

BIOLOGICAL EVALUATION

Wheeler Peak Project
Nevada Prospectors

Bridgeport Ranger District
Humboldt-Toiyabe National Forest
Mono County, CA

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Introduction

The purpose of this biological evaluation (BE) is to analyze potential impacts from the Wheeler Peak Exploratory Drilling Project to plants and animals listed as sensitive by the 1995 United States Forest Service Region 4 Sensitive Species List (USDA 1995, updated 1999 and 2003). This BE was prepared in accordance with Forest Service Manual (FSM) direction 2672.42 and meets legal requirements set forth under Section 7 of the Endangered Species Act of 1973, as amended, and implementing regulations [19 U.S.C. 1536 (c), 50 CFR 402.12 (f) and 402.14 (c)].

Current Management Direction

Current management direction on desired future conditions for Threatened, Endangered and Sensitive species on the HTNF can be found in the following documents, filed at the District Office:

- Forest Service Manual and Handbooks (FSM/H 2670)
- National Forest Management Act (NFMA)
- Endangered Species Act (ESA)
- National Environmental Policy Act (NEPA)
- Toiyabe National Forest Land and Resource Management Plan (LRMP)
- Sierra Nevada Forest Plan Amendment (SNFPA)
- Recovery Plans for individual species
- Intermountain Region (R4) Sensitive Species List
- Conservation Strategy for *Phacelia monoensis*

Consultation

A threatened and endangered species list from the United States Fish and Wildlife Service was received on May 6, 2004 (File No. 1-5-02-SP-131) and is on file at the Bridgeport Ranger District office for public review. Due to the date of the species list, Chad Mellison was contacted from the US Fish and Wildlife Service and extended the validation of this list by 90 days (Personnel correspondence to Chad Mellison 10/25/04). This list showed no potential habitat for threatened or endangered species for the project area.

Proposed Action

The proposed action will consist of drilling nine exploratory holes to a depth of 500-1000 feet. Drilling will be accomplished by a track-mounted, reverse circulation drill rig and access will be through Sweetwater Ranch on Forest roads 191 and 198 to Belfort, then north to the sites. Nine sumps (10' X 15' X 5' deep) will be established and located where impact is minimized. Drill sites are either on the road (un-named FS road located off FS road 198) or west off (within 200 feet) of the road. The drill rig is 8.5 feet wide and 10 feet tall and will require a maximum 10-foot wide road. Portions of FS road 198 would need to be widened. The total amount of widened road measures approximately

1,300 feet (0.86 acre) and would not occur in sensitive plant habitat. Approximately 2,000 feet of road would need leveling. No trees will need to be cut and limbing would occur only on a few trees on FS road 198. Mitigation measures to reduce the impact to sensitive plant species include dropping exploratory holes number one and three, which are located within occupied Bodie Hills rockcress habitat. Any drilling in this area would result in a direct loss to this population and loss of potential and suitable habitat. All equipment used during the exploratory activity will be restricted to the road. Sumps will be placed on the road or outside potential habitat for Bodie Hills rockcress. Prior to drilling operations, additional surveys will be conducted and all plant populations and potential habitat will be flagged to ensure that no activities occur in that area. The remaining seven holes are located on a FS road and will not occur in potential habitat for Bodie Hills rockcress.

Affected Environment

The project area is found on the east side of the Sweetwater Mountains. The project area is near the historic mining site of Belfort, California T 7N R 25E Section 31. The elevation for this project site is 9,800 to 11,600 feet on a southeast aspect. Soils in this area include rock covered clay and granite. The vegetation communities within the project area include alpine and subalpine coniferous forest. Rocky granitic outcrops and boulder fields are present with vegetation including curl-leaf mahogany, whitebark pine, mountain sagebrush, rabbitbrush, bitterbrush, mountain brome, Indian ricegrass and crested wheatgrass. There are no large, dense stands of sagebrush present within the project area. No perennial or ephemeral streams are located near the project area.

Analysis Process

Aerial photos and soil survey maps were reviewed to determine the potential habitat types and plant and animal species, which may be affected by the proposed project. The Region 4 Threatened, Endangered and Sensitive Species List (1995), the Nevada Natural Heritage Data Base, the California Natural Diversity Database, the Humboldt-Toiyabe National Forest TES Plant Program, and the Sensitive Plant Field Guide, were used to determine potential habitat requirements for the R4 sensitive species. Enviroscientists, Inc. was contracted by Nevada Prospectors to conduct the plant surveys. These surveys were conducted on July 15, 2004. An area within a 100-meter radius from each proposed drill site was surveyed on foot. The entire area was walked in a zigzag pattern, covering all topographic features and soil types. The spacing between foot routes varied from 15 to 30 feet. Bodie Hills rockcress (*Arabis bodiensis*), a Forest Sensitive species was found within the project area. Several state listed plants were identified as well including: Beatley buckwheat (*Eriogonum beatleyae*) broad-keeled milkvetch (*Astragalus platytropis*), Great Basin claytonia (*Claytonia umbellata*), Sweetwater Mountains draba (*Draba incrassata*) and small-flowered fescue (*Festuca minutiflora*). During the site visit, Enviroscientists, Inc. biologist, Sue Fox, observed a white-tailed jack rabbit and white-tailed jack rabbit scat within the proposed project area. This species has no special state or federal status.

