a plurality ruling, the Court noted that certain "not relatively permanent" (i.e. ephemeral), non-navigable tributaries must have a "significant nexus" to downstream traditional navigable waters to be jurisdictional. An ephemeral tributary has a significant nexus to downstream navigable "waters" when it has "more than a speculative or an insubstantial effect on the chemical, physical, and/or biological integrity of a Traditional Navigable Water (TNW)." A significant nexus is established through the consideration of a variety of hydrologic, geologic and ecological factors specific to the particular drainage feature in question.

(4) Federal Clean Water Act, Section 401

The mission of the California Regional Water Quality Control Board (RWQCB) is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

> Any applicant for a Federal permit for activities that involve a discharge to waters of the State shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act.

Therefore, before the ACOE will issue a Clean Water Act Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the RWQCB. A complete application for 401 Certification will include a detailed Water Quality Management Plan that addresses the key water quality features of the project to ensure the integrity of water quality in the area during and post-construction.

Under separate authorities granted by State law (i.e., the Porter-Cologne Water Quality Control Act), a RWQCB may choose to regulate discharges of dredge or fill materials by issuing or waiving (with or without conditions) Waste Discharge Requirements (WDRs), a type of State discharge permit, instead of taking a water quality certification action. Processing of a WDR is similar to that of a Section 401 certification; however, the RWQCB has slightly more discretion to add conditions to a project under Porter-Cologne than under the Federal CWA.

(5) California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive plant species in California. CNPS has compiled an inventory comprised of the USFS information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered plant species of California (CNPS 2001). The inventory is commonly used by State and federal resource agencies in their review and evaluation of CEQA documentation. CNPS has developed five categories of rarity:

List 1A Presumed extinct in California

List 1B Rare or Endangered in California and elsewhere

List 2 Rare or Endangered in California, more common elsewhere

List 3 Plants about which we need more USFS information before rarity can be determined– Review list

List 4 Plants of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat– Watch list

In addition, the CNPS recently updated their Lists with Threat Codes. There are three new Threat Code extensions that follow the List number as a decimal:

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

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

3. Not very endangered in California (<20% of occurrences threatened or no current threats known)

(6) California's Endangered Species Act (CESA)

CESA defines an "endangered" species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The state defines a "threatened" species as "a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter.

For purposes of this assessment, the following acronyms are used for State status species:

SE	State listed as Endangered
ST	State listed as Threatened
SR	State Rare
SCE	State Candidate for Endangered
SCT	State Candidate for Threatened
SCD	State Candidate for Delisting
SFP	State Fully Protected
SSC	California Species of Special Concern

(7) Federal Protection and Classifications

The Federal Endangered Species Act of 1973 (FESA) defines an "endangered" species as "any species which is in danger of extinction throughout all or a significant portion of its range". A "threatened" species is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range". Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined in Section 3(18) of FESA as to: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of "take". These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks permission from a federal agency for an action which could affect a federally-listed plant or animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants.

Within the last ten years the USFWS instituted changes in the listing status of candidate species abandoning the C1/C2 model. Former C1 candidate species are now considered federal candidate species (FC). Some of the USFWS field offices (e.g., Sacramento) maintain lists of federal Species of Concern (FSC). Federal Species of Concern is not a term that is defined in the federal Endangered Species Act. Rather, it is an informal term that is used to characterize species whose population are or appear to be in decline and warrant conservation. These species receive no legal protection and the use of the term FSC does not mean that they

will eventually be proposed for listing.[1] Therefore, this term is not used in this assessment. For purposes of this assessment, the following acronyms are used for federal status species:

FE	Federally listed as Endangered
FT	Federally listed as Threatened
FPE	Federally proposed for listing as Endangered
FPT	Federally proposed for listing as Threatened
FPD	Federally proposed for delisting
FC	Federal candidate species (former Category 1 candidates)

(8) USDA Forest Service Sensitive Species

The National Forest Management Act (NFMA) of 1976 and its implementing regulations require the Forest Service to ensure a diversity of animal and plant communities and maintain viable populations of existing native species as part of their multiple use mandate. The USFS sensitive species program is a proactive approach to conserving species to ensure the continued existence of viable, well-distributed populations, and to maintain biodiversity of National Forest Service lands (USFS 2004). In addition, the Secretary of Agriculture's policy on fish and wildlife (Department Regulation 9500-4) directs the USFS to avoid actions "which may cause a species to become threatened or endangered."

The USFS defines sensitive species as those animal and plant species identified by a regional forester for which population viability is a concern. This may be a result of significant current or predicted downward trends in habitat that would reduce a species' existing distribution or significant current or predicted downward trends in density or population numbers (CNDDB 2009e).

The USFS, USFS maintains a list of sensitive wildlife and plant species. This list consists of rare plants and animals which are given special management consideration to ensure their continued viability on the national forests (Murphy, pers. comm. 2009; USFS 2006).

(9) Inyo National Forest Land and Resource Management Plan

The USFS Inyo National Forest Land and Resource Management Plan (LRMP) establishes the management, direction, and long-range goals for the Inyo National Forest (USFS 1988). Management goals for the USFS include (but are not limited to) the following:

- Protect and improve riparian area-dependent resources while allowing for management of other compatible uses.
- Protect or improve the habitats of threatened or endangered species in cooperation with state and other federal agencies.
- Protect sensitive plants to ensure they will not become threatened or endangered.

[1] *Sacramento Fish &Wildlife website: http://sacramento.fws.gov/es/spp_concern.htm*

- Manage wildlife habitat to provide species diversity, ensure that viable populations of existing native wildlife is maintained, and that the habitats of management emphasis species are maintained or improved.

Forest-wide Standards and Guidelines provide specific guidelines for the management of each resource to ensure its enhancement and protection. These include (but are not limited to) the following:

(a) Riparian Areas

- Protect streams, streambanks, lakes, wetlands, and shorelines, and the plants and wildlife dependant on these areas.
- Prevent adverse riparian area changes in water temperature, sedimentation, chemistry, and water flow.
- Rehabilitate and/or fence riparian areas that consistently show resource damage.
- Allow new developments and surface disturbance in riparian areas only after on-site evaluations have determined that resources are not adversely affected, or mitigation of any adverse impacts is identified and incorporated into the project design.

(b) Sensitive Plants

- Allow no new disturbance of identified sensitive plant habitat without direction from Interim Management Guidelines, Species Management Guides, or an environmental analysis.
- Complete inventories of project areas and areas of disturbance if there is potential habitat or known population locations identified.

(c) Wildlife – Threatened, Endangered, and Sensitive Wildlife Species

- Cooperate with the USFWS and the CDFG in the management of threatened and endangered species.
- Submit proposals for actions that might affect the continued existence of a threatened or endangered species to the USFWS for formal consultation.

(d) Wildlife – Management Indicator Species

Management Indicator Species ("MIS") are wildlife species identified in the USFS MIS Amendment Record of Decision ("ROD") signed December 14, 2007. The list of MIS was developed under the 1982 National Forest System LRMP Rule and amended by the 2007 SNF MIS Amendment ROD. Forest Service resource managers are directed to analyze the effects of Proposed Project Alternatives on the habitat of each MIS affected by such projects and monitor populations and/or habitat trends of each MIS.

The following habitat or ecosystem components and corresponding USFS's MIS are included under the 2007 USFS MIS Amendment ROD.

- Riverine and lacustrine: aquatic macroinvertebrates
- Shrubland (west-slope chaparral types): fox sparrow (*Passerella iliaca*)
- Sagebrush: greater sage-grouse (*Centrocercus urophasianus*)

- Oak-associated hardwood and hardwood/conifer: mule deer (*Odocoileus hemionus*)
- Riparian: yellow warbler (*Dendroica petechia*)
- Wet meadow: Pacific tree frog (*Pseudacris regilla*)
- Early and mid seral coniferous forest: mountain quail (*Oreortyx pictus*)
- Late seral open canopy coniferous forest: sooty (blue) grouse (*Dendragapus obscurus*)
- Late seral closed canopy coniferous forest: California spotted owl (*Strix occidentalis occidentalis*), American marten (*Martes americana*), and northern flying squirrel (*Glaucomys sabrinus*)
- Snags in green forest: hairy woodpecker (*Picoides villosus*)
- Snags in burned forest: black-backed woodpecker (*Picoides arcticus*)

(10) Town of Mammoth Lakes Ordinances

The Town has adopted several ordinances that protect biological resources. Municipal Code Chapter 8.12, *Refuse Disposal*, would be applied to work within the Project Area. This code section establishes regulations for the proper refuse disposal to eliminate the availability of refuse for wildlife and Section 17.20.040(H), *Vegetation*, 17.16.050 B and 17.24.050 require the preservation of existing trees and vegetation within commercial, residential and industrial zones to the maximum extent possible. The Town may apply similar standards to other zones, including Public-Quasi Public, Resort and Open Space zones. Most types of development is prohibited within 50 feet of a creek or stream bank; trails and roads are permitted, however.

(11) Town of Mammoth Lakes General Plan

The Town of Mammoth Lakes General Plan Resource Management and Conservation Element (2007) establishes and emphasizes its goal to promote sound stewardship of natural resources including wildlife, habitat, fisheries, water, and vegetation resources of significant biological, ecological, aesthetic, and recreational value. The habitat, wildlife and vegetation conservation policies incorporated in the General Plan to support this goal are outlined below.

- R.1.A Policy: Be stewards of important wildlife and biological habitats within the Town's municipal boundary.
- R.1.B Policy: Development shall be stewards of Special Status plant and animal species and natural communities and habitats.
- R.1.C Policy: Prior to Development, projects shall identify and mitigate potential impacts to site-specific sensitive habitats, including special status plant, animal species and mature trees.
- R.1.D Policy: Be stewards of primary wildlife habitats through public and/or private management programs. For example, construction of active and passive recreation and development areas away from the habitat.
- R.1.E Policy: Support fishery management activities.

- R.1.F Policy: Support education, interpretive programs and facilities offered by the Department of Fish and Game, Mono County Fisheries Commission, and other appropriate entities.

- R.1.J Policy: Live safely with Wildlife within our community.

(12) Mono County General Plan

Whitmore Park is a Town-operated facility, but lies within unincorporated Mono County. One of the goals of the Mono County General Plan is to "maintain an abundance and variety of vegetation, aquatic and wildlife types in Mono County for recreational use, natural diversity, scenic value, and economic benefits" (Mono County 1993). This goal is accomplished through a number of policies including the following:

- Future development shall mitigate impacts to biological resources to a level of less than significant or avoid potential significant impacts.
- Threatened and endangered plants and wildlife and their habitats shall be protected and restored.
- Native plants, sensitive plants, and plants "of exceptional scientific, ecological, or scenic value" shall be protected and restored.
- Construction activities shall be prohibited in sensitive habitats prior to environmental review.
- Soil conservation practices shall be utilized during construction.
- The acquisition of valuable wildlife habitat by land conservation organizations or federal or State land management agencies shall be encouraged.
- OHV use shall be restricted in valuable habitats.
- Water quality for fishery habitat shall be maintained by enforcing the policies of the Conservation/Open Space Element of the Mono County General Plan
- Efforts shall be made to regulate in-stream flows and lake levels for the purposes of maintaining fisheries and other riparian-dependent biological resources.
- Efforts shall be made to manage fisheries "in accordance with their biological capabilities."
- Non-consumptive use of existing fisheries shall be promoted.
- Efforts to support the reintroduction of trout in appropriate locations shall be made.
- CDFG fish stocking efforts shall be supplemented with a "county-supported stocking program."

(13) Upper Owens River Watershed Management Plan

In March, 2007, through funding provided by a grant from the State Water Resources Control Board, Mono County and The Mono County Collaborative Planning Team completed the Upper Owens River Watershed Management Plan. Goals of the Upper Owens River Watershed Management Plan include maintaining and improving the aquatic habitat of Hot Creek and Mammoth Creek, maintaining existing wetlands, and maintaining and improving riparian habitat. Potential actions to facilitate these goals include the following:

- Guide development away from wetland margins and do not develop wetland areas
- Explore opportunities for land trades with areas of lesser quality habitat

- Suggest conservation easements on wetland parcels
- Remove and improve roads in riparian areas,
- Remove nonessential stream crossings, and remove development from riparian zones
- Restore degraded riparian areas

(14) Special Interest Species

The CDFG, U.S. Fish and Wildlife Service (USFWS), local agencies, and special interest groups, such as the California Native Plant Society (CNPS) publish watch lists of declining species. Species on these lists are a part of the special interest species assessment. Special interest species, species of concern, and candidates for state and/or federal listing are also included in the special interest species discussion.

