United States Department of Agriculture
Forest Service
Georgetown Ranger District
7600 Wentworth Springs Rd.
Georgetown, CA 95634
(916) 333-4312

Reply to: 2310
PCWA
Date: September 19, 1994

RECEIVED
SEP 21 1994
POWER SYSTEMS DIVISION

Stephen Jones, Power Systems Manager
Placer County Water Agency
P.O. Box 667
Foresthill, CA 95631

Dear Mr. Jones:

I am sending you a copy of the Biological Evaluation for Big Meadows Campground Projects which is required for wildlife. The evaluation includes all predicted activities, including the proposed improvement work. The key item of concern is on page 20, Recommendations. The recommendation, in particular the Limited Operating Period (LOP), will have to be included in the contract. The determination of the LOP, which we can discuss at a later date, cannot be finalized until next spring.

If you have any questions please feel free to contact Arthur Allen at any time.

Sincerely,

for Arthur A. Allen

RAYMOND E. LABOA
District Ranger

Enclosure

ELDORADO NATIONAL FOREST
GEORGETOWN RANGER DISTRICT

# BIOLOGICAL EVALUATION

FOR

BIG MEADOWS CAMPGROUND PROJECTS

PREPARED BY Timothy C Pafford DATE 19 September 1994

TIMOTHY C. PAFFORD
Assistant Wildlife/Fisheries Biologist

and

Sheryl L Ducummon DATE 19 September 1994

SHERYL L. DUCUMMON
District Wildlife Biologist

REVIEWED BY Sheryl L Ducummon DATE 19 September 1994

SHERYL L. DUCUMMON
District Wildlife Biologist

## I. INTRODUCTION AND CURRENT MANAGEMENT DIRECTION

Forest Service Manual (FSM) 2670.32 directs that a Biological Evaluations (BE) be prepared to evaluate project effects upon threatened, endangered, or sensitive species and to ensure that project decisions do not result in loss of species viability or create significant trends toward Federal listing. This biological evaluation (prepared in accordance with FSM 2670.3) analyzes the potential effects of the Big Meadows Campground project on the following species:

Federally Listed and Proposed Species:

| | | |
|---|---|---|
| Bald Eagle | Haliaeetus leucocephalus | endangered |
| Peregrine Falcon | Falco peregrinus | endangered |
| Valley Elderberry Longhorn Beetle | Desmocerus californicus dimorphus | threatened |
| California Red-legged Frog | Rana aurora draytonii | proposed |

Region 5 Designated Sensitive Species (FSM 2672):

| | |
|---|---|
| California Spotted Owl | Strix occidentalis occidentalis |
| Northern Goshawk | Accipiter gentilis |
| Great Gray Owl | Strix nebulosa |
| Willow Flycatcher | Epidonax traillii |
| Pacific Fisher | Martes pennanti |
| American Marten | Martes americana |
| Sierra Nevada Red Fox | Vulpes vulpes necator |
| Northwestern Pond Turtle | Clemmys marmorata marmorata |

Region 5 Candidate Sensitive Species (these species have been proposed for listing as sensitive; it is anticipated that some or all of these animals will be added to the Regional Forester's list of sensitive wildlife species).

| | |
|---|---|
| California Horned Lark | Eremophila alpestris actia |
| Loggerhead Shrike | Lanius ludovicianus |
| California Wolverine | Gulo gulo luteus |
| Sierra Nevada Snowshoe Hare | Lepus americanus tahoensis |
| Greater Western Mastiff-Bat | Eumops perotis californicus |
| Pacific Western Big-Eared Bat | Plecotus townsendii townsendii |
| Spotted Bat | Euderma maculatum |
| Foothill Yellow-Legged Frog | Rana boylii |
| Mountain Yellow-Legged Frog | Rana muscosa |
| Mount Lyell Salamander | Hydromantes platycephalus |
| Yosemite Toad | Bufo canorus |

A federally endangered, threatened, and proposed species list was requested from the USDI Fish and Wildlife Service (FWS) on February 22, 1994. The FWS identified the following federally listed threatened, endangered, or proposed wildlife species as potentially occurring on the Georgetown Ranger District (USDI FWS: 1994): bald eagle, peregrine falcon, valley elderberry longhorn beetle, and California red-legged frog.