Species Considered and Evaluated

MAMMALS

Spotted bat (<i>Euderma maculatum</i>)	Sensitive
Western (Pale Townsend's) big-eared bat (<i>Corynorhinus (=Plecotus) townsendii pallescens</i>)	Sensitive
North American wolverine (<i>Gulo gulo luteus</i>)	Sensitive
Fisher (<i>Martes pennanti</i>)	Sensitive
Pygmy rabbit (<i>Brachylagus idahoensis</i>)	Sensitive

BIRDS

Mountain quail (<i>Oerortyx pictus</i>)	Sensitive
Flammulated owl (<i>Otus flammeoulus</i>)	Sensitive
California spotted owl (<i>Strix occidentalis occidentalis</i>)	Sensitive
Great gray owl (<i>Strix nebulosa</i>)	Sensitive
Northern goshawk (<i>Accipiter gentilis</i>)	Sensitive
White-headed woodpecker (<i>Picoides alborlarvatus</i>)	Sensitive
Three-toed woodpecker (<i>Picoides tridactylus</i>)	Sensitive
Sage grouse (<i>Centrocercus urophasianus</i>)	Sensitive
Peregrine falcon (<i>Falco peregrinus</i>)	Sensitive

REPTILES AND AMPHIBIANS

Spotted frog (<i>Rana pretiosa</i>)	Sensitive
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PLANTS

Charleston angelica (<i>Angelica scabrida</i>)	Sensitive
Charleston pussytoes (<i>Antennaria soliceps</i>)	Sensitive
Bodies Hills rockcress (<i>Arabis bodiensis</i>)	Sensitive
Ophir rockcress (<i>Arabis ophira</i>)	Sensitive
Galena Creek rockcress (<i>Arabis rigidissima</i> var. <i>demota</i>)	Sensitive
White bear desert-poppy (<i>Arctomecon merriamii</i>)	Sensitive
Rosy King's sandwort (<i>Arenaria kingii</i> spp. <i>rosea</i>)	Sensitive
Eastwood milkweed (<i>Asclepias eastwoodiana</i>)	Sensitive
Clokey milkvetch (<i>Astragalus aequalis</i>)	Sensitive
Funeral milkvetch (<i>Astragalus funereus</i>)	Sensitive
Scorpion milkvetch (<i>Astragalus lentiginosus</i> var. <i>scorpionis</i>)	Sensitive
Half-ring pod milkvetch (<i>Astragalus mohavensis</i> var. <i>hemigyryus</i>)	Sensitive
Lee Canyon milkvetch (<i>Astragalus oophorus</i> var. <i>clokeyanus</i>)	Sensitive
Lavin's milkvetch (<i>Astragalus oophorus</i> var. <i>lavinii</i>)	Sensitive
Spring Mountain milkvetch (<i>Astragalus remotus</i>)	Sensitive
Toquima milkvetch (<i>Astragalus toquimanus</i>)	Sensitive
Upswept moonwort (<i>Botrychium ascendens</i>)	Sensitive
Dainty moonwort (<i>Botrychium crenulatum</i>)	Sensitive
Seaside sedge (<i>Carex incurviformis</i>)	Sensitive
Mohave cryptantha (<i>Cryptantha tumulosa</i>)	Sensitive
Bodie Hills draba (<i>Cusickiella quadricosta</i>)	Sensitive
Goodrich biscuitroot (<i>Cymopterus goodrichii</i>)	Sensitive
Snowy spring parsley (<i>Cymopterus nivalis</i>)	Sensitive
Arid draba (<i>Draba arida</i>)	Sensitive

Star draba (<i>Draba asterophora</i> var. <i>asterophora</i>)	Sensitive
Jaeger draba (<i>Draba jaegeri</i>)	Sensitive
Serpentine draba (<i>Draba oreibata</i> var. <i>serpentina</i>)	Sensitive
Charleston draba (<i>Draba paucifructa</i>)	Sensitive
Nevada willowherb (<i>Epilobium nevadense</i>)	Sensitive
Spring Mountain goldenweed (<i>Ericameria compactus</i>)	Sensitive
Mono buckwheat (<i>Eriogonum ampullaceum</i>)	Sensitive
Toiyabe buckwheat (<i>Eriogonum esmeraldense</i> var. <i>toiyabense</i>)	Sensitive
Clokey buckwheat (<i>Eriogonum hermannii</i> var. <i>clokeyi</i>)	Sensitive
Barrel cactus (<i>Ferocactus cylindraceus</i> var. <i>lecontei</i>)	Sensitive
Clokey greasebrush (<i>Glossopetalon clokeyi</i>)	Sensitive
Smooth dwarf greasebrush (<i>Glossopetalon pungens</i> var. <i>glabra</i>)	Sensitive
Sierra Valley ivesia (<i>Ivesia aperta</i> var. <i>aperta</i>)	Sensitive
Dog Valley ivesia (<i>Ivesia aperta</i> var. <i>canina</i>)	Sensitive
Charleston ivesia (<i>Ivesia cryptocaulis</i>)	Sensitive
Jaeger ivesia (<i>Ivesia jaegeri</i>)	Sensitive
Plumas ivesia (<i>Ivesia sericoleuca</i>)	Sensitive
Webber ivesia (<i>Ivesia webberi</i>)	Sensitive
Dune penstemon (<i>Penstemon arenarius</i>)	Sensitive
Bicolored beardtongue (<i>Penstemon bicolor</i> ssp. <i>bicolor</i>)	Sensitive
Rose-colored beardtongue (<i>Penstemon bicolor</i> ssp. <i>roseus</i>)	Sensitive
Death Valley beardtongue (<i>Penstemon fruticiformis</i> spp. <i>amargosae</i>)	Sensitive
Mono phacelia (<i>Phacelia monoensis</i>)	Sensitive
Marsh's bluegrass (<i>Poa abbreviata marshii</i>)	Sensitive
Williams combleaf (<i>Polycytenium williamsii</i>)	Sensitive
Tahoe yellowcress (<i>Rorippa subumbellata</i>)	Sensitive
Clokey Mountain sage (<i>Salvia dorrii</i> var. <i>clokeyi</i>)	Sensitive
Clokey silene (<i>Silene clokeyi</i>)	Sensitive
Low sphaeromeria (<i>Sphaeromeria compacta</i>)	Sensitive
Masonic Mountain jewel flower (<i>Streptanthus oliganthus</i>)	Sensitive
Charleston kittentails (<i>Synthyris ranunculina</i>)	Sensitive
Alpine goldenweed (<i>Tonetus alpinus</i>)	Sensitive
Charleston ground daisy (<i>Towsendia jonesii</i> var. <i>tumulosa</i>)	Sensitive
Rollins clover (<i>Trifolium rollinsii</i>)	Sensitive