Inclusion of species described in this analysis is based on the following:

- Direct observation of the species or its sign in the Project Area or immediate vicinity during surveys conducted for this study or reported in previous biological studies;
- Sighting by other qualified observers;
- Record reported by the California Natural Diversity Data Base (CNDDB) published by the CDFG;
- Presence or location of specific species lists provided by private groups (e.g., CNPS); or
- Site lies within known distribution of a given species and contains appropriate habitat.

(15) Protected Bird Species

Most bird species are protected under the federal Migratory Bird Treaty Act (MBTA), as mentioned above, a and under Sections 3503, 3503.5, and 3800 of the California Fish and Game Code. It is unlawful to take, possess, or needlessly destroy any bird of prey or the nests or eggs of any kind of bird species except as otherwise provided in the CDFG Codes and regulations. Disturbance of any active bird nest during the breeding season is prohibited. Disturbances at the active nesting territories should be avoided during the nesting season; typically, April 1 through August 31 in the Mammoth Lakes area.

b. Existing Conditions

(1) Vegetation and Wildlife

The following provides a discussion of the existing vegetation and wildlife resources found in the Project Area. Figure 9, *Vegetation Map*, of the BRA (see Appendix E of this Draft EIR) illustrates the general distribution of vegetation types throughout the Project area.

(a) Vegetation Communities

Vegetation within the Project Area consists of individual or mixed plant communities. The reader should note that due to the scale of the Project the following descriptions summarize the basic characteristics and constituent species of plant communities as stand-alone elements. In cases where two or three of these communities are mixed, the vegetation shares characteristics and constituent species from each of the

component parts. A summary of each major vegetation community, including descriptions of their characteristic distribution within the Project area, is provided below.

Aspen Forest and Aspen Woodland

Aspen forest consists of dense groves of quaking aspen (*Populus tremuloides*) as the sole or dominant tree in the tree canopy. Trees grow to 20 meters in height. The understory in this community typically is sparse, but includes a variety of small shrubs and herbaceous perennials. Scrubby quaking aspen thickets may occur at the edges in areas of relatively dry soil or at high altitudes. Additional species observed in this community

include mountain snowberry (*Symphoricarpus rotundifolius*), interior rose (*Rosa woodsii* var. *ultramontana*), mountain alder (*Alnus incana*), ranger's buttons (*Sphenosciadium capitellatum*), common yarrow (*Achillea millefolium*), wax currant (*Ribes cereum*), Sierra onion (*Allium campanulatum*), meadow goldenrod (*Solidago canadensis* ssp. *elongata*), and narrow-leaved willow (*Salix exigua*).

Aspen woodland consists of quaking aspen as the sole or dominant tree in the tree canopy. In contrast to aspen forests, trees in aspen woodland tend to be less than 35 meters in height with an intermittent or open canopy. This plant community characteristically occurs at elevations between 1500 meters and 3000 meters in depressions and swales, on slopes, at meadow margins, along stream corridors, and on colluvial toe slopes where soils are typically deep, well developed, and seasonally or permanently saturated. Consequently, stands of aspen forest and aspen woodlands are found scattered throughout the Project area. Additional species observed included willow (*Salix* spp.), lodgepole pine (*Pinus contorta* ssp. *murrayana*), white fir, mountain alder, common yarrow, ranger's buttons, mountain snowberry, stickey cinquefoil (*Potentilla glandulosa*), mountain meadow rue (*Thalictrum fendleri*), and scarlet gilia (*Ipomopsis aggregata*).

For the purpose of this assessment, the terms "forest" and "woodland" are used to describe quaking aspen dominated vegetation types as a whole.

Great Basin Sagebrush Scrub

Great Basin sagebrush scrub consists of mostly soft-woody shrubs usually with bare ground underneath and between shrubs. This plant community typically grows at elevations between 300 meters and 3000 meters on plains, alluvial fans, pediments, lower slopes, and valley bottoms, and along seasonal and perennial stream channels, and dry washes. It is most abundant on the broad valley floor in the Snowcreek and Sherwin Creek area; however, it can be found throughout most lower elevation areas within the Project area. Great Basin sagebrush (*Artemisia tridentata*) is the dominant species of this plant community, and growth occurs mostly in late spring and early summer. This plant community is dormant during the winter and occurs on a wide variety of soils and terrain, from rocky, well-drained slopes to fine-textured, valley soils with a high water table. Characteristic species include Great Basin sagebrush, four-wing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Chrysothamnus nauseosus*), Idahoe fescue (*Festuca idahoensis*), antelope bitterbrush (*Purshia tridentata*), and elymus (*Elymus cinereus*).

Conifer Forest

Conifer forest consists of an open to dense forest of coniferous evergreens up to 75 meters in height. Within the basic conifer forest classification there are various alliances that are dominated by individual species, and the forest type. In mixed conifer forest dominant species within the Project Area include lodgepole pine,

white fir, western white pine (*Pinus monticola*), and Jeffrey pine. Lodgepole pine and Jeffrey pine are most commonly the dominants or co-dominants; however, there is considerable mixing of all of the above mentioned species of pines. The understory typically consists of scattered broadleaved mesophytic shrubs and small trees. Species characteristic of this community may also include currant (*Ribes* spp.), manzanita (*Arctostaphylos* sp.), chinquapin (*Chrysolepis sempervirens*) and California lilac (*Ceanothus* spp.). Conifer forest within the Project area occur on a wide variety of slopes and aspects, on ridges and terraces, as well as in depressions. These forests are common throughout the Town environs and on the upper slopes within the Sherwin area.

Conifer forest predominates much of the landscape within the Project area. Jeffrey pine forest is characterized as a tall, open forest dominated by Jeffrey pine (*Pinus jefferyi*) with sparse understories of either montane chaparral or Great Basin sagebrush scrub. This community occurs on dry, cold sites, especially on well-drained slopes, ridges, or cold air accumulation basins up to approximately 2900 meters. Characteristic species include Jeffrey pine (dominant), Great Basin sagebrush, antelope bitterbrush, huckleberry oak (*Quercus vaccinifolia*), and snowberry. Lodgepole pine forest is characterized by dense forest of slender trees up to 40 meters tall dominated by lodgepole pine. More open stands also occur within drier sites where trees reach 20 meters tall. Dense stands of lodgepole pines typically have a sparse understory with small shrubs and perennial herbs occurring within the forest openings. Lodgepole pine forest typically occurs at elevations between 1500 meters and 3400 meters with cool, dry summers and long winters with abundant snowfall. This community tolerates a variety of soil conditions and moisture levels; however, it most commonly occurs on rocky, well-drained soils. Characteristic species include lodgepole pine (dominant), quaking aspen, cinquefoil (*Potentilla* sp.), heather (*Phyllodoce* spp.), and wintergreen (*Pyrola* spp.)

Mixed Willow Riparian Scrub

Mixed willow riparian scrub consists of a relatively open to dense shrubby streamside thicket consisting of a mixture of willow species as the dominant species in the shrub canopy. Species observed in this community on-site included arctic willow (*Salix arctica*), narrow-leaved willow (*Salix exigua*), Lemmon's willow (*Salix lemmonii*), shining willow (*Salix lucida* ssp. *lasiandra*), yellow willow (*Salix lutea*), and tea-leaved willow (*Salix planifolia*), corn lily (*Veratrum californicum*), fireweed (*Epilobium angustifolium*), spike mallow (*Sidalcea oregano* ssp. *spicata*), western blue flag (*Iris missouriensis*), common monkeyflower (*Mimulus guttatus*), mountain snowberry, meadow goldenrod (*Solidago canadensis* ssp. *elongata*), common yarrow, and horse-mint (*Agastache urticifolia*). This plant community occurs throughout the eastern Sierra Nevada up to elevations of approximately 3800 meters. It requires seasonally or perennially saturated soils and, consequently, is found along many of the larger and tributary drainages in the Project area, as well as at the margins of wet meadows.

Montane Wet Meadow

Montane meadow vegetation is characterized by a dense growth of sedges and other perennials herbs. Typically, it occurs between 1200 meters and 2600 meters. The main growth period for this plant community is from late spring through summer with a dormancy period in the winter. This community occurs on fine-textured, somewhat permanently moist or wet soils. Montane meadows are often a successional stage in the filling of lakebeds with soil and often are characterized by young trees encroaching from the margins. Within the Project area, it may be found in many areas where springs and seeps occur, at lake margins, but is concentrated in the broad valley bottom adjacent to Snowcreek.

Plant species observed within this community in the project area included epilobium (*Epilobium ciliatum*), smoothstem willow-herb (*Epilobium glaberrimum*), fireweed, corn lily, wandering daisy (*Erigeron peregrinus* var. *hirsultus*), sedge, Kelly's tiger lily (*Lilium kelleyanum*), leopard lily (*Lilium pardalinum*), yampah (*Perideridia parishii* ssp. *latifolia*), arrow-leaf butterweed (*Senecio triangularis*), meadow goldenrod, western blue flag, Sierra rein orchid (*Platanthera leucostachys*), monkshood (*Aconitum columbianum*), swamp onion (*Allium validum*), meadow paintbrush (*Castilleja miniata* ssp. *miniata*), Brewer's mitrewort (*Mitella breweri*), cow parsnip (*Heracleum lanatum*), stickey cinquefoil, mountain meadow rue, rush, horsetail (*Equisetum* sp.) common monkeyflower, slender cinquefoil (*Potentilla gracilis*), common yarrow, elephant's head (*Pedicularis groenlandica*), spike mallow, dented silk-moss (*Plagiothecium denticulatum*), common green bryum moss (*Bryum pseudotriquetrum*), ribbed bog moss (*Aulacomnium palustre*), and water speedwell (*Veronica anagallis-aquatica*).

Montane Chaparral

Montane chaparral is associated with mountainous terrain from mid to high elevations at 900 to over 3,000 meters. It occurs throughout the mountain ranges in southern California and in the Sierra Nevada and Cascade mountain ranges in central and northern California. Montane chaparral can be found on shallow to deep soils, on all exposures, and from gentle to relatively steep slopes. It may dominate on more xeric sites, but occurs locally throughout the coniferous zone. The growth form of montane chaparral plant species can vary from tree-like to prostrate. When mature, it generally becomes extremely dense. The composition of montane chaparral varies markedly throughout California, depending on elevation, geography, soil type, and slope aspect. In the Mammoth Lakes region dominant species include manzanita (*Arctostaphylos nevadensis* and *A. patula*), lilac (*Ceanothus cordulatus*, *C. interrimus*, and *C. velutinus*), and cherry (*Prunus emarginata*). Montane chaparral may be found throughout the Project area, but is most abundant on the lower and upper mountain slopes in the Sherwin area where it forms a mosaic with conifer forest.

Developed and Disturbed

Developed and disturbed habitats are found throughout the Town and along roads. While native trees, shrubs and groundcovers may occur, the predominant cover is hardscape surfaces, bare ground, non-native plants, and ornamental plantings.

(b) Wildlife

The plant communities discussed above provide wildlife habitat. Following are discussions of wildlife populations within the Project Area, segregated by taxonomic group. Representative examples of each taxonomic group either observed or expected within the Project Area are provided. Wildlife species actually observed, as well as those expected to be present, are listed in Appendix A, *Plant and Wildlife Species Compendium*, of the BRA (see Appendix E of this Draft EIR). Special status wildlife species are discussed below.

Invertebrates

Focused surveys for common invertebrate species were not conducted; however, the Project Area would be expected to support populations of a diverse assortment of invertebrates due to the number of diverse plant communities on-site.

Fish

Focused surveys for fish species were not conducted by PCR, but have been conducted for areas within the Project Area since 1992 excluding 1998 (Beak Consultants Inc. 1992, 1993, 1994; Sierra Nevada Aquatic Research Laboratory 1995, 1997; KDH 1998, 2001, 2002, 2003, 2004 2006; Horseshoe Canyon Biological Consultants 1999; Thomas R. Payne & Associates 2006, 2007, 2009). The following species have been detected within the Project Area during these surveys: brown trout (*Salmo trutta*), rainbow trout (*Oncorhynchus mykiss*), and brook trout (*Salvelinus fontinalis*).