Bald Eagle

Forest Management Direction: The Eldorado National Forest Land and Resource Management Plan (LRMP) directs that the Forest utilize administrative measures to protect and improve habitat for endangered species, and to prepare local management plans to meet recovery objectives. Local management plans have not yet been prepared for bald eagles on the Forest.

Habitat Use and Status: Wintering and potential nesting habitat has been identified and mapped surrounding most major reservoirs on the Forest. Wintering habitat is associated with young to mature forest types surrounding open water. Nesting habitat requires large trees for nesting and low human disturbance.

Peregrine Falcon

Forest Management Direction: The Forest LRMP directs that the Forest utilize administrative measures to protect and improve habitat for endangered species, and to prepare local management plans to meet recovery objectives. Local management plans have not been prepared for peregrine falcons.

Habitat Use and Status: Peregrine falcons have been sighted on the Forest but there are no known active eyries. Potential cliff nesting locations were mapped and evaluated for suitability in 1980. This was not a complete habitat inventory, however, and additional site evaluation should occur during project planning.

Valley Elderberry Longhorn Beetle

Forest Management Direction: The Forest LRMP directs the Forest to utilize administrative measures to protect and improve habitat for endangered species, and to prepare local management plans to meet recovery objectives. Local management plans have not yet been prepared for valley elderberry longhorn beetle on the Forest.

Habitat Use and Status: The species range in California consists of patchy distributions from 2500 feet in elevation and lower. The elderberry shrubs or trees upon which this species survives are concentrated in moist riparian areas within oak woodlands or adjacent uplands. The valley elderberry longhorn beetle is most abundant along the margins of major rivers and streams in dense communities with mature overstory and mixed understory. Common associated plants include Populus fremontii, Salix spp., Fraxinus spp., Quercus lobata, Rubus spp., and Rosa spp.

California Red-Legged Frog

Forest Management Direction: The Forest LRMP does not provide specific management guidelines for maintaining viable populations of California red-legged frogs, however general guidelines direct administrative measures be used to protect and improve habitat for sensitive species. Forest Guidelines also provide protection for meadow habitats and riparian zones.

Habitat Use and Status: There are no known occurrences of this species on the Eldorado National Forest. However, there is a historic location just north of the Forest boundary near the Tahoe National Forest (Stebbins: 1951). This species has experienced population declines caused by competition from introduced exotic species, such as the bullfrog and non-native fishes. The California red-legged frog has completely disappeared from some areas and has only remnant populations in other areas. The California red-legged frog is the

largest frog native to California and is found chiefly in streams, canals, pools, and ponds with a minimum depth of approximately 2 feet. They occur adjacent to mesic forests, woodlands, and grasslands, especially where cattails or other plants provide moderate to high cover (Hayes & Jennings: 1988; Stebbins: 1985). California red-legged frogs are found most frequently in low order (1-4), low gradient (less than 2 percent) streams. Their embryos require temperatures between 39-70 degrees fahrenheit during early stages of development. Water temperature requirements may prove to be a limiting factor for this species.

California red-legged frogs occur west of the Cascade-Sierra Nevada crest from Southwest British Columbia to Northwest Baja California. They are considered uncommon in the Sierra-Cascade portion of their range (Zeiner et al: 1988). Distribution on west slopes of the Sierra Nevada Mountains range from sea level to 6,000 feet elevation, however, the species is not commonly found above 4,000 feet (Zeiner et al: 1988; Verner & Boss: 1980).