Humboldt-Toiyabe National Forest Sensitive Species

Wildlife

The following species do not occur on the Bridgeport Ranger Station: spotted frog, three-toed woodpecker, peregrine falcon and therefore no further analysis will be conducted for these species.

Northern goshawk

The northern goshawk (*Accipiter gentilis*) lives in boreal and temperate forests. The goshawk is a partial migrant, probably due to food supplies. In the western United States,

it uses mixed conifer, Douglas fir and quaking aspen (*Populus tremuloides*), and often has water near the nest. A favorable forest is mature with large trees, on a moderate slope and open understory. They have been known to forage in open sagebrush and from aspen edge along sagebrush in Nevada. Pairs are in their territories starting as early as February to early April. The eggs are laid by early May and hatch about a month later. The young fledge approximately 40 days later and are dependant on the parents for another thirty to forty days (Squires and Reynolds 1997).

There is no potential goshawk nesting habitat within the project areas. There are no dense stands of mixed conifer which would offer suitable nesting habitat for northern goshawks.

Sage Grouse

Sage grouse (*Centrocercus urophasianus*) rely primarily on one particular plant type- sagebrush- to meet its life requirements. Leks, or breeding display sites, typically occur in open areas surrounded by sagebrush; these sites include, but are not limited to, landing strips, old lakebeds, low sagebrush flats and ridge tops, roads, cropland, and burned areas (Connelly et al. 2000). A common feature of leks sites is that they have less herbaceous and shrub cover than surrounding habitats (Schroeder et al. 1999). Brood-rearing areas include sagebrush, riparian meadows, greasewood bottoms, alfalfa, grain, irrigated pastures and trails; the common feature of brood areas is that they are rich in forbs and insects. Winter ranges are dominated by 6-43% cover of sagebrush, primarily big sagebrush, low sagebrush, and/or silver sagebrush (Schroeder et al. 1999). Sagebrush is essential in surviving the winter and dominates the diet during late autumn, winter and early spring. Insects, beetles and ants are important for juveniles and forbs increase as the juveniles age. Breeding occurs from March to early April and young hatch in early April to late July (Schroeder et al. 1999). The nest site tends to be in sagebrush stands with the mean height of 29 to 80 cm, and nests tend to be under the tallest sagebrush in the stand (Connelly et al. 2000).

There is no potential habitat for nesting sage grouse within the project area due to the lack of suitable sagebrush stands needed for nesting, meadow habitats important during the brood-rearing season and the lack a suitable corridor between the nearest lek (seven miles northeast of the project area) and the project area.

Mountain quail

The mountain quail (*Oerortyx pictus*) is the largest North American quail and is a resident from southwestern British Columbia, western and southern Washington, central Idaho south through the mountains of California and western Nevada (Johnsgard 1973). Mountain quail often nest in high elevations up to 10,000 feet migrating to lower elevation in the fall (Terres 1980). However, Pope et al. (1999) found that mountain quail do not always migrate between seasons and will often nest within their winter range. Mountain quail appear to be opportunistic nesters utilizing a wide variety of habitat types for breeding. For example, Pope (2003) found nesting quail in old growth coniferous forest, mixed shrub and grasslands, regenerating clear-cuts and old burned areas. Nests are often concealed under logs or fallen pine branches, in weeds, shrubs, or

at the base of large trees. Brennan et. al (1987) found that mountain quail usually nest within a few hundred yards of water to provide chicks with required water supply after hatching. However, recent studies suggest proximity to water source may not always be important in selection of breeding habitat (Pope 1999, 2003). Young mountain quail may receive sufficient hydration from vegetative sources found in non-riparian areas (Ibid). The reproductive period generally begins sometime in late March with pair-bonding and nest site selection and ends in mid-July when the young are hatched and independent. The female often lays two clutches of eggs, which are simultaneously incubated by, both male and female (Pope 2003). The two clutches join together in the fall forming a covey, which, typically stay together through fall and winter. Mountain quail feed primarily on plant food obtained while foraging on the ground in low growing shrubs. Legumes appear to be an important food source for mountain quail, particularly during the fall (Pope 1999, Gutierrez 1977). Mountain quail also feed on seeds, fruit, and insects. Threats to mountain quail include disturbance from livestock grazing and humans during breeding season (USDA, 1991).

There is potential habitat for mountain quail near the project area, but no observations have been made for this area.