Amphibians

Terrestrial amphibian species may or may not require standing water for reproduction. Terrestrial species avoid desiccation by burrowing underground; within crevices in trees, rocks, and logs; and under stones and surface litter during the day and dry seasons. Due to their secretive nature, terrestrial amphibians are rarely observed, but may be quite abundant if conditions are favorable. Aquatic amphibians are dependent on standing or flowing water for reproduction. Such habitats include fresh water marshes and open water (reservoirs, permanent and temporary pools and ponds, and perennial streams). Many aquatic amphibians will utilize vernal pools as breeding sites. These pools are temporary in duration and form following winter and spring rains.

Mammoth Creek, portions of the Bodle Ditch, and most of the lakes found in the Mammoth Lakes area contain water perennially. The Yosemite toad was observed in a meadow west of Lake Mary during focused surveys conducted by David Martin of Canorus Ltd. in 2009 (Martin 2009). The project area has the potential to support a few amphibian species including Sierran treefrog (*Pseudarcis sierra*) and western toad (*Bufo boreas*). Of note, the Sierran treefrog is a USFS Management Indicator Species (MIS) associated with wet meadow and freshwater emergent wetland habitats for the Sierra Nevada Forests (USDA Forest Service 2008a). However, during Martin's 2009 surveys throughout the Mammoth Lakes Basin, this species was found or detected only around Lake Mary and Twin Lakes. None were found or detected along Mammoth Creek or in Mammoth Meadows (e-mail communication from D. Martin to L. Robb of PCR, January 25, 2010). Martin also noted that the staff at the Valentine Reserve have seen "one or two in some 20 years". Therefore, significant populations of the Sierran treefrog are not expected within the Project Area.

Reptiles

Reptiles, as a group, occupy a much broader spectrum of habitats than amphibians. Reptilian diversity and abundance typically varies with habitat type and character. Some species prefer only one or two natural communities; however, most will forage in a variety of communities. A number of reptile species prefer open habitats that allow free movement and high visibility. Most species occurring in open habitats rely on the presence of small mammal burrows for cover and escape from predators and extreme weather.

One reptile species, mountain garter snake (*Thamnophis elegans*) was observed within the Project Area. Several species have the potential to occur on-site. These include rubber boa (*Charina bottae*), Sierra alligator lizard (*Elgaria coerulea*), Sierra fence lizard (*Sceloperus occidentalis*), and sagebrush lizard (*Sceloperus graciosus*).

Birds

The riparian and forest habitats within the Project Area provide foraging and cover habitat for year-round and seasonal residents. Bird species detected during the site visit included turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), northern flicker (*Colaptes auratus*), hairy woodpecker (*Picoides villosus*), olive-sided flycatcher (*Contopus cooperi*), western wood-pewee (*Contopus sordidulus*), cliff swallow (*Petrochelidon pyrrhonota*), violet-green swallow (*Tachycineta thalassina*), black-billed magpie (*Pica hudsonia*), American robin (*Turdus migratorius*), black-headed grosbeak (*Pheucticus melanocephalus*), western tanager (*Piranga ludoviciana*), dark-eyed junco (*Junco hyemalis*), fox sparrow (*Passerella iliaca*), green-tailed towhee (*Pipilo chlorurus*), red-winged blackbird (*Agelaius phoeniceus*), brown-headed cowbird (*Molothrus ater*), common grackle (*Quiscalus quiscula*), pine siskin (*Carduelis pinus*), Stellar's jay (*Cyanocitta stelleri*), Brewer's blackbird (*Euphagus cyanocephalus*), Clark's nutcracker (*Nucifraga columbiana*), mountain chickadee (*Poecila gambeli*), and American crow (*Corvus brachyrhynchos*).

Several additional species have the potential to occur in the Project Area. These include (but are not limited to) American kestrel (*Falco sparverius*), mountain quail (*Oreortyx pictus*), great horned owl (*Bubo virginianus*), belted kingfisher (*Ceryle alcyon*), brown creeper (*Certhia americana*), mountain bluebird (*Sialia currucoides*), orange-crowned warbler (*Vermivora celata*), yellow-rumped warbler (*Dendrioca coronate*), yellow warbler (*Dendroica petechia*), and Wilson's warbler (*Wilsonia pusilla*). As noted previously, yellow warbler may occur on-site. This is a MIS associated with montane riparian and valley foothill riparian habitats for the Sierra Nevada Forests (USDA Forest Service 2008a).

Mammals

Most mammals are either nocturnal, reclusive, or both, and are more often detected by their sign, denning sites, etc., or through live-trapping (rodents). Mammals observed within the project area by sight, scat, tracks, or other means, include the mule deer (*Odocoileus hemionus*), snowshoe hare (*Lepus americanus*), Botta's pocket gopher (*Thomomys bottae*), western gray squirrel (*Scirius griseus*), California ground squirrel (*Spermophilus beecheyi*), golden-mantled ground squirrel (*Spermophilus beecheyi*), chipmunk (*Tamias* sp.), and black bear (*Ursus americanus*).

Several additional species have the potential to occur in the Project Area. These include (but are not limited to) broad-footed mole (*Scapanus latimanus*), big brown bat (*Eptesicus fuscus*), northern flying squirrel (*Glaucomys sabrinus*), lodgepole chipmunk (*Tamias speciosus*), deer mouse (*Peromyscus maniculatus*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), long-tailed weasel (*Mustela frenata*), American marten (*Martes americana*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), and raccoon (*Procyon lotor*). As noted previously, mule deer was detected within the Project Area and American marten may be present as well. Mule deer is a MIS associated with montane hardwood and montane hardwood-conifer habitats for the Sierra Nevada Forests, and American marten is a MIS associated with ponderosa pine, Sierran mixed conifer, white fir, and red fir habitats (USDA Forest Service 2008a).

(c) Wildlife Movement

Wildlife corridors link together areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger

and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because such conditions preclude the USFS infusion of new individuals and genetic USFS information into isolated populations (MacArthur and Wilson 1967, Soule 1987, Harris and Gallagher 1989, Bennett 1990).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). Each type of movement may also be represented at a variety of scales from non-migratory movement of amphibians, reptiles, and some birds, on a "local" level to many square mile home ranges of large mammals moving at a "regional" level.

Local scale wildlife movement likely occurs within the Project Area as well as its surrounding vicinity. The Project Area contains habitat that supports a variety of common species of invertebrates, amphibians, reptiles, birds, and mammals. The home range and average dispersal distance of many of these species may be entirely contained within the Project Area and immediate vicinity. Numerous populations of insects, amphibians, reptiles, small mammals, and a few bird species may find all of their resource requirements within the project area and its immediate vicinity. Riparian areas and other natural landscape features located in and around the project area can serve as natural guides for wildlife along travel routes (Hilty, et al. 2006). Local movement by small and medium-sized mammals such as California ground squirrel, Botta's pocket gopher, deer mouse, long-tailed weasel, American marten, and gray fox may occur within the project area. Occasionally, individuals expanding their home range or dispersing from their natal range will attempt to disperse from the project area.

It is also possible for migratory individuals to utilize the Project Area for cover and water resources. The Round Valley and Casa Diablo Mule Deer Herds are known to use areas in the vicinity of the Project Area for portions of their migrations from winter ranges in the lowlands to summer ranges within the higher elevations of the Sierra Nevada. The deer migratory routes are illustrated in Figure 10, *Deer Migration Routes*, of the BRA (see Appendix E of this Draft EIR). Predators, such as the mountain lion have also been known to make migrations that directly correlate temporally and spatially with those of mule deer in the region (Pierce, et al. 1999).

Mule deer

Although not considered a sensitive wildlife species, mule deer are considered an important harvest species by the CDFG. The Town of Mammoth Lakes is located within the Eastern Sierra Nevada Deer Assessment Unit. Deer populations within the Town of Mammoth Lakes consist of Rocky Mountain mule deer from the Round Valley and Casa Diablo herds. Some deer from both herds use the Doe Ridge area throughout the summer. These herds are migratory. Deer herd management plans were prepared by the CDFG in the mid 1980's for both herds. Management objectives include enhancing important winter, holding, migratory, and fawning habitats. Migratory movements occur over a six to ten week period. Deer begin their spring migration in April or May after occupying holding areas to feed and regain strength lost over the winter. When the snow recedes and forage is available at their higher elevation summer ranges (usually mid-June), they migrate to these areas.

The Round Valley herd range encompasses approximately 2,000 square miles and includes the west slope of the Sierra Nevada to the San Joaquin Ridge. The Mammoth Pass herd segment of the Round Valley herd uses

a route that heads westerly below Mammoth Rock, passes through the Mammoth Lakes Basin, and then crosses over Mammoth Pass into the Middle Fork of the San Joaquin River Drainage (PCR 2005). The Project Area is located within the Mammoth Lakes Basin.

The Casa Diablo herd's winter range includes the lower elevations near Benton, California to the north end of Owen's Valley. Some deer from this herd migrate across Doe Ridge towards their summer range on the higher elevations of the eastern Sierra Nevada (between June Lake and Lee Vining). The Mammoth Lakes Basin, which is located south-southeast of the project area, is utilized as a migratory corridor and holding area by the Round Valley Herd. The Casa Diablo Herd utilizes an area approximately 8 to 9 miles to the northwest of the Project Area and 6 to 7 miles north of the town of Mammoth Lakes (Jones and Stokes 1999).

Approximately 75 percent of the Round Valley Herd leaves their wintering grounds in the Round Valley, which is located approximately 20 miles southeast of the Project Area, to migrate in a northerly direction along the toe of the Eastern Sierra to the Mammoth Lakes Basin (Taylor 1996). The herd utilizes the Mammoth Lakes Basin as a holding area for approximately eight weeks while they forage and wait for winter snows to recede from the mountain passes. Following the snowmelt, some deer leave the approximately 11,300-acre holding area to traverse over the Mammoth Crest via McGee, Hopkins, Solitude, Mammoth, and San Joaquin passes to their preferred summering grounds in the Sierra Nevada between the Sierra Nevada's western slope and the San Joaquin Ridge (Town of Mammoth Lakes 2005). Those deer that do not continue their migration beyond the Mammoth Lakes Basin remain there until the herd makes its way back to the Round Valley in the fall months (Town of Mammoth Lakes 2005).

The Town of Mammoth Lakes 2007 General Plan Update identifies three distinct migration corridors for the Round Valley Herd, which occur within the vicinity of the Project Area (see the BRA, Figure 10, *Deer Migration Routes,* in Appendix E of this Draft EIR):

1. The Solitude Pass/Duck Lake herd segment leaves the holding area and migrates to summer ranges through the Solitude Pass located in the Sherwin Range, and Duck Pass located approximately three (3) miles south of the holding area.

2. The Mammoth Pass herd segment of the Round Valley Herd migrates along a route that heads westerly below Mammoth Rock, passes through the Mammoth Lakes Basin, and then crosses over Mammoth Pass into the Middle Fork of the San Joaquin River Drainage.

3. The San Joaquin herd segment migrates across the Sierra crest over San Joaquin Ridge between Minaret Summit and Deadman Pass from the western portion of the holding area.

A fairly consistent timeline of movement is generally observed for the Round Valley Herd's annual migration. Interannual temporal variability does occur, however, with respect to migrations. Variability in migration timing is generally dependent on environmental factors that affect food and habitat requirements (French, et al. 1989). The Round Valley Herd begins to appear in the Mammoth Lakes Basin during the spring. Migrants typically occupy the basin from April through June. Around mid-June most deer that are going to continue

their journey to summering grounds in the higher elevations of the Sierra have left the Mammoth Lakes Basin. Not all deer continue on to the higher elevations. Some choose to spend their summers in and around

the holding area (Carey, et al. 2004). The Round Valley Herd will begin to return to its wintering grounds in the fall months as temperatures drop and snow begins to accumulate.