California Spotted Owl

Forest Management Direction: The Forest LRMP directs that the Forest utilize administrative measures to protect and improve habitat for sensitive species. In addition, the Plan identifies a network of 32 Spotted Owl Habitat Areas (SOHA's) that have been identified to maintain suitable habitat for reproductive pairs of owls. As of January 13, 1993, the LRMP has been amended for a two year period to add new Interim Guidelines for the California spotted owl. These guidelines are based upon information contained in "The California Spotted Owl: A Technical Assessment of Its Current Status," (CASPO Report), which provides the most current, comprehensive scientific assessment of the status of the California spotted owl. The guidelines address timber and fuels management prescriptions and provide for protection of a 300 acre Protected Activity Center (PAC) surrounding known nest/roost stands.

Habitat Use and Status: Suitable spotted owl habitat on the Eldorado National Forest is typically found in mixed conifer, red fir, white fir, and conifer/black oak habitat types. It is comprised of a multilayered canopy with moderate to high canopy closure (greater than 50%). The canopy typically contains a number of dominant overstory trees (generally larger than 24 inches diameter). Habitat characteristics are more specifically described in several studies conducted on the Forest (Laymon: 1988; Bias: 1989). Based on several years of Forest-wide inventory, a population of about 180 spotted owl individuals/pairs is thought to exist on the Forest, and habitat exists in scattered blocks across the forest. Suitable spotted owl habitat has been reduced over the past ten years.

Northern Goshawk

Forest Management Direction: The Forest LRMP identifies a network of fifty-one goshawk habitat areas that are managed to provide suitable habitat for nesting goshawk pairs and to maintain sufficient habitat to ensure a viable population. Not all territories are utilized by goshawks; therefore, the LRMP incorporates all new nest stands into the network until a verified network is established.

Habitat Use and Status: Insufficient surveys have been conducted to estimate a goshawk population on the Forest or to predict species status. Goshawk habitat on the Eldorado National Forest is typically found on gentle north to east

facing slopes, within mixed conifer and red fir types, with older-aged trees and canopy closure greater than 60 percent. Habitat characteristics within the Sierra Nevada are more specifically defined in a Habitat Capability Model (Fowler: 1988). Goshawk habitat areas established in the LRMP are 50 acres in size. A minimum 120 acre stand may be needed to maintain nesting goshawk pairs, based on information provided in the Habitat Capability Model (Fowler: 1988) and results of recent studies.

Great Gray Owl

Forest Management Direction: The Forest LRMP does not provide specific management guidelines for the great gray owl, however general guidelines direct that administrative measures be used to protect and improve habitat for sensitive species. Forest Guidelines also provide protections for meadows and maintain mature forest characteristics within a zone of 50 to 100 feet surrounding meadows.

Habitat Use and Status: There have not been any verified sightings of great gray owls on the Eldorado National Forest and comprehensive surveys have not been conducted. The closest known populations are found on the Stanislaus National Forest adjacent to Yosemite National Park. Potentially suitable habitat on the Eldorado is considered to be mature stands of mixed conifer and red fir forest, surrounding large meadows (typically larger than 20 acres in size).

Willow Flycatcher

Forest Management Direction: The Forest LRMP does not provide specific management guidelines for the willow flycatcher, however general guidelines direct that administrative measures be used to protect and improve habitat for sensitive species. Forest Guidelines also provide protections for meadow habitats and riparian zones.

Habitat Use and Status: Dense patches of willow and alder within broad, open meadows or riparian areas, provide potentially suitable habitat for willow flycatchers on the Eldorado National Forest. Habitat characteristics are more fully described in a Habitat Capability Model prepared for the Sierra Nevada region (Fowler, 1991). There have been no verified sightings of willow flycatchers on the Forest and comprehensive surveys have not been conducted.

Pacific Fisher, American Marten, and Sierra Nevada Red Fox

Forest Management Direction: The Forest LRMP does not provide specific guidelines for maintaining viable populations of the Pacific fisher, marten, or Sierra Nevada red fox. General guidelines provide direction to protect and improve habitat for sensitive species.