Flammulated owl

The flammulated owl (*Otus flammeolus*) breeds throughout the Toiyabe National Forest, except in the Spring Mountain National Recreational Area, and they winter down to northern Central America. Territories are established in early May and eggs are laid in early June. The young fledge in late July and disperse by September. The owl prefers forests that contain, if not dominated by western yellow pine (ponderosa pine and Jeffrey pine) and Douglas-fir (*Pseudotsuga menziesii*). It has also been noted that they use forests with an aspen component in Utah, Colorado and Nevada. These forests typically have an open canopy with large diameter (>20 dbh) snags (McCallum 1994 and Spahr et al 1991).

There is no potential habitat for flammulated owls within the project area due to the lack of suitable nesting stands of mixed-conifer and aspen stands.

White-Headed Woodpecker

The white-headed woodpecker (*Picoides alborlarvatus*) occupies a restricted range from southern British Columbia south through Washington and Idaho to Southern California and western Nevada (USDA 1991). They are found in mixed conifer forests from 3,500-9,000 feet in elevation. White-headed woodpeckers in the Intermountain Region in the Sierra Nevada's mainly forage in white fir, red fir and Jeffrey pine forests. Preferred habitat appears to be stands with large diameter trees, soft snags averaging 23 inches dbh, and 40 to 70 percent canopy cover. They forage on live, mature conifers with deeply creviced and scaly bark, snags, pine and fir cones and terminal needle clusters (Zeiner 1990). Nests are often in open conifer habitats, near edges of roads, natural openings, or on edges of small clearings. The excavate cavities in large snags or stumps at least 61 cm in diameter (at nest height) in a trunk with a hard shell and soft interior. Nests are about 2-1 meters above the ground. White-headed woodpeckers breed from mid-April to late

August with peak activity mid-June through mid-July. The average clutch is four eggs (Zeiner 1990). The primary threat to white-headed woodpeckers is over-harvesting of mature, large diameter trees, especially ponderosa pine (USDA 1991).

There is no potential nesting habitat for white-headed woodpeckers due to the lack of suitable mature nesting stands of mixed-conifer.

Great gray owl

The great gray owl (*Strix nebulosa*) is the largest owl in North America. Its range is primarily in Canada and Alaska, but also has a limited distribution in the Sierra Nevada. It prefers habitat near bogs, forest edge, montane meadows, open forest and other openings. The population of the owl appears to be dependant on its prey source (rodents) and nest site availability (mostly abandoned birds of prey nests and sometimes on the top of broken trees/snags or artificial platforms). In the Sierra Nevada, breeding owls prefer pine and fir forests adjacent to meadows that occur between 4,000 to 8,000 feet. Ponderosa pine is the dominant pine in these stands, and it is thought that Jeffery pine can take the place of ponderosa where it is lacking. The owls pair up in late winter and eggs are laid by early June. By early-July the eggs are hatched and after approximately 55 days, they fledge, but are still dependant on the parents for several weeks (Bull and Duncan 1993, Bull and Henjum 1990, Duncan 1994, Habeck 1994 and Spahr et al 1991).

There is no potential habitat for nesting great gray owls within the project area due to the lack of suitable mature stands of mixed-conifer and meadow habitats important for foraging.

California spotted owl

The California spotted owl (*Strix occidentalis occidentalis*) is one of three sub-species of the spotted owl, and occurs in the Sierra Nevada and the south coastal ranges of California. The California spotted owl can be found in five vegetation types in the Sierra Nevada; foothill riparian/hardwood, ponderosa pine/hardwood, mixed-conifer forest, red fire forest, and the east side pine forest (SNFPA 2001). In general, stands suitable for owl foraging have 1) at least two canopy layers, 2) dominant and co dominant trees in the canopy averaging at least eleven inches in dbh, 3) at least 40 percent canopy cover in overstory trees, and higher than average numbers of snags and downed woody material (SNFPA 2001). Stands suitable for nesting and roosting have 1) two or more canopy layers, 2) dominant and co dominant trees in the canopy averaging at least 24 inches in dbh, 3) at least 70 percent total canopy cover, 4) higher than average levels of very large, old trees, and 5) higher than average levels of snags and downed woody material (SNFPA 2001). Egg-laying through incubation extends from early April through mid-to late May. Young owls fledge from the nest in mid- to late June. Adults continue to bring food to the fledglings until mid-to late September (SNFPA 2001).

There is no potential nesting habitat for California spotted owls within the project area due to the lack of mature mixed-conifer stands suitable for nesting.

Pygmy rabbit

The pygmy rabbit (*Brachylagus idahoensis*) is the smallest of all North American rabbits. The pygmy rabbit is largely dependent upon sagebrush (primarily big sagebrush, *Artemisia tridentata*), but is usually found in areas where big sagebrush grows in very dense stands. Within these stands of dense sagebrush, it selects sites that have the greatest cover densities (SNFPA 2001). Burrows are usually under big sagebrush and only rarely located in an opening in the vegetation. Generally soft, deep soils are required for burrowing. They also use the contours of the soil, most often digging into a slope. Sexual development in males begins in January, peaks in March and declines in June (SNFPA 2001). Females are fertile from late February through March in Utah and from late March through late May in Idaho. The gestation period lasts from 26 to 28 days. Litter size ranges from five to eight and average six. Females are able to produce three litters per year (SNFPA 2001). The pygmy rabbit will not cross even moderately large areas of open ground.

There is no potential habitat for pygmy rabbits within the project area due to the lack of suitable large, dense stands of sagebrush used for den sites.