The Mammoth Lakes Basin holding area represents the point where migration associated areas are most closely located to the Project Area. Deer from the Round Valley Herd generally occupy an area south and west of U.S. Route 395, and between Tobacco Flats to the east and Mammoth and Sherwin Creeks to the west. This area is known as the Sherwin Holding Area. The close proximity of these two areas presents a high likelihood for members of the Round Valley Herd to occur within the Project Area during the spring through fall months.

Mountain Lion

Mountain lions were once the broadest ranging terrestrial mammals in the western hemisphere (Logan and Sweanor 2001), ranging from British Columbia to southern Chile and Argentina, and from coast to coast in North America (NatureServe, 2006). As time has passed, land use changes, extermination campaigns, and hunting pressure have diminished the geographic range of the mountain lion to rocky, mountainous, and relatively unpopulated areas (Currier 1983, Logan and Sweanor 2001).

A wide range of habitats, including swamps, riparian woodlands, and open space with ample brush and/or woodland cover, are utilized by mountain lions throughout their range. This highly adaptable species is found in North America between sea level and approximately 11,500 feet above MSL (NatureServe 2006).

Mule deer make up the bulk of the mountain lion's diet throughout North America. Some experts have observed mule deer constituting over 90 percent of a mountain lion's diet (Logan and Sweanor 2001). This rate has been known to vary between seasons (Currier 1983). Small to medium sized mammals, birds, and reptiles are also opportunistically consumed by mountain lions (Pierce, et al. 2000).

Home range figures are highly variable throughout the mountain lion's range with males typically utilizing larger home ranges than females. Pierce, et al. (1999) documented home ranges between 425 km^2 and 817 km^2 (164 $miles^2$ and 315 $miles^2$) for mountain lions in the Round Valley area of California. Mountain lions are generally solitary in nature, but home ranges have been known to overlap (Sweanor, Logan, and Hornocker 2000).

Pierce, et al. (1999) observed an interesting connection between mountain lion home range size and behavior of their prey. Mountain lions from the Round Valley that primarily preyed on migratory mule deer had home ranges that rarely changed over time. Contrastingly, mountain lions that primarily preyed on non-migratory mule deer tended to make seasonal migrations that corresponded to mule deer movements, both spatially and temporally. Home ranges for mountain lions that were contiguous throughout the year were larger than those with distinct summer and winter ranges.

The Round Valley mountain lion population exhibited two different modes of migration. Some lions tended to move rather slowly along the deer herd's migratory route, but did not show signs of having a discontinuous home range. Other lions moved more rapidly and had distinct summer and winter ranges that mirrored those of the Round Valley Herd.

Mountain lions that followed the migration of the Round Valley Herd to the Sherwin Holding Area have a high potential to occur within the Project Area. Logan and Sweanor (2001) documented transient behavior in numerous mountain lion populations. They also describe the possibility of mountain lions making the change from transient behavior to territorial multiple times throughout its life. Transient behavior, as described by Logan and Sweanor, usually occurs because of one or a combination of four potential conditions: (1) population isolation; (2) an extremely low, patchy, or migratory food base; (3) an extremely diffuse mountain lion population; and (4) inability to compete. If transient lions make their way into the Sherwin Holding Area it is possible that they could wander into the Project Area in search of food, mates, or establishment of a new home range.

Nesting Birds

For the purpose of this EIR analysis, nesting birds are considered migratory and therefore, fall under the category of wildlife movement.

(d) Jurisdictional Waters and Wetlands

In California, certain drainage features and the associated riparian resources fall under the regulatory jurisdiction of the ACOE, RWQCB, and CDFG. These features can include: perennial, intermittent and ephemeral streams; lakes, ponds, and other impounded water bodies; and wet meadows and wetlands. Whereas the ACOE and RWQCB use the ordinary high water mark to determine their jurisdiction, CDFG may include the bed, banks and associated riparian habitat within its jurisdiction. There are numerous jurisdictional features throughout the Project area. Most notably, Mammoth Creek and its tributaries are regulated by one or more of the above mentioned agencies.

(e) Sensitive Species and Habitats

The following sections indicate the habitats, as well as plant and animal species, present or potentially present in the Project Area that have been afforded special recognition. Sources used to determine the potential occurrence of special status resources in the vicinity of the site include USFWS (2009), USFS, USFS (2006 and 2008b), CNPS (CNPS 2009), CNDDB (CNDDB 2009a), and CDFG 2009a, 2009b, 2009c and 2009d).

Special-Status Wildlife Species Within the Project Area

Sensitive wildlife species include those species listed as endangered or threatened under the federal ESA or CESA, candidates for listing by USFWS or CDFG, and SSC to the CDFG. In addition, species considered sensitive by the USFS (USFS) have also been included and analyzed in this document to provide a comprehensive list of species.

A number of sensitive wildlife species were reported in the CNDDB as occurring in the vicinity of the project area. These species are included in Table 4**,** *Sensitive Wildlife Species*, in the Project's BRA (Appendix E of this Draft EIR), which provides a summary of the sensitive wildlife species occurring or potentially occurring within the Project Area based upon their known geographic ranges, distributions, and preferred habitats. The majority of these species are not expected to be present due to a lack of suitable habitat.

In addition, several wildlife species listed as sensitive by the USFS (USFS) may occur within the general bioregional location of the Project Area. Sensitive wildlife species for the USFS are also included Table 4 in the BRA (Appendix E of this Draft EIR).

Focused surveys for fish species have been conducted for areas within the vicinity of the Project Area since 1992 excluding 1998 (Beak Consultants Inc. 1992, 1993, 1994; Sierra Nevada Aquatic Research Laboratory 1995, 1997; KDH 1998, 2001, 2002, 2003, 2004 2006; Horseshoe Canyon Biological Consultants 1999; Thomas R. Payne & Associates 2006, 2007, 2009). No sensitive fish have the potential to occur within the Project Area.

Special-Status Plant Communities and Plant Species Within the Project Area

The Project Area supports plant communities considered sensitive by the CDFG's CNDDB due to their scarcity and/or because they support state and/or federal listed endangered, threatened, or rare vascular plants and animals. These communities are considered highest-inventory priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes. These communities are described previously and include montane wet meadow, aspen forest and woodland, and willow scrub, and any mixed community comprised in part by one of these plant communities. These communities constitute wetland and riparian natural communities.

Sensitive plants include those listed, or candidates for listing, by the USFWS and CDFG, and species considered sensitive by the CNPS (particularly Lists 1A, 1B, and 2). Several sensitive plant species were reported in the CNDDB from the Project vicinity, and several were determined to be potentially present in the Project Area through the literature review. A discussion of each sensitive plant species observed, as well as those potentially present within the project area, is presented in Table 5, *Sensitive Plant Species*, of the BRA (see Appendix E of this Draft EIR).

On July 20 and August 9, 2010, a field survey was conducted by USFS for the areas potentially impacted by trail connection development for the Panorama Dome trailhead and the borrow pit staging area to Mammoth Rock Trail, Mammoth Creek Park East, and Tamarack Street Trailhead (SHARP Project nos. 3, 6, 712b, and 13). No sensitive, threatened, endangered, or proposed-for-listing plant species were located during these surveys. It was determined, however, the potential habitat for sensitive and listed species does exist in Kerry Meadow.

Plant species listed as sensitive by the USFS may occur within the general bioregional location of the Project Area; however, several of these species are not expected to be present due to a lack of suitable habitat and/or restricted elevation range or distribution. All USFS (USFS) plant species are also included in Table 5 of the BRA.

(f) Critical Habitat

The Project Area is not within designated critical habitat for any listed plant or wildlife species.

2. ENVIRONMENTAL IMPACTS

a. Methodology

(1) Approach

The EIR summarizes information gained from the BRA's analysis of both direct and indirect impacts. Direct impacts are considered to be those that involve the loss, modification or disturbance of natural habitats (i.e.,

vegetation or plant communities), which, in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts also include the destruction of individual plants or wildlife, which is typically the case in species of no or low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals in these manners may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and, hence, population stability.

Indirect impacts are considered to be those that involve the effects of increases in ambient levels of sensory stimuli (e.g., noise, light), unnatural predators (e.g., domestic cats and other non-native animals), and competitors (e.g., exotic plants, non-native animals). Indirect impacts may be associated with the construction and/or eventual habitation/operation of a project; therefore, these impacts may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites. Such impacts include increased pollutant discharges to receiving water bodies such as wetlands or marine environments, harassment by humans and/or their pets, light and glare, or increased ambient noise levels.

The determination of impacts in this analysis is based on both the features of the Project and the biological values of the habitat and/or sensitivity of plant and wildlife species potentially affected. The Goals and Objectives of the TSMP that avoid, preserve, or restore biological resources are taken into consideration and specifically described below prior to the assessment of potential adverse impacts.

Those direct and indirect impacts determined to be less than significant include impacts to biological resources that are relatively common or exist in a degraded or disturbed state, rendering them less valuable as habitat, or impacts that do not meet or exceed the significance thresholds defined below. Those impacts determined to be significant are those that do meet the thresholds of significance defined below. Conclusions are based on both the features of the proposed project and the biological values of the habitat and/or sensitivity of plant and wildlife species to be affected. Specific considerations included the overall size of habitats to be affected, the Project Area's previous land uses and disturbance history, the Project Areas surrounding environment and regional context, the Project Area's biological diversity and abundance, the presence of sensitive and special-status plant and wildlife species, the Project Area's importance to regional populations of these species, and the degree to which habitats within the Project Area are limited or restricted in distribution on a regional basis and, therefore, are considered sensitive in themselves.

In addition to new trails alignments, the TSMP considers street crossing improvements and new on-street bikeways. Since these improvements will generally be located within existing roadways and disturbed areas, it is concluded that they will not affect biological resources; therefore, they are not analyzed in this assessment. As also noted earlier, the impact analysis for this assessment is programmatic for all Project features except the Priority Projects, which are analyzed in as much detail as possible. In order to accommodate this varying degree of specificity and the multi-faceted nature of the Project, the following impact analysis is organized into four primary sections. The first, 5.3.1 Potential Direct and Indirect Impacts, discusses potential impacts, by topical area, that could be associated with any one or more of the Project components, whether it be a new trail, park improvement, or other recreation facility. As such, the discussions under this heading are generic in nature and should be viewed in a programmatic context.

More specific impact determinations are then discussed under Subsection (b) Trail System Master Plan, and Subsection (c) Sharp Projects Impact Determination. In each case, specific Project components are assessed

with regard to the impact types discussed under Potential Direct and Indirect Impacts. Although this analysis does address individual project components in greater detail, many of the alignments proposed are conceptual in nature, and are expected to undergo additional refinement as they are implemented.

This assessment of biological resources is based on USFS information compiled through field reconnaissance conducted by PCR Services Corporation (PCR) and LSA Associates (LSA) biologists, and the review of applicable reference materials. In addition, USFS biologists provided PCR with the results of sensitive plant surveys they conducted in the areas of various trail segments.

(2) Literature Review

This EIR summarizes information gained from the literature review performed for the BRA The study began with a literature review that was conducted to determine special interest plant and animal species known to occur in the proposed project vicinity. Database records for *Mammoth Lakes, Whitmore Hot Springs, Convict Lake* and *Bloody Mountain, California* USGS 7.5-minute quadrangles were reviewed on March 24, 2011 using the California Department of Fish and Game ("CDFG") Natural Diversity Data Base application *Rarefind* and the California Native Plant Society ("CNPS") *Electronic Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2010). Federal register listings, protocols, and species data published by the United States Fish and Wildlife Service ("USFWS") and CDFG were reviewed in conjunction with anticipated federally and state listed species potentially occurring within the vicinity. USFS information pertaining to sensitive species provided by the USFS was also reviewed. In addition, several regional flora and fauna field guides were utilized to assist in the identification of species and suitable habitats (e.g., Weden 2005 and Laws 2007). Additional documentation relevant to the project area was also reviewed and is listed in the BRA (see Appendix E of this Draft EIR).

(3) Field Investigations

This EIR summarizes information gained from field surveys performed for the BRA. Field surveys began on July 3rd, 5th and 6th, 2009, by LSA Biologists Wendy Walters and Sarah Barrera who focused on the TSMP. Notes were taken regarding general site conditions, vegetation, potential jurisdictional areas of the ACOE and CDFG, and suitability of habitat for various special interest elements. A field reconnaissance of the Sherwin area was conducted by PCR Biologist Steve Nelson on August 31 and September 1, 2010. The primary focus of PCR's field work was to characterize the vegetation and habitats in the area of the SHARP projects. Here again, notes were taken on general site conditions, vegetation, areas of potential jurisdiction, and sensitive species habitat evaluations.