Habitat Use and Status: Distribution and abundance of these species on the Eldorado National Forest is mostly unknown. Recent sightings of marten are common above 6,000 feet and in the wilderness areas. Fisher sightings are rare (particularly since the early 1970's) and few sightings of Sierra Nevada red fox are reported. Habitat characteristics for fisher and marten have been summarized for Region 5, based on a compilation of existing literature and knowledge of species experts (Freel: 1991). Although studies specific to Sierra Nevada have not been conducted, preferred habitat in other parts of the state and country is found in large, relatively unfragmented blocks of older

forest, characterized by dense (60-100%) canopy closure, multistoried structure, with a high number of large snags and down logs.

Habitat for fisher on the Eldorado National Forest is thought to exist between 4,000 and 7,000 feet in the mixed conifer, ponderosa pine, and red fir types, with the best habitat probably being provided in the mixed conifer stands. It is thought that 6,000 to 12,000 acres of suitable habitat are needed to support a fisher reproductive unit (two females and one male). Large blocks of late seral stage habitat have been reduced on the Eldorado, and existing habitat blocks of this size are quite limited within and surrounding the Forest. Available corridors for movement are also limited through much of the Forest. For this reason, areas containing large blocks of fairly unfragmented older or mature forest have been identified as potentially significant habitat and movement corridors for fisher (Lipton: 1993). Surveys and studies specific to Sierra Nevada are needed, however.

Marten occur at somewhat higher elevations than fisher. Their elevation range is between 3,400 and 10,400 feet in the northern Sierra Nevada. Habitat characteristics for marten are similar to fisher, but habitat for this species is also found in upper elevation lodgepole pine and subalpine forest (above 7,000 feet). Higher elevation habitat found in the Desolation and Mokelumne Wilderness areas, in addition to habitat identified as potentially significant for fisher, probably supports a substantial marten population. Very few surveys have been conducted, and information is inadequate to predict population size or status.

Preferred habitat for Sierra Nevada red fox on the Eldorado, is thought to exist within mature red fir and lodgepole pine forest, interspersed with meadows. Down logs and stumps are important for den sites. Population size and status is unknown.

Northwestern Pond Turtle

Forest Management Direction: The Forest LRMP does not provide specific management guidelines for maintaining viable populations of northwestern pond turtles, however general guidelines direct administrative measures be used to protect and improve habitat for sensitive species. Forest Guidelines also provide protection for meadow habitats and riparian zones.

Habitat Use and Status: Six sightings, ranging in elevation from 2240 to 4640 feet, have been recorded on the Eldorado National Forest on the Placerville and Georgetown Ranger Districts. Northwestern pond turtles are habitat generalists occurring in a wide range of both permanent and intermittent aquatic habitats including rivers, streams, lakes, ponds, vernal pools, and other wetlands. Elevation range is from sea level to 6700 feet. They become scarce above 4500 feet in the northern Sierra Nevada. Critical habitat requirements include: 1) basking sites near or over water, 2) areas of relatively slow moving water, 3) undisturbed aquatic habitats for hatchlings and juveniles that provide adequate hiding cover, and 4) undisturbed upland nest sites, which can occur up to 1/4 mile from water. Nest sites generally are characterized as open areas dominated by grasses and herbaceous annuals, typically with a southern exposure. Egg laying occurs between May and August, with incubation lasting 73 to 80 days.

The northwestern pond turtle typically selects upslope habitats during for overwintering. These sites may range up to 1/4 mile from aquatic areas. Sites

to overwinter in are selected in late fall, with turtles returning to aquatic habitats in the spring.

Region 5 Candidate Sensitive Species

The Regional Forester's Sensitive Species List is intended to identify species for which population viability is a concern due to downward trends in population or habitat. It is intended to be dynamic, and periodic revisions are expected to occur as needed. With few exceptions this has not happened in Region 5 since 1984. The following are federal candidate animals for designation as Region 5 Sensitive. The Forest LRMP does not provide specific management guidelines for maintaining viable populations of these candidate species, however general guidelines direct administrative measures be used to protect and improve habitat for sensitive species. Forest Guidelines also provide protection for meadow habitats and riparian zones, habitats which are critical for several sensitive species.