Western (Pale Townsend's) big-eared bat

The western (Pale Townsend's) big-eared bat (*Corynorhinus (=Plecotus) townsendii pallascens*) occurs throughout the western United States including the Intermountain Region. Females can breed in their first fall and breeding occurs between October and February. Young are born in late spring or early summer. These bats have nurseries (12 to 200 individuals) where the female and young roost communally and by August the nurseries breakup. The bats use a wide variety of habitats from sea level to 10,000 feet. Juniper/pine and mixed coniferous forests are commonly used. Roosting occurs in caves, mine shafts, abandoned buildings and rocky outcrops during the winter. These bats do not migrate, but will move to different roost sites. During breeding, non-breeding females and males roost alone (Pierson et al 1999 and Spahr et al 1991).

There is potential roosting habitat for western big-eared bats, but the species occurrence is unknown within the project area. The abandoned buildings at Belfort do provide suitable roosting habitat.

Spotted bat

The spotted bat (*Euderma maculatum*) is a wide-ranging western species that has a patchy distribution throughout its range and is highly associated with prominent rock formations. This species has been in dry, rough, desert terrain and is also found in caves or cave-like situations (Watkins 1977). It is generally believed that this species forage primarily on moths. Predators of the spotted bat include kestrels, peregrine falcons and red-tailed hawks (Watkins 1977). The spotted bat is known to roost in cliff faces and foraged alone in a variety of habitats, being most active over marshes and in open ponderosa-pine woodland. Foraging bats fly 5-15 meters above the ground (Wai-Ping 1989). The spotted bat may be locally abundant it is considered rare over its geographic range.

There is no potential habitat for spotted bat within the project area due to the high alpine habitat present and lack of rock formations suitable for roosting.

Wolverine

The wolverine (*Gulo gulo luteus*) is a wide-ranging mammal of the circumboreal regions of the world, reaching down into the northwestern U.S. and into the backcountry of California. It lives essentially in high elevation, un-roaded areas and do not inhabit grassland-chaparral or sagebrush and creosote scrublands in California (Banci 1998 and Spahr et al 1991). Wolverines appear to select areas that are free from significant human disturbance, especially during the denning period from late winter through early spring. Wolverines predominately use coniferous forest types, but they also use non-forest alpine habitats (Sierra Nevada Forest Plan Amendment, Final Environmental Impact Statement January 2001). Prey items for wolverines are primarily carrion, but also marmots and other intermediate-sized vertebrates. Breeding occurs during June to August. Breeding pairs of wolverines restrict their movements and stay together for two-three days (Ruggiero 1994). Little information is known on den sites in forested areas. Holes dug under spruce trees and hollow spruce trees were noted in research studies as denning sites. Natal dens in Montana were most commonly associated with snow-covered tree roots, log jams or rocks and boulders (Ruggiero 1994).

There is no potential denning habitat within the project area. There are no log jams, rocks or boulders that would provide suitable denning habitat for wolverines.

Fisher

The fisher (*Martes pennanti*) occurs only in North American from British Columbia to Nova Scotia and into the lower forty-eight states including Montana, Idaho, Oregon and California. The fisher prefers extensive forested areas with continuous canopy. In the eastern Sierra Nevada they prefer higher elevations in true fir or mixed conifer forests (Powell and Zielinski 1994 and Spahr et al 1991). In general, fishers use forest or woodland landscape mosaics that include conifer-dominated stands, and avoid entering open areas that have no overstory or shrub cover. Late-successional coniferous or mixed forests provide the most suitable fisher habitat because they provide abundant potential den sites and preferred prey species. Rest site structures used by fishers include: hollow logs, tree cavities; rocks; snags; ground burrows; fallen trees; canopy of live trees, commonly in witches brooms; and slash and brush piles. Natal dens, where kits are born, are most commonly in tree cavities at heights of greater than 20 feet, while maternal dens, where kits are raised, may be in cavities closer to the ground (Sierra Nevada Forest Plan Amendment Final Environmental Impact Statement January 2001). The breeding season for fishers is from approximately February 27 to April 15 (Ruggiero 1994). The major prey items for fishers are small- to medium-sized mammals, birds and carrion; squirrels, mice, shrews, snowshoe hares and porcupines are some of the most common.

There is no potential habitat for fisher due to the lack of extensive forested areas, which provide cover and suitable denning sites.

Plants

It has been determined after using the Humboldt – Toiyabe National Forest TES Plant Program (Weixelmen 2001) and the Nevada Natural Heritage Program (Morefield 2001) that the following plant species do not occur nor have the probability of occurring in Mono County, California where the project is located. Therefore there will be no impact on these species, and no further analysis of these species will be done. Charleston angelica (*Angelica scabrida*), Charleston pussytoes (*Antennaria soliceps*), Bodie Hills rockcress (*Arabis bodiensis*), Ophir rockcress (*Arabis ophira*), White bear desert-poppy (*Arctomecon merriamii*), Rosy King's sandwort (*Arenaria kingii* spp. *rosea*), Eastwood milkweed (*Asclepias eastwoodiana*), Clokey milkvetch (*Astragalus aequalis*), Funeral milkvetch (*Astragalus funereus*), Scorpion milkvetch (*Astragalus lentiginosus* var. *scorpionis*), Half-ring pod milkvetch (*Astragalus mohavensis* var. *hemigyris*), Lee Canyon milkvetch (*Astragalus oophorus* var. *clokeyanus*), Spring Mountain milkvetch (*Astragalus remotus*), Toquima milkvetch (*Astragalus toquimanus*), Mohave cryptantha (*Cryptantha tumulosa*), Goodrich biscuitroot (*Cymopterus goodrichii*), Snowy spring parsley (*Cymopterus nivalis*), Arid draba (*Draba arida*), Jaeger draba (*Draba jaegeri*), Serpentine draba (*Draba oreibata* var. *serpentina*), Charleston draba (*Draba paucifruca*), Nevada willowherb (*Epilobium nevadense*), Spring Mountain goldenweed (*Ericameria compactus*), Toiyabe buckwheat (*Eriogonum esmeraldense* var. *toiyabense*), Clokey buckwheat (*Eriogonum hermannii* var. *clokeyi*), Barrel cactus (*Ferocactus cylindraceus* var. *lecountei*), Clokey greasebrush (*Glossopetalon clokeyi*), Smooth dwarf greasebrush (*Glossopetalon pungens* var. *glabra*), Dog Valley ivesia (*Ivesia aperta* var. *canina*), Charleston ivesia (*Ivesia cryptocaulis*), Jaeger ivesia (*Ivesia jaegeri*), Plumas ivesia (*Ivesia sericoleuca*), Dune penstemon (*Penstemon arenarius*), Bicolored beardtongue (*Penstemon bicolor* ssp. *Bicolor*), Rose-colored beardtongue (*Penstemon bicolor* ssp. *Roseus*), Death Valley beardtongue (*Penstemon fructiciformis* spp. *Amargosae*), Clokey Mountain sage (*Salvia dorrii* var. *clokeyi*), Clokey silene (*Silene clokeyi*), Low sphaeromeria (*Sphaeromeria compacta*), Charleston kittentails (*Synthyris ranunculina*), Alpine goldenweed (*Tonetus alpinus*), Charleston ground daisy (*Towsendia jonesii* var. *tumulosa*), and Rollins clover (*Trifolium rollinsii*).