(a) Plant Community Mapping

Vegetation community classifications used in the BRA follow a basic classification system that is considered appropriate for the scale of the proposed Project. In addition, a generalized vegetation map was prepared for the BRA using data obtained from the California Department of Forestry and Fire Protection.

(b) General Plant Inventory

All plant species observed during surveys by LSA and PCR were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Hickman (1993). Common plant names, when not available from Hickman, were taken from Munz (1974) and McAuley (1996). Because common names

vary significantly between references, scientific names are included upon initial mention of each species; common names consistent throughout the report are employed thereafter. All plant species observed are included in Appendix A, *Floral and Faunal Compendium*, of the BRA (see Appendix E of this Draft EIR).

(c) Sensitive Plant Surveys

Sensitive plants include those listed by the USFWS, CDFG, and CNPS (particularly Lists 1A, 1B, and 2). No focused sensitive plant surveys were conducted by either LSA or PCR. However, certain segments of the trail system were surveyed by USFS Botanists Kristen Dutcher, Paul Satterthwaite, and Sue Weis. The results of their findings are incorporated herein where appropriate, particularly with regard to the priority projects.

(d) General Wildlife Inventory

All wildlife species observed within the Project Area, as well as diagnostic sign (call, tracks, nests, scat, remains, or other sign), were recorded in field notes by both LSA and PCR. Binoculars and regional field guides were utilized for the identification of wildlife, as necessary. Wildlife taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998) for birds, and Jameson and Peeters (1988) for mammals. Scientific names are used during the first mention of a species; common names only are used in the remainder of the text. A list of all wildlife species detected is included in Appendix A, *Floral and Faunal Compendium*, of the BRA (see Appendix E of this Draft EIR).

(e) Sensitive Wildlife Species

No focused surveys for sensitive wildlife species were conducted by either LSA or PCR. Rather, a habitat evaluation of habitat conditions and their suitability to support listed and/or species of concern to federal and State wildlife agencies were performed. This evaluation included an assessment of habitat characteristics and how they fit with the habitat requirements of sensitive species that include the Project Area within their range.

(f) Jurisdictional Waters

A delineation of the potential jurisdictional waters and wetlands was not conducted at the time of LSA's 2009 site visit or PCR's field reconnaissance in 2010. However, areas within each site which may potentially fall under the jurisdiction of ACOE under Section 404 of the CWA or CDFG under Sections 1600 et seq. of the California Fish and Game Code were identified. General site characteristics were noted including presence of any hydrological conditions (including any drainage patterns, surface inundation, or saturated soils) or vegetation potentially indicative of the presence of water for an extended period of time within a site. Soil samples were not collected and wetland data forms were not prepared.

It should be noted, the findings and conclusions presented in the BRA regarding the location and extent of wetlands and other waters subject to regulatory jurisdiction, represent the professional opinions of LSA and/or PCR. These findings and conclusions are to be considered preliminary until verified by the ACOE and CDFG.

(g) Regional Connectivity/Wildlife Movement Corridor Assessment

The analysis of wildlife movement in preparation of the BRA is based on USFS information compiled from the literature. Within the past 30 years there have been a number of studies regarding the regional movements of deer herds, and the Town has delineated a deer migration route in its General Plan. As for other species, analysis of aerial photographs and topographic maps was used to determine likely wildlife movement patterns. Relative to corridor issues, the focus of this assessment is to determine if the introduction of trails within the Project Area will have significant impacts on the regional wildlife movement.

b. Thresholds of Significance

Appendix G of the *CEQA Guidelines* contains the Initial Study Environmental Checklist form used during preparation of the project Initial Study, which is contained in Appendix A of this EIR. The Initial Study Environmental Checklist includes questions relating to biological resources. The Initial Study Environmental Checklist questions relating to biological resources have been utilized as the thresholds of significance in this section. Accordingly, a project may create a significant environmental impact if it causes one or more of the following to occur:

Threshold 1: Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to Impact Statement 4.C-1).

Threshold 2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service (refer to Impact Statement 4.C-2).

Threshold 3: Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filing, hydrological interruption, or other means (refer to Impact Statement 4.C-3).

Threshold 4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites (refer to Impact Statement 4.C-4).

Threshold 5: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (refer to Impact Statement 4.C-5).

Threshold 6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (refer to Impact Statement 4.C-6).

c. Analysis of Project Impacts

(1) Sensitive Species

4.C-1 Project elements are proposed within habitats that could support sensitive animal species, a limited number of sensitive plant species, and several special-status plant and wildlife species. In such cases, the loss of habitat and individuals of sensitive species would be considered potentially significant and would warrant mitigation. The analysis has concluded that impacts to these sensitive species would be reduced to a less than significant level with implementation of the prescribed mitigation measures.

(a) Program Level Impacts

Project-related construction activities will involve the creation of new trails in some cases, improvements to existing trails in other cases, and other related improvement such as installation of bridge stream crossings, tunneling under Minaret Road; the project also includes implementation of various park facilities or improvements. In many cases, these activities may require the removal of vegetation and wildlife habitat. Whereas native vegetation and habitat will be lost, it will more often than not be limited in extent and/or will result in the loss of already disturbed or common plant species and habitat types that are relatively abundant in the Mammoth Lakes area. Consequently, impacts associated with most Project elements will be less than significant with regard to the habitat loss for sensitive wildlife. It should be noted, however, that impacts to certain sensitive wildlife species and nesting birds are potentially significant as discussed below.

In total, eight federal/state listed species are known to occur in the Mammoth Lakes region. The USFWS has not designated critical habitat for any of these species within the Project Area. Seven of these species are considered to be absent from the project site due to the lack of suitable habitat or the proposed project site being located outside the known range of the species. One State-listed endangered species, the willow flycatcher (*Empidonax traillii*) has a low to moderate potential to nest in riparian habitat associated with Mammoth Creek and its tributaries. According to the 2007 General Plan, potential habitat for the willow flycatcher occurs along Mammoth Creek directly upstream of U.S. Highway 395 and upstream from the creek's intersection with Minaret Road. Areas where trails improvements are proposed in the vicinity of Mammoth Creek are the only sites that have the potential to support this species.

No other federal/state listed species are expected to occur in the Project Area.

Eighteen other plant and wildlife species identified as being potentially present in the region are not state/federal listed species but are considered special status. Eleven of these are considered to be absent from the Project Area due to lack of suitable habitat or the proposed project site being located outside the known range of the species. Seven special interest species have a low or moderate probability of occurrence in the Project Area. However, Project related impacts to non-listed wildlife would be considered potentially significant and would warrant mitigation.

In a limited number of cases, Project elements are proposed within habitats that could support sensitive plants. In such cases, the loss of habitat and individuals of sensitive plant species would be considered potentially significant and would warrant mitigation measures provided below.

SHARP Project Impacts

The SHARP addresses potential trails and recreational uses in the Sherwins Area, which is located in the southern part of the Town's Municipal Boundary and comprises undeveloped National Forest lands administered by the USFS. Generally, land to the east, south and west of the Sherwins area is undeveloped federal public land also administered by the USFS. To the north is a mix of open space, rural residential uses, and resort uses, including the existing Snowcreek V subdivision and proposed Snowcreek VIII resort area.

The Sherwins Area is a diverse landscape that contains such features as Mammoth Rock, the Sherwin Range, Hidden Lake, Panorama Dome, Solitude Canyon, and Mammoth Meadows as well as forests, wetlands, bodies of water, and wildlife. Topography varies from flat meadowlands to glacial moraines to the chutes and cirques of the Sherwin Range. The landscape includes areas of evergreens, sage, aspens, and other native plants rooted primarily in till and talus. While recreation use in the Sherwin has traditionally been high, no formal trailheads or facilities exist at this time and the area receives no maintenance. The area has a mix of trails, some of which are part of the Inyo National Forest trail system, others that have been user created, and some that are remnants of historical use. Facilities in this area include USFS recognized trails (such as the Mammoth Rock Trail), USFS and TOML roads (such as 4S100 and Sherwin Creek Road), a portion of the legacy Blue Diamond Trail System, and unofficial social trails.

The SHARP recommends winter and summer projects regarding trails, public access, and recreation facilities for implementation in the Sherwin area. The SHARP identifies 31 summer and 19 winter projects. A number of these projects are analyzed as Priority Projects, below. All of the trails identified within SHARP are located on National forest lands; some or all of the existing and proposed trails and facilities may remain or become official USFS system trails, others may be constructed, operated and maintained by the Town under Special Use Permit from Inyo National Forest, or under collaborative programs developed between the two agencies. All trails and facilities proposed in the SHARP are subject to review under the National Environmental Policy Act and would require approval by the USFS to move forward. At this time, only a select number of the proposals have been accepted by the USFS for further environmental review and consideration. Additional proposals included in the SHARP document may or may not be considered by the USFS as future projects.

In general, SHARP projects are located outside the UGB within undisturbed habitats, but because specific alignments have not been established for many of the trails, a project level analysis of their affects on biological resources cannot be made at this time. Only in the case of Priority Projects is a project level analysis possible. However, a programmatic analysis of non-priority facilities is appropriate.

SHARP projects (excepting Priority Projects) have the potential for a "Project Level Impact." Until site specific surveys are completed there is the potential for SHARP components to result in impacts to sensitive plant and wildlife species. As the non-priority SHARP Project components come on line, each would be assessed at the project level as to the potential impacts that may result. At that time, specific mitigation measures, as described below under Subsection 4.C, *Mitigation Measures*, below, would be incorporated into project design and implementation.

(b) Trail System Master Plan Impacts

The TSMP Trails include Recommended MUPs (also referred to as Long-Term MUPs), recommended potential trails and potential boardwalk. These features are identified in Figure 2 of the BRA (see Appendix E of this Draft EIR). In the following analysis, LSA/PCR assumes that ground disturbance for these trails would be minimal and would be contained to the proposed width of the trail or path and shoulders.

The majority of Recommended MUPs are within "in town" areas; nonetheless, these components of the Project may impact biological resources as the result of ground disturbance on vacant land and other construction activities. Design guidelines for MUPs specify that they will be between 10 feet and 12 feet wide. The Recommended MUPs may be proposed in areas that provide habitat for plant and/or wildlife species of concern that could be directly or indirectly impacted by trail construction and maintenance activities and human use. In addition, removal of vegetation and construction activities in proximity to habitat area could disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503

The Recommended Potential Trails are proposed soft-surface trails located north of the UGB and Town Limits. These are located mostly on USFS land. Soft surface trails would be designed for the use of hikers, mountain bikers, and/or equestrians and winter users such as cross-country skiers and snowmobilers. Trails would vary in width depending on the intended use.

The Recommended Potential Trails are located mostly in a dense mixed conifer forest with little to no understory. Two special interest species, the American pine marten and great gray owl, have a moderate potential to occur in the Recommended Potential Trails vicinity due to the presence of a well-developed mixed conifer forest. In addition, several sensitive plants and other wildlife species may be affected by the Recommended Potential Trails. In addition, removal of vegetation and construction activities in proximity to habitat area could disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

The Boardwalk consists of a potential six-foot wide low-impact path located within the Town's drainage/access easement in the Snowcreek Meadow Preserve. This Preserve is privately-ownerd open space of approximately 15 acres and is located adjacent to Mammoth Creek north of Old Mammoth Road and west of Minaret Road.