Bodie Hills rockcress

Bodie Hills rockcress (*Arabis bodiensis*) is a perennial herb. This plant species typically occurs in rocky crevices and open slopes on mountain summits. Bodie Hills rockcress is found at elevations ranging from 6,720 to 9,970 feet in sagebrush associations within the pinyon-juniper and mountain sagebrush zones. The Bodie Hills rockcress is known to occur in Mineral County, Nevada and Fresno, Inyo, Mono and Tulare Counties in California. It is known to grow in the Sweetwater Mountains, Bodie Hills, Wassuk Ranges, Brawley Peaks, and in the southern and central high Sierra Nevada. Flowering typically occurs in early-spring (Morefield 2001). Mineral exploration and development, road construction and maintenance are listed threats for this species.

There is potential habitat for Bodie Hills rockcress within the project area and during surveys conducted on July 15, four occurrences were observed in the project area. However, this survey was conducted late in the season, and therefore complete positive species identification, and accurate determination of the size and area of the plant

occurrence was not possible (Enviroscientists, Inc. 2004 Survey Report). The four occurrences observed were under a quarter acre in size and all occurred in rocky outcrops and on rock covered soils.

Lavin's egg vetch

The Lavin's egg vetch (*Astragalus oophorus* var. *lavinii*) is known from Douglas, Mineral and Lyon Counties, Nevada, and Mono County, California. It occurs in soft clay and gravelly limestone soils at elevations ranging from 6,000 to 9,000 feet. Lavin's egg vetch is found on dry, hot and exposed hillsides, flats, ridges and open slopes of the pinyon-juniper woodlands and sagebrush community. It flowers from June to July (Morefield 2001).

There is no potential for Lavin's egg vetch within the project area due to the lack of volcanic ash or carbonate soils and due to the elevational range of the project area.

Upswept moonwort

Upswept moonwort (*Botrychium ascendens*) grows in wet to moist meadows in conifer forests where they grow in moss, grasses, sedges, and rushes and other vegetation (USDA 2001a). Upswept moonwort may be found with other moonworts including *B. crenulatum*, *B. lunaria*, and *B. minganense* (Wagner 1993). In Nevada, the habitat is described as moist ground of spring head areas in deep shade on north-facing slopes often with shooting star (*Dodecatheon redolens*) from 8,891 to 11,155 feet (Morefield 2001). Upswept moonwort is widely scattered in western North America including Nevada and California (NatureServe 2000). The sites are usually localized and rare. In Nevada, upswept moonwort is known only from the Spring Mountains but has not been systematically surveyed in Nevada (Morefield 2001).

There is no potential habitat for upswept moonwort within the project area due to the lack of moist, spring areas.

Dainty moonwort

Dainty moonwort (*Botrychium crenulatum*) grows in riparian areas wet to moist meadows in conifer forests where they grow in moss, grasses, sedges, and rushes and other vegetation (USDA 2001a). In Nevada, dainty moonwort is found from 8,202 to 11,150 feet. Dainty moonwort is found in the western North America, but is localized and rare. In Nevada, upswept moonwort is known only from the Spring Mountains but has not been systematically surveyed in Nevada and may occur in isolated pockets in many of the higher and wetter mountains in Nevada (Morefield 2001).

There is no potential habitat within the project area for dainty moonwort due to the lack of moist, spring and meadow areas.

Slender moonwort

Slender moonwort (*Botrychium lineare*) is found usually at higher elevations in montane forest or meadow habitats, however the typical habitat is difficult to describe in elevation (FWS 2001, Wagner and Wagner 1994). The described habitats have ranged from

roadside in open habitat dominated by low-growing forbs; meadow dominated by knee-high grass; shaded woods, and woodlands; grass-to-forb-dominated openings in forest pine, spruce, and fir forests; grassy horizontal ledges on a north-facing limestone cliff; and a flat upland section of a river valley. Elevation ranges up to 9,840 feet. Population are threatened by habitat destruction and fragmentation from road construction and maintenance, including herbicide spraying, recreational activities, grazing and trampling by wildlife and livestock, development, timber harvest, and competition from non-native plant species (FWS 2001).

There is no potential habitat within the project area for slender moonwort due to the lack of meadow habitats.

Seaside sedge

The seaside sedge (*Carex incurviformis* var. *danaensis*) occurs in alpine and subalpine moist tundra and wet rock ledges at elevations of 10,000 to 13,120 feet. Seaside sedge is found in California, Colorado and Wyoming. In California, it is found in Inyo, Mono, Tulare, and Tuolumne (California Native Plant Society 2002).

There is no potential habitat for seaside sedge due to the lack of moist tundra and wet rock ledges.

Bodie Hills draba

The Bodie Hills draba (*Cusickiella quadricostata*) is known to occur in Mineral and Douglas Counties in Nevada, and Mono County in California. This species occurs on clay soils at elevations ranging from 6,000 to 9,200 feet. Bodie Hills draba is found in a number of plant communities including low sagebrush grasslands, pinyon-juniper woodlands, big sagebrush grasslands and mountain mahogany woodlands. Habitat for this species is usually found at middle to high mountains on flats, ridges and windswept side-slopes. Flowering occurs from May to June (Morefield 2001).

There is potential habitat for Bodie Hills draba within the project area, but no populations were observed during the field survey.

Star (Tahoe) draba

Star draba (*Draba asterophora* var. *asterophora*) is an alpine perennial forming large mats through vegetative reproduction. These plants grow in rock crevices and granite talus slopes at high elevations between 8,000 and 10,200 feet elevation. Slopes are typically north facing and frequently hold patches of snow throughout the summer months. The most frequently cited locations for star draba are characterized by extensive scree slopes of granitic material ranging in size from sand to small boulders (Morefield 2001). Seven distinct populations occur within a discontinuous distribution between Washoe County, Nevada and to Mt. Gibbs near Tioga Pass in Yosemite, CA: Mt. Rose Ski Area/ Slide Mountain; Mt. Rose; Rose Knob; Heavenly Valley (Lake Tahoe Basin Management Unit); Job's Peak (Lake Tahoe Basin Management Unit); Yosemite; and Echo Lake (El Dorado National Forest).

There is potential habitat for Star draba within the project area, but no populations were observed during the field survey.

Mono buckwheat

The Mono buckwheat (*Eriogonum ampuliaceum*) is known from the eastern slope of the Sierra Nevada in Mono County, California, and in western Nevada from Alkali Valley on the north side of Alkali Lake in Mineral County. It is found in sandy pumice soils at elevations ranging from 6,400 to 6,900 feet. It is aquatic or wetland-dependent in Nevada. Mono buckwheat is an annual that flowers in June through August (Morefield 2001).

There is no potential habitat within the project area for Mono buckwheat due to the lack of wetland habitats.

Mono phacelia

The Mono phacelia (*Phacelia monoensis*) is known from Nye, Lyon and Mineral Counties, Nevada and in Mono County, California. This plant occurs in disturbed areas where it colonizes barren or sparsely vegetated soils and is also found on naturally eroding badlands. It is found in low sagebrush steppe or pinyon-juniper woodlands. Threats to this species include any activity that promotes invasive weed infestation, mining and road maintenance (SNFPA, FEIS). It occurs in granitic and heavy clay soils on rocky ridges, at elevations ranging from 6,000 to 9,000 feet. Mono County phacelia is an annual which flowers from May to July, depending on spring time weather conditions (Morefield 2001).

Potential habitat does occur for Mono phacelia within the project area, but no populations were observed during the field survey.

Marsh's bluegrass

Marsh's bluegrass (*Poa abbreviata* ssp. *marshii*) is a dwarf perennial alpine grass found in alpine habitats from 11,600 to 12,000 ft. The habitats are described as alpine scree and talus and boulder and rock fields. Characteristic of this habitat are strong cold winds, intense illumination. Marsh's bluegrass has been documented in Nevada (one known occurrence), California (one known occurrence), and Idaho (Morefield 2001, CNDDDB 2002).

There is potential habitat for Marsh's bluegrass, but no populations were observed during the field survey.

William's combleaf

The William's combleaf (*Polycatenium williamsiae*) is known from the foothills of little Washoe Lake in the Virginia Range of Washoe County, Nevada and in Mono County, California. It occurs on the edges of vernal ponds at elevations ranging from 5,600 to 5,700 feet. William's combleaf is a perennial herb that flowers in May and June (Morefield 2001).

There is no potential habitat within the project area for William's combleaf due to the lack of vernal ponds and the elevational range.

Masonic Mountain jewel flower

The Masonic Mountain jewel flower (*Streptanthus oliganthus*) is known from western Nevada in Mineral and Lyon Counties, and in Mono and Inyo Counties, California. It typically grows on rocky slopes or talus, on flat areas, in ravines, and in canyon bottoms. The soils are described as sandy or gravelly of decayed granite or decomposing volcanic rock. On the Bridgeport Ranger District, it has been reported to grow along roadsides and in old dumps as well as in litter under trees. Slopes varied from zero to 20 degrees on all aspects. The elevation ranges are reported from 6,400 to 10,000 feet. It is reported from the pinyon-juniper zone but reports also include the Jeffery pine and sagebrush-grass zones. This species flowers from May to July (Morefield 2001).

There is potential habitat for Masonic Mountain jewel flower within the project area, but no populations were observed during the field surveys.

Effects and Determinations of Proposed Action on listed and Sensitive Species

Northern goshawk: There is no potential goshawk-nesting habitat within the project areas. There are no dense stands of mixed conifer, which would offer suitable nesting habitat for northern goshawks; therefore it is my determination that this project will not impact northern goshawks.