The Snowcreek VIII, Snowcreek Master Plan Update Draft EIR identified seven special-status plant species and six special status wildlife species with a moderate or high potential to occur in the Boardwalk vicinity. These species include:

- Scalloped moonwort (*Botrychium crenulatum*) – CNPS List 2
- Common moonwort (*Botrychium lunaria*) – CNPS List 2
- Blandow's bog-moss (*Helodium blandowii*) –CNPS 2
- Subalpine fireweed (*Epilobium howelii*) – CNPS 1B
- Hockett Meadows lupine (*Lupinus Lepidus* var. *culbertsonii*) – CNPS 1B
- Scalloped-leaved lousewort (*Pedicularis crenulata*) – CNPS 2

- Robbins's pondweed (*Potamogeton robbinsii*) – CNPS 2
- Yosemite toad (*Bufo canoris*) – CSC, FSS
- Willow flycatcher (*Empidonax traillii*) – (State Endangered)
- Western white-tailed jackrabbit (*Lepidus townsendii townsendii*), CSC
- American badger (*Taxidea taxus*) – CSC;
- Mount Lyell shrew (*Sorex lyelli*) – CSC; and,
- Sierra Nevada mountain beaver (*Aplodontia rufa californica*) – CSC

Removal of vegetation and trail construction activities in proximity to habitat area could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

As discussed herein, the TSMP could result in potentially significant direct and indirect impacts to special interest species special status species. Impacts to species of concern or special status species would be reduced to less than significant levels through the implementation of Mitigation Measures 4.C-1, 4.C-2, 4.C-3, and 4.C-4.

(c) Priority Project Impacts

As described above, most of the projects included in the TSMP and SHARP are conceptual; however, some projects are more fully developed and have a high priority for implementation in the short-term (i.e., next 1-5 years). These projects are considered "Priority Projects" by the Town. The Priority Projects are summarized below along with a determination of their potential direct and indirect impacts. The Priority Projects included within the TSMP (Project Nos. 1 and 2, below) and SHARP area (Project Nos. 3-9, below). Priority Projects within the SHARP area are illustrated in Figure 7, *SHARP Area Priority Projects*, in the BRA (see Appendix E of this Draft EIR).

Main Path (4a) – Town Loop

This MUP would fill in a gap on the Main Path along Old Mammoth Road between Mammoth Creek Park and Minaret Road (921 linear feet). The site is dominated by alder-willow riparian scrub associated with Mammoth Creek and its banks. Vegetation beyond the banks consists of basin sagebrush scrub. Several trails have been formed by park users in order to access the Creek. Riparian and wetland vegetation associated with Mammoth Creek is of high value to wildlife and may provide suitable habitat for special interest species including the willow flycatcher, Sierra Nevada mountain beaver, and others. Removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

MUP 3-1 - College Connector

This MUP, partially located along Meridian Boulevard and College Parkway, would connect Sierra Park Road to the Main Path (3,769 linear feet). Vegetation along this trail alignment is developed and disturbed along the roads and basin sagebrush scrub from where it leaves College Parkway to where it connects to the Main Path. No special interest plant or wildlife species are expected to occur at the South Gateway site due to the historic and on-going human activities and disturbances on the site and lack of suitable habitat for such

species. However, removal of or disturbances in proximity to habitat areas could disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 1 (Summer and Winter) – Major Multi-Use Staging Area at the Borrow Pit

This would be the primary staging area for the Sherwin area and therefore the most developed. Facilities would include parking, bathrooms, an education/interpretive area, and signage. This staging area would be open year-round to all users and would be served by public transit. The majority of this site is disturbed due its past use as a borrow pit and a propane tank farm and much of the area is devoid of vegetation and appears to be maintained in this condition. Basin sagebrush scrub is found at the edge of the disturbed area.

No special interest plant or wildlife species are expected to occur at the Borrow Pit site due to the historic and on-going human activities and disturbances on the site and lack of suitable habitat for such species. However, removal of or disturbances in proximity to habitat areas could disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 5B (Summer)

Parallel soft-surface non-motorized connections—one on the north side of Old Mammoth Road, one on the south side—from the Old Mammoth Road safe crossing to the intersection of Old Mammoth Road and Lake Mary Road. This Priority Project would include a set of parallel soft-surface non-motorized trail connections between the Old Mammoth Road safe crossing and the road's intersection with Lake Mary Road. Facilities would be limited to signage. The north trail would be approximately 2,800 linear feet and the south trail would be approximately 4,295 linear feet. Vegetation at this site includes mixed riparian scrub, aspen forest and woodland, montane chaparral, and mixed conifer forest. The mixed riparian scrub and aspen forest and woodland are considered sensitive natural communities.

Two special interest species, the American pine marten and great gray owl, have a moderate potential to occur in the Recommended Potential Trails vicinity due to the presence of a well-developed mixed conifer forest. In addition, several sensitive plants and other wildlife species may be affected by the Recommended Potential Trails. Finally, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 6 (Summer)

This element would be a hard-surface or paved non-motorized connector from the borrow pit staging area to the Town Loop at Hayden Cabin Museum within Mammoth Creek Park East at the bridge. This Priority Project would include a hard-surface or paved ADA-compliant MUP from the borrow pit staging area (see SHARP No. 1 above) to the bridge at Mammoth Creek Park East. The exact surface of this trail is to be determined. The trail could be up to approximately 4,642 linear feet. No special interest plant or wildlife species are expected to occur at the site due to lack of suitable habitat for such species; historic and on-going human activities and disturbances along this alignment, including areas disturbed by dirt roads, informal trails and use paths, and uses associated with the adjacent to the USFS stables and Borrow Pit . However, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 7 (Summer)

This element consists of non-motorized "backbone" trail connections from the borrow pit staging area to the Tamarack Street trailhead. This Priority Project would articulate two separate non-motorized routes that connect the borrow pit staging area to the Tamarack Street trailhead and also connect into the summertime stacked-loop trail. The hard-surface or paved trail would be ADA-accessible and would be aligned over the existing USFS 4S100 road, which would require closure to motorized use. The complementary trail would be soft surface and aligned over the existing trail to the south, near the base of the Sherwin. Accommodation of equestrian use would be included in the design process, which may include an equestrian-only bridle path. The trail would be approximately 6,800 linear feet.

Vegetation in this area consists of Great Basin sagebrush scrub, montane chaparral, and montane wet meadow. Montane wet meadow is a sensitive natural community. USFS botanists surveyed this site for sensitive plants on July 20 and August 20, 2010 (Dutcher and Satterthwaite, 2010). No sensitive, threatened, endangered, or proposed plant species were located during the survey. However, the botanists did determine there was potential habitat for sensitive plant species in Kerry Meadow through which a portion of the proposed trail may be located. In addition, potential habitat for sensitive wildlife species is present. Finally, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 12b (Summer)

Soft-surface non-motorized trail connecting the Lake Mary Road staging area to the Panorama Vista Trail, Panorama Dome Trail, and the Lake Mary Road Bike Path. This Priority Project would include a new bridge that would connect the Lake Mary Road Bike Path to the soft-surface trail described here. This would be constructed on the east side of the existing bridge where the Lake Mary Road Bike Path currently ends. The trail would be approximately 1,074 linear feet.

The site is dominated by a dense mixed conifer community with a sparse understory. Narrow bands of alder-willow riparian habitat that are commonly associated with drainage features may also occur in the area. Alder-willow riparian habitat is a sensitive natural community.

Two special interest wildlife species, the American pine marten and great gray owl, have a moderate potential to occur in the area due to the presence of a well-developed mixed conifer forest. In addition, suitable habitat to support sensitive plant species may occur in the area. In addition, potential habitat for sensitive wildlife species is present. Finally, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 13 (Summer)

This element consists of a soft-surface non-motorized connector from the borrow pit staging area to Mammoth Rock Trail. This Priority Project would include a soft-surface non-motorized connector trail from the Mammoth Rock Trail to the south side of the borrow pit staging area. Design concerns may necessitate rehabilitation of the two existing use-trails into one system trail that connects to the existing road on the south side of the borrow pit. The trail would be approximately 2,000 linear feet.

The trail would begin at its lower terminus in basin sagebrush scrub. As it climbs up toward Mammoth Rock Trail it crosses through montane chaparral, scattered coniferous forest and talus fields that exist in a mosaic pattern across the north-facing slopes of the Sherwin.

Two special interest wildlife species, the American pine marten and great gray owl, have a moderate potential to occur in the area due to the presence of a well-developed mixed conifer forest. In addition, suitable habitat to support sensitive plant species may occur in the area. Finally, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

SHARP No. 15 (Summer)

This Priority Project involves an Old Mammoth Road soft-surface non-motorized safe crossing. A trail would be built roughly from the western entrance of Mammoth Rock Trail and stay on the uphill (south) side of Old Mammoth Road, utilizing a portion of the existing use trail/mine road, then turn parallel to the road and continue to the uppermost hairpin turn of Old Mammoth Road. The trail would be approximately 1,506 linear feet. Vegetation at this site is predominantly montane chaparral and mixed conifer forest creating a mosaic pattern.

Two special interest wildlife species, the American pine marten and great gray owl, have a moderate potential to occur in the area due to the presence of a well-developed mixed conifer forest. In addition, suitable habitat to support sensitive plant species may occur in the area. Finally, removal of or disturbances in proximity to habitat areas could also disturb nesting birds in violation of the MBTA and State Fish and Game Code Section 3503 et seq.

Some Priority Projects could result in potentially significant direct impacts to special interest species including the willow flycatcher, Sierra Nevada mountain beaver, and others, and construction projects could disturb nesting birds. Impacts to these species and nesting birds would be reduced to less than significant levels through the implementation of Mitigation Measures 4.C-1, 4.C-2, 4.C-3, and 4.C-4.

(2) Sensitive Habitat

4.C-2 Construction and maintenance activities, direct human activity, and invasion by exotic plant species could result in the loss of high priority inventory communities. These impacts would be considered potentially significant and would warrant mitigation. The analysis has concluded that impacts to these sensitive species would be reduced to a less than significant level with implementation of the prescribed mitigation measure.

(a) Program Level Impacts

In addition to the potential loss of habitats that support sensitive plant and wildlife species, CDFG maintains a list of high priority inventory natural communities. In general, these communities that are either restricted in their distribution in the state, have undergone substantial depletion over time, and/or serve as critical components of biological systems. Within the Project Area, these include aspen forest and woodland, mixed willow riparian, and montane wet meadow.

As with the loss of habitats potentially supporting sensitive plant and wildlife species, the loss of high priority inventory communities would also be potentially significant and would warrant mitigation. Losses could occur as the result of construction and maintenance activities as well as the direct effects of trampling of sensitive vegetation and invasion by exotic plant species.

Any future activities within the Project Area that could affect the wet meadows or stream beds, banks, or associated riparian vegetation (e.g., stream crossing repair/maintenance/ improvement, bank stabilization, riparian habitat restoration) would be considered potentially significant. Impacts to these sensitive habitats would be reduced to less than significant levels through the implementation of Mitigation Measure 4.C-5, below.

In addition, it is a violation of the federal Migratory Bird Treaty Act to disturb actively nesting birds either directly (e.g., brush and tree removal) or indirectly (e.g., excessive construction noise). Should this occur during new facility and trail construction, trail reclamation, exotic plant removal, fuel modification, maintenance or other management activities to be conducted as part of the Project, such a violation would represent a potentially significant impact and mitigation would be warranted. It should be noted that this potential impact may be associated with all elements and areas of the Project, including elements within the developed Town area. Impacts to nesting birds would be addressed through the implementation of Mitigation Measure 4.C-2, below.

SHARP projects (excepting Priority Projects) have the potential for a "Project Level Impact." Until site specific surveys are completed there is the potential for SHARP components to result in impacts to sensitive habitats. As the non-priority SHARP Project components come on line, each would be assessed at the project level as to the potential impacts that may result. At that time, specific mitigation measures, as described below under Subsection 4.C, *Mitigation Measures*, below, would be incorporated into project design and implementation.

(b) Trails System Master Plan Impacts

The proposed MUPs would traverse several natural communities (even within the in town areas) and can potentially be located in any of the vegetation communities previously identified, including mixed conifer forest, montane chaparral, Great Basin sagebrush, montane wet meadow, and alder-willow riparian. The proposed alignment for the Shady Rest Park Path Extension, Forest Trail to Shady Rest Connector and Knolls Path are located in an area that predominantly supports mixed conifer forest with a sparse Great Basin sagebrush understory. The proposed alignment for the Mammoth Creek Path is located in an area that predominantly supports Great Basin sagebrush and montane chaparral.