Sage grouse: There is no potential habitat for nesting sage grouse within the project area due to the lack of suitable stands of sagebrush and meadow habitats important during the brood-rearing season, therefore it is my determination that this project will not impact sage grouse.

Mountain quail: There is no potential nesting habitat for mountain quail due to the lack of standing water near the area and riparian areas important for foraging during the brood-rearing season, therefore it is my determination that this project will not impact mountain quail.

Flammulated owl: There is no potential habitat for flammulated owls within the project area due to the lack of suitable nesting stands of mixed-conifer and aspen stands, therefore it is my determination that this project will not impact flammulated owls.

White-headed woodpecker: There is no potential nesting habitat for white-headed woodpeckers due to the lack of suitable mature nesting stands of mixed-conifer, therefore it is my determination that this project will not impact white-headed woodpeckers.

Great gray owl: There is no potential habitat for nesting great gray owls within the project area due to the lack of suitable mature stands of mixed-conifer and meadow habitats important for foraging, therefore it is my determination that this project will not impact great gray owls.

California spotted owl: There is no potential nesting habitat for California spotted owls within the project area due to the lack of mature mixed-conifer stands suitable for nesting, therefore it is my determination that this project will not impact California spotted owls.

Pygmy rabbit: There is no potential habitat for pygmy rabbits within the project area due to the lack of suitable large, dense stands of sagebrush used for den sites, therefore it is my determination that this project will not impact pygmy rabbit.

Western (Pale Townsend's) big-eared bat: There is potential roosting habitat for western big-eared bats, but the species occurrence is unknown within the project area. The abandoned buildings at Belfort do provide suitable roosting habitat. The noise and human presence may cause a disturbance to any bats in the area, but the buildings will not be removed or altered, so suitable roosting areas will still be available. It is my determination that this project may impact individuals but is not likely to cause a trend to federal listing or a loss of viability.

Spotted bat: There is no potential habitat for spotted bat within the project area due to the high alpine habitat present and lack of rock formations suitable for roosting, therefore it is my determination that this project will not impact spotted bats.

Wolverine: There is no potential denning habitat within the project area. There are no log jams, rocks or boulders that would provide suitable denning habitat, therefore it is my determination that this project will not impact wolverines.

Pacific fisher: There is no potential habitat for fisher due to the lack of extensive forested areas, which provide cover and suitable denning sites, therefore it is my determination that this project will not impact Pacific fishers.

Bodie Hills rockcress: Potential habitat for Bodie Hills rockcress was discovered within the project area during surveys conducted on July 15, 2004. Four occurrences of the plant were observed in the project area. The four occurrences observed were under a quarter acre in size and all occurred in rocky outcrops and on rock covered soils, located on the west side of the un-named FS road. Potential habitat extends on both sides of the road. This survey was conducted late in the season for positive species identification, and determining the size and area of the plant occurrence was not possible (Enviroscientists, Inc. 2004 Survey Report). Under the proposed action mitigation measures have been placed to ensure that impacts to Bodie Hills rockcress are minimized, these include 1) all equipment used during the exploratory activity will be restricted to the road; 2) sumps will be placed on the road or outside potential habitat for Bodie Hills rockcress; 3) prior to drilling operations, additional surveys will be conducted and all plant populations and potential habitat will be flagged to ensure that no activities occur in that area. Because all equipment and drilling operations will occur outside of Bodie Hills rockcress habitat, it is my determination that there will be no impact to Bodie Hills rockcress.

Lavin's egg vetch: There is no potential for Lavin's egg vetch within the project area due to the lack of volcanic ash or carbonate soils and due to the elevational range of the project area, therefore it is my determination that there will be no impact to Lavin's egg vetch.

Upswept moonwort: There is no potential habitat for upswept moonwort within the project area due to the lack of moist, spring areas, therefore it is my determination that this project will not impact upswept moonwort.

Dainty moonwort: There is no potential habitat within the project area for dainty moonwort due to the lack of moist, spring and meadow areas, therefore it is my determination that this project will not impact dainty moonwort.

Slender moonwort: There is no potential habitat within the project area for slender moonwort due to the lack of meadow habitats; therefore it is my determination that this project will not impact slender moonwort.

Seaside sedge: There is no potential habitat for seaside sedge due to the lack of moist tundra and wet rock ledges; therefore it is my determination that this project will not impact seaside sedge.

Bodie Hills draba: There is potential habitat for Bodie Hills draba within the project area, but no populations were observed during the field survey, therefore it is my determination that this project will not impact Bodie Hills draba.

Star draba: There is potential habitat for Star draba within the project area, but no populations were observed during the field survey, therefore it is my determination that this project will not impact star draba.

Mono buckwheat: There is no potential habitat within the project area for Mono buckwheat due to the lack of wetland habitats; therefore it is my determination that this project will not impact Mono buckwheat.

Mono phacelia: Potential habitat does occur for Mono phacelia within the project area, but no populations were observed during the field survey, therefore it is my determination that this project will not impact Mono phacelia.

Marsh's bluegrass: There is potential habitat for Marsh's bluegrass within the project area, but no populations were observed during the field survey, therefore it is my determination that this project will not impact Marsh's bluegrass.

William's combleaf: There is no potential habitat within the project area for William's combleaf due to the lack of vernal ponds and the elevational range, therefore it is my determination that this project will not impact William's combleaf.

Masonic Mountain jewel flower: There is potential habitat for Masonic Mountain jewel flower within the project area, but no populations were observed during the field surveys,

therefore it is my determination that this project will not impact Masonic Mountain jewel flower.

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