The Boardwalk would traverse a montane wet meadow as well as willow-alder riparian vegetation, both of which are considered to be sensitive natural communities. Impacts on sensitive habitat would be potentially significant. It should be noted that any future activities within the Project Area that could affect the wet meadows or stream beds, banks, or associated riparian vegetation (e.g., stream crossing repair/maintenance/improvement, bank stabilization, riparian habitat restoration) could also be regulated by Section 1602 of the California State Fish and Game Code. Under the jurisdiction of the CDFG such impacts would be considered potentially significant and may require a Streambed Alteration Agreement (SAA) from the CDFG, as described in Mitigation Measure 4.C-5, below. With the implementation of Mitigation Measure 4.C-5, the TSMP's impacts on sensitive riparian habitats would be reduced to less than significant levels.

(c) Priority Project Impacts

As described above, most of the projects included in the TSMP and SHARP are conceptual; however, some projects are more fully developed and have a high priority for implementation in the short-term (i.e., next 1-5 years). These projects are considered "Priority Projects" by the Town.

The Priority Projects are summarized below along with a determination of their potential direct and indirect impacts. The Priority Projects included within the TSMP (Project Nos. 1 and 2, below) and SHARP area (Project Nos. 3-9, below). Priority Projects within the SHARP area are illustrated in Figure 7, *SHARP Area Priority Projects*, in the BRA (see Appendix E of this Draft EIR).

Main Path (4a) – Town Loop.

The site is dominated by alder-willow riparian scrub associated with Mammoth Creek and its banks. Riparian and wetland vegetation associated with Mammoth Creek is of high value to wildlife. Vegetation beyond the banks consists of basin sagebrush scrub. Several trails have been formed by park users in order to access the Creek.

SHARP No. 6 (Summer)

The trail would begin at the existing bridge across Mammoth Creek; however, the trail would be designed to avoid impacts to the bed, banks, or riparian vegetation associated with the creek. From the bridge the trail would cross basin sagebrush scrub vegetation to the borrow pit area.

SHARP No. 12b (Summer)

The site is dominated by a dense mixed conifer community with a sparse understory. Narrow bands of alder-willow riparian habitat that are commonly associated with drainage features may also occur in the area.

Some Priority Projects are in proximity to and may potentially impact sensitive riparian habitat. However, with the implementation of Mitigation Measure 4.C-5, impacts to riparian and other sensitive natural communities from the development of Priority Projects would be reduced to less than significant levels.

(3) Federally Protected Wetlands

4.C-3 Construction and maintenance of park and trail facilities could affect wetlands through potential dredging and filling activities. This impact would be potentially significant and may require CWA Section 404 Permits from the ACOE, and a certification from the RWQCB. With the implementation of such permits and the prescribed mitigation measure, impacts would be reduced to less than significant levels.

(a) Program Level Impacts

Project-related activities, including construction and maintenance of park and trail facilities, within the Project Area that could affect wetlands through dredging and filling (e.g., stream crossing repair/maintenance/improvement, bank stabilization, riparian habitat restoration) may be regulated by

Section 404 of the Clean Water Act. Under the jurisdiction of the ACOE such impacts would be considered potentially significant and may require a CWA Section 404 Permit from the ACOE, and a certification from the RWQCB. Impacts with respect to federally protected wetlands would be reduced to less than significant levels through the implementation of Mitigation Measure 4.C-6, below.

SHARP projects (excepting Priority Projects) have the potential for a "Project Level Impact." Until site specific surveys are completed there is the potential for SHARP components to result in impacts to federally protected wetlands. As the non-priority SHARP Project components come on line, each would be assessed at the project level as to the potential impacts that may result.

(b) Trails System Master Plan Impacts

The Boardwalk would potentially be located in a wet meadow area adjacent to Mammoth Creek and would traverse a montane wet meadow as well as willow-alder riparian vegetation, both of which are considered to be sensitive natural communities. The site likely contains potentially jurisdictional areas including jurisdictional waters, wetlands and riparian habitat that are regulated by ACOE, RWQCB, and/or CDFG. Other soft surface trails included in the TSMP could also cross potentially jurisdictional areas not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG. The TSMP could result in potentially significant direct impacts to regulated waters and associated riparian habitat and potentially significant direct impacts to federally protected wetlands. With the implementation of Mitigation Measure 4.C-6, potential impacts to federally-protected wetlands would be reduced to less than significant levels.

(c) Priority Project Impacts

Main Path (4a) – Town Loop

This MUP would fill in a gap on the Main Path along Old Mammoth Road between Mammoth Creek Park and Minaret Road. Mammoth Creek is considered a permanent water and is likely to fall under ACOE, RWQCB, and CDFG jurisdiction due to the presence of moist soils and obligate hydrophytic plant species on the banks of the Creek. These also indicate that the banks likely contain wetlands that would also fall under ACOE jurisdiction. All riparian vegetation associated with Mammoth Creek would be under CDFG jurisdiction.

MUP 3-1 - College Connector

No drainage features likely to fall under ACOE, RWQCB, and CDFG jurisdiction were observed in this area.

SHARP No. 1 (Summer and Winter) – Major Multi-Use Staging Area at the Borrow Pit

No drainage features likely to fall under ACOE, RWQCB, and CDFG jurisdiction were observed in this area.

SHARP No. 5B (Summer)

This Priority Project would include a set of parallel soft-surface non-motorized trail connections between the Old Mammoth Road safe crossing and the road's intersection with Lake Mary Road. These parallel trails may cross potential jurisdictional areas not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG.

SHARP No. 6 (Summer)

This element would be a hard-surface or paved non-motorized connector beginning at the existing bridge across Mammoth Creek. However, other than Mammoth Creek, which would not be affected by the trail, no drainage features likely to fall under ACOE, RWQCB, and CDFG jurisdiction were observed in this area.

SHARP No. 7 (Summer)

This element consists of non-motorized "backbone" trail connections from the borrow pit staging area to the Tamarack Street trailhead. This Priority Project would articulate two separate non-motorized routes that connect the borrow pit staging area to the Tamarack Street trailhead and also connect into the summertime stacked-loop trail. These parallel trails may cross potential jurisdictional drainage features and wetlands not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG.

SHARP No. 12b (Summer)

Soft-surface non-motorized trail connecting the Lake Mary Road staging area to the Panorama Vista Trail, Panorama Dome Trail, and the Lake Mary Road Bike Path. This Priority Project would include a new bridge that would connect the Lake Mary Road Bike Path to the soft-surface trail described here. The trail may cross potential jurisdictional drainage features not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG.

SHARP No. 13 (Summer)

This element consists of a soft-surface non-motorized connector from the borrow pit staging area to Mammoth Rock Trail. The trail may cross potential jurisdictional drainage features not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG.

SHARP No. 15 (Summer)

This Priority Project involves an Old Mammoth Road soft-surface non-motorized safe crossing. The trail may cross potential jurisdictional drainage features not specifically identified in this analysis but that are regulated by ACOE, RWQCB, and/or CDFG.

As discussed above, some Priority Projects could impact federally protected wetlands. However, with the implementation of Mitigation Measure 4.C-6, potential impacts associated with Priority Projects would be reduced to less than significant levels.

(4) Wildlife Corridors

4.C-4 Impacts related to the movement of wildlife are not expected to be significant and no mitigation would be required.

(a) Program Level Impacts

Because of the historic recreational use of the Project Area, including past and on-going motorized and non-motorized use of existing trails and USFS roads, potentially significant impacts to wildlife movement is not

expected to result from any of the Project elements. Currently, fairly intensive recreational activities, including hiking, biking and riding are taking place in all portions of the Project Area. In particular, the SHARP area has a number of existing trails throughout including the Panorama Dome area, the area along Lake Mary Road, the Sherwin area, and area surrounding the Snowcreek development. Thus, any wildlife movement that is occurring today through these areas does so in the presence of humans and their recreational activities, and is expected to continue uninterrupted. Intensification of overall human use of recreation lands and of the trails system will occur as future projects in the Town as a whole and in this area (such as the Snowcreek VIII project), are built out. However, these changes are not caused directly by the Project, and would occur with or without the implementation of the Project. Moreover, the implementation of the plan will predominantly involve trails which are not considered to be an agent for habitat fragmentation and habitat isolation.

SHARP projects (excepting Priority Projects) have the potential for a "Project Level Impact." Until site specific surveys are completed the potential for future SHARP components to result in impacts to wildlife movement is unknown. As future non-priority SHARP components are initiated, each would be assessed at the project level regarding the potential impacts that may result.

(5) Local Policies or Ordinances

4.C-5 *Potential conflicts between humans and their pets and wildlife are likely to currently occur within and adjacent to the Project Area, particularly in the SHARP area and, as such, the Project could conflict with the management goals and standards and guidelines of the Inyo National Forest Land and Resource Management Plan (LRMP). This impact could be significant and mitigation would be warranted. With the implementation of the prescribed mitigation measures, impacts would be reduced to less than significant levels.*

(a) Program Level Impacts

It is expected that with implementation of the Project by the Town, or with USFS's approval authority for facilities on its lands, will be consistent with local policy and ordinances as well as USFS land use and conservation plans. As is discussed below, adoption and implementation of the Project should incorporate certain mitigation and conservation measures. These primarily speak to the Town's 2007 General Plan Resource Management and Conservation Element which includes policies specifically directed at: sound stewardship of important wildlife and biological habitats, as well as special status plant and animal species; mitigation for potential impacts to sensitive habitats, including special status plant and animal species and mature trees; construction of active and passive recreation away from habitat areas; support of fishery management activities; and living safely with wildlife.

Nonetheless, conflicts between humans and their pets and wildlife such as bears, mountain lions and coyotes are likely to currently occur within and adjacent to the Project Area. Given the natural setting of much of the Project Area, particularly the SHARP area, it is inevitable that potential conflicts with wildlife will occur so long as humans (and their pets) continue to visit and use the Project Area and its trail and park systems. Such conflicts potentially include, but are not limited to harassment of wildlife by off-leash dogs, or by humans approaching wildlife, the feeding of wildlife, the discharge of weapons at or in proximity to wildlife, noise associated with snowmobiles and Off-Highway Vehicles, and human disturbance of breeding and

foraging activities, all of which are detrimental normal wildlife behavior. Conversely, in some cases, human/wildlife conflicts have resulted in injury, often severe, to humans.

In addition, the adoption and implementation of the Project will need to be cognizant of the Inyo National LRMP and the management goals and standards and guidelines it contains. Specifically, these goals, standards and guidelines stress the conservation of riparian areas, sensitive plants, wildlife, and special status wildlife species. By incorporating the mitigation and conservation measures (Mitigation Measures 4.C-1, 4.C-2, 4.C-3, 4.C-4, 4.C-5, 4.C-6, and 4.C-7, below) provided in this assessment the Project will be consistent with local policies and ordinances and any impacts would be reduced to less than significant levels.

For all SHARP projects there exists the associated potential for one or more of the impacts described as a "Project Level Impact." However, because of their location on USFS lands, it is not likely that SHARP Project components would conflict with local policies or ordinances or conservation plans.

(6) Conservation Plans

4.C-6 No impacts with respect to adopted conservation plans are expected and no mitigation would be required.

At this time there are no adopted or on-going region-wide habitat conservation plans in the area that would be affected by implementation of the Project. Thus, no impact would occur in this regard.

3. MITIGATION MEASURES

The following mitigation measure addresses the potentially significant impacts to biological resources from the proposed project. It should also be noted that many of the Project components are located on Lands owned and managed by the USFS; if constructed or operated by the Town, they Town would be required to obtain a Special Use Permit prior to implementation. This, or construction of the proposed trails by the USFS, would trigger the need to comply with the National Environmental Policy Act (NEPA) which will entail the preparation of additional environmental documentation and review by the public and federal resource agencies. During that process, compliance with USFS land and resource management policies will be scrutinized. For example, the Inyo National Forest has adopted a Land and Resource Management Plan that sets forth forest-wide standards and guidelines that establish the minimum resource conditions that will be maintained throughout the Forest, including fish, riparian areas, sensitive plants, and wildlife. The plan also has specific management prescriptions that specify how forest resources will be managed within various management units. Thus, in addition to the measures described below for the CEQA assessment, additional measures, protocols, and conditions of compliance may be added to the Project at the federal level.

Mitigation Measure 4.C-1 - Willow Flycatcher: Prior to approval of individual projects proposed under the TSMP or PRMP that have the potential to significantly disturb riparian vegetation associated with Mammoth Creek and its tributaries, the Town shall require a habitat evaluation by a biologist well versed in the requirements of willow flycatcher to be completed. If no suitable habitat for the species is identified within 300 feet of construction or maintenance activities, no further measures would be required in

association with the project. If suitable habitat for the species is identified within 300 feet of such activities, prior to construction the Town shall require that a survey be completed by a qualified biologist for the species according to CDFG survey guidelines (Bombay et. al., May 29, 2003). This survey protocol requires a minimum of two surveys, one between June 15-25 and one during either June 1-14 or June 26-July 15. Surveys during these periods must be at least five days apart and the second survey shall be conducted no more than one week prior to clearing of vegetation and/or the operation of motorized heavy equipment. If the surveys determine the species is not present within 300 feet of the area to be affected by an individual project, no further action shall be required. If, however, willow flycatcher is determined to be present and is using habitat within 300 feet of Project-related activities, inclusive of nesting and foraging, the Town shall consult with CDFG prior to initiating any construction activities in the area. Consultation may entail the processing of a 2081 Incidental Take Permit that includes certain conditions to avoid and/or mitigate for potential impacts to the species. Such conditions could include, but not be limited to, restrictions on the time of year for construction, noise monitoring, restrictions on equipment use, and others.

Mitigation Measure 4.C-2 - Nesting Birds: To the extent practicable, brush and tree removal activities for trail and facilities and major construction activity shall be initiated outside of the nesting bird season, which is generally held to be from April 1 to August 31 in the Mammoth Lakes area, and shall be carried out with no more than a two week lapse in the work. If the Town deems this to not be practicable the Town shall require a nesting bird survey by a monitoring biologist to be conducted within 300 feet (for songbirds) and 500 feet (for raptorial birds) of construction sites no more than one week prior to initiating construction to ensure no birds protected under the MBTA and/or State Fish and Game Code Section 3503 et seq. are harmed or harassed.

If no active nests of songbirds and raptors are found within 300 feet and 500 feet, respectively, of the construction site, the work may begin. If active nests are found within the survey areas the Town shall delineate a buffer zone of 300 feet and 500 feet for songbirds and raptors, respectively, around the nest. Based on the nature of the work to be performed and the equipment to be used, the monitoring biologist may reduce the buffer zone based on intervening vegetation and topography. Such buffer zones shall remain in place until the young in the nest have fledged or the nest has failed, as determined by the monitoring biologist.

All projects involving removal of trees or vegetation capable of supporting nesting birds shall be subject to the requirements of this Mitigation Measure.

Mitigation Measure 4.C-3 - Other Sensitive Wildlife: As discussed earlier, there are a number of wildlife species of concern to federal and State resource agencies that are known or are expected to occur in the Project area.

- For such avian species, implementation of the mitigation measure for nesting birds below will suffice in reducing impacts to these species to less than significant.
- For such amphibian species, including the Mount Lyell salamander and Yosemite toad, where suitable habitat exists for these species in the project area, a thorough search of areas to be disturbed shall be made by construction personnel trained in the methods of searching for these species. If any amphibians are found, regardless of

species, they will be captured and relocated in like habitat no less than 100 feet away from construction sites.

- For such sensitive mammal species with the potential to occur in conjunction with particular project components, including the Sierra Nevada red fox, American marten, Sierra Nevada mountain beaver, Townsend's western big-eared bat, and Mount Lyell shrew, and where suitable habitat for these species exists in the project area, pre-construction surveys shall be conducted by a biologist familiar with the sign of each species to identify signs of their presence or determine their absence no more than two weeks prior to initiating construction activities. Such surveys shall encompass the area to be disturbed and the habitat within 300 feet of construction activities. Due the secretive and/or nocturnal activity patterns of these species, the following signs shall be used:
  - Sierra Nevada red fox – evidence of den, normally on slopes with porous soils.
  - American marten – evidence of den, normally in hollow trees or downed logs.
  - Sierra Nevada mountain beaver – evidence of extensive tunnels, runways and burrows beneath dense streamside vegetation.
  - Townsend's western big-eared bat – evidence of occupation by colonies in caves, mine tunnels, and buildings
  - Mount Lyell shrew – evidence of nests of dry leaves or grasses in stumps or under logs or piles of brush.

If no evidence of the presence of any of these species is found, no further mitigation activities shall be required. However, if evidence of the presence of any of these species is observed, impacts will be avoided or minimized in one or more of the following ways and in consultation with CDFG and/or USFS: realigning trails and relocating new facilities so as to retain a 100-foot buffer between the occupied site and construction activities and human use; suspending construction activities within 300 feet of the den, nest, or bat roosts during the breeding period, (generally held to be March 1 to July 31 for these species); verifying the actual occupation of dens, nests, or roosts by means such as placing tracking medium around the den or nest entrance or conducting a bat survey at the roost entrance at sunset; temporarily blocking the entrance of a den or nest verified to be unoccupied until after construction is completed.

Mitigation Measure 4.C-4 - Sensitive Plants: Prior to approval of individual projects proposed under the TSMP that are located in areas not previously surveyed for sensitive plant species, and that are determined to have habitat suitable to support such plants, the Town shall require that a survey be completed by a qualified botanist for sensitive plant species within 100 feet on either side of a trail alignment or within the disturbance area of other proposed facilities. These surveys shall be conducted during the flowering period for the target species when they are most readily detectable. For those species with at least a low potential to occur in the Project area, this period is usually from late June to mid-August. For reference, the flowering period for individual species is provided in Table 5, *Sensitive Plant Species*, in the Project's BRA (Appendix E of this Draft EIR). If no sensitive plant species are located within the area of disturbance, no further action shall be required. If sensitive plant species are located within such areas and are likely to be impacted by and individual project, conservation actions shall be implemented. Such actions shall include, but not necessarily be limited to re-routing the trail alignment so as to avoid or minimize impacts to sensitive plants while preserving an off-site population that is substantially larger than the population to be impacted, developing a

transplantation program, and collecting seeds to move populations elsewhere out of harm's way. These measures shall be developed in consultation with the CDFG and USFS.

Mitigation Measure 4.C-5 – Sensitive Habitats: As previously noted, there are three vegetation types within the Project area that are considered sensitive. These are aspen forest and woodland, mixed willow riparian, and montane wet meadow. To the extent practicable new trails and other recreational facilities shall avoid these vegetation types. In the event this is not practicable impacts will be minimized by restricting the Project footprint, including temporary and permanent impacts, to the minimum required to implement the project. Mitigation for trees that are necessary to remove has also been incorporated in the Project's Aesthetics and Visual Resources assessment.

In the event the Town elects to repair, maintain and/or improve trail crossings along stream courses and other drainage features (that often support the sensitive vegetation types mentioned above) in association with individual projects proposed under the TSMP, prior to project approval the Town shall notify and consult with the CDFG regarding the need for a Streambed Alteration Agreement (SAA). All work shall be performed in compliance with the conditions set forth in the SAA, as determined by the CDFG. Such conditions may include the in-kind replacement or restoration of riparian habitat at a 1:1 ratio for temporary impacts and a 2:1 ratio for permanent impacts within the Project Area, or as otherwise directed by the CDFG. Alternatively, if the impacts are very minor, the CDFG may, at its discretion, allow the work to proceed under a letter of law without mitigation other than notification and consultation.

As part of the SAA agreement process and prior to beginning construction within CDFG regulated drainages, a Habitat Mitigation and Monitoring Plan (HMMP) should be developed in coordination with the CDFG and USFS if necessary that ensures no net loss of riparian habitat value or acreage. The HMMP shall include, but not necessarily be limited to, the following:

- The establishment of a reference site near regulated resources to be impacted that have similar hydrology, soil regimes, and exposure as the resources to be impacted.
- The establishment of baseline conditions at the reference site regarding absolute native shrub and tree cover, woody shrub and tree stalk density, percentage cover by non-native plant species, and plant species diversity the vegetation using the Sorensen method (Stiling, 1999) within a 400 square foot prescribed reference plot.
- The establishment of a restoration site to encompass the mitigation needs of one or more Project elements either on the Project element site or off site within the Mammoth Creek watershed.
- A minimum 3-year establishment, monitoring, and maintenance (trash collection, weeding, etc.) period.
- The establishment of the following success success criteria within a 400 square foot prescribed plot within the restoration site – 70 % of baseline absolute cover by native shrubs and trees; 70 % of baseline woody shrub and tree stalk density; no more than 5% cover by non-native plant species; and a Sorensen value of 0.6.

The HMMP shall be subject to CDFG approval and may require additional measures in addition to the mitigation discussed above. Because the implementation of individual

projects proposed under the TSMP is expected to occur over several years, the Town should also explore the processing of a Programmatic SAA with CDFG.

Also of note, the Project's Hydrology and Water Quality assessment identified several mitigation measures which are consistent with the protection of sensitive riparian and wet meadow vegetation. These include: measures that control erosion; avoidance of wet areas, springs, wetlands, and the lower portions of slopes; crossing structures at stream crossings; and, the establishment of 5 foot wide vegetation buffers between trails, streams, and wetlands. Implementation of these mitigation measures would further reduce the potential impacts to sensitive habitats.

Mitigation Measure 4.C-6 – Federally Protected Wetlands: In the event the Town elects to construct, repair, maintain and/or improve trail crossing in association with individual projects proposed under the TSMP within waters of the U.S. and federally protected wetlands, prior to project approval the Town shall notify and consult with the ACOE regarding the need for a Section 404 Permit and the RWQCD regarding the need for its 401 certification. All work shall be performed in compliance with the conditions set forth in the Permit, as determined by the ACOE. Such conditions may include the in-kind replacement or restoration of waters and/or wetlands at a ratio of 1:1 for temporary impacts and a ratio of 2:1 for permanent impacts within the Project Area, or as otherwise directed by the ACOE. Alternatively, if the impacts are less than 0.1 acre, the ACOE may, at its discretion, allow the work to proceed without mitigation other than notification and consultation.

The mitigation shall use the same approach as is outlined above in Section 6.1.5 for the mitigation of impacts to CDFG regulated resources. As is usually the case, CDFG jurisdiction extends beyond that of ACOE and mitigation for impacts to CDFG regulated resources is inclusive of ACOE mitigation needs.

Mitigation Measure 4.C-7 – Local Policies or Ordinances: In order to educate trail and facility users about the potential for human/wildlife conflicts, the Town shall install signage at all new entry points to the trail system that include warning signs. The signs shall explain the risks and potential dangers that could be encountered by trail use and include instructions for what to do in case of a potential human/wildlife conflict. The signage should include, but not necessarily be limited to the following: refer to the Police Department/Wildlife Management Officer, USFS personnel and/or CDFG personnel as appropriate when dealing with bears; prohibitions on feeding wildlife; warnings against approaching wildlife; and user responsibilities for removing trash.

a. Conservation Plans

Since there would be no conflict with existing Conservation Plans, no mitigation measures are necessary.

b. Nesting Birds

Refer to Mitigation Measure 4.C-2 above.

4. CUMULATIVE IMPACTS

4.C-7 Only two of 24 related projects (a land exchange near the Mammoth Mountain Ski area and the Casa Diablo IV Geothermal Project) are expected to affect biological resources. These projects, however, are well removed from the Project Area's biological resources and are not expected to contribute to measurably greater impacts than the Project itself. Thus, cumulative impacts would be less than significant

Cumulative impacts refer to incremental effects of an individual project when viewed in connection with the effects of past projects, current projects, and probable future projects (Section 15130 of the *CEQA Guidelines*). A total of 24 projects have been identified for the cumulative impacts analysis. However, all but two of these are within the UGB and are not expected to have marked effects on biological resources, and/or would be the subject of regulations and policies, similar to those outlined in this chapter that would reduce the potentially significant effects of their implementation. aTherefore, they would not contribute substantially to cumulative impacts. The remaining two are a land exchange near the Mammoth Mountain Ski Area main lodge and the Casa Diablo IV Geothermal Project which is east of SR 395 and well removed from the Project Area's biological resources. Thus, any cumulative impacts that result from the Project will not be measurably greater that those discussed above for the Project by itself.

5. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With the implementation of and adherence to the prescribed mitigation measures included herein, all potentially significant impacts would be reduced to a less than significant level.