California Horned Lark

Habitat Use and Status: No surveys have been conducted for this species on the Eldorado National Forest. Suitable habitat is open areas, usually where trees and large shrubs are absent, mainly grasslands, oak woodlands, and alpine meadows. California horned larks typically leave the mountains in winter, but small flocks may remain to winter on windswept, snow-free areas at high elevations. The species breeds from March to late July. Nests are constructed on dry ground among sparse vegetation. Their diet consists of insects, some seeds, and other vegetation.

Loggerhead Shrike

Habitat Use and Status: No surveys for this species have been conducted on the Eldorado National Forest. Loggerhead shrikes are residents and winter visitor of lowlands and foothills throughout California. They prefer open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. They sometimes use the edges of denser habitats. They typically utilize stands of oak savannah, gray pine/oak woodland, riparian deciduous, and chaparral with low percent canopy closure (less than 40%). They feed mostly on large insects, but will also take small birds, mammals, amphibians, fish, carrion, and various other invertebrates.

California Wolverine

Habitat Use and Status: Distribution and abundance of this species on the Eldorado National Forest is mostly unknown. Sightings have been recorded in the following counties: two in Eldorado, one in Amador, and one in Alpine (Rarefind Database). Preferred habitat for California wolverine is thought to exist within large tree stages with moderate to dense canopy cover of mixed conifer, jeffrey pine lodgepole, and red fir forests. California wolverines prefer areas with low human disturbance. They use caves, cliffs, hollow logs, rock outcrops, and burrows for cover and denning. They feed primarily on small mammals and carrion.

Sierra Nevada Snowshoe Hare
Habitat Use and Status: No surveys for this species have been conducted on the Eldorado National Forest. Population numbers are unknown, but may be quite low. Upper elevation, early successional stages of mixed conifer, jeffrey pine, red fir, lodgepole pine, and riparian deciduous forests are likely habitats, primarily along edges, and especially near meadows. Sierra Nevada snowshoe hares are rarely found in open spaces or mature closed-canopy forests. They eat grasses, forbs, and shrubs along meadow edges and other forest openings.

Greater Western Mastiff-Bat:
Habitat Use and Status: No surveys have been conducted for this species on the Eldorado National Forest. Greater western mastiff-bats live in a variety of communities including oak woodland, mixed conifer, riparian deciduous, and chaparral. In the Sierras, they have been recently associated with large river drainages which provide rock cliffs for roosting, river/riparian areas for foraging and water, and offer areas free from disturbance. Greater western mastiff-bats tend to forage in more open areas such as grassland, meadows, clearings, or over water. Greater western mastiff-bats prefer to tightly crowd into deep, narrow crevices. They can roost alone, or in groups of two or more, but usually they roost in colonies of up to 100 individuals. Cliffs and rock crevices are optimum roost sites, but crevices in mines, building, trees, or caves may be used. They regularly use roosts which allow the bats a vertical drop of 10 or more feet. The bats use separate sites for night, day, hibernation, and maternity roosts. Habitat must include appropriate roosting, maternity, and hibernations sites free from human disturbance. Greater western mastiff-bats feed on a variety of insects, primarily moths.

Pacific Western Big-Eared Bat (also called Townsend's Big-Eared Bat):
Habitat Use and Status: No surveys have been conducted for this species on the Eldorado National Forest. Pacific western big-eared bats live and forage in a variety of communities including oak woodland, mixed conifer, and riparian deciduous. Suitable roosting habitat appears to be the limiting factor for this species. Pacific western big-eared bats roost in cavities and prefer to hang from open ceilings. They do not use cracks or crevices. Open cavities such as caves, mines, buildings, tunnels, and large cavities in trees or snags are suitable roosting sites. They can roost alone, or in groups of two or more, but they usually roost in colonies of up to 100 individuals, occasionally more. Separate sites for night, day, hibernation, and maternity roosts are needed. Habitat must include appropriate roosting, maternity, and hibernations sites free from human disturbance. Pacific western big-eared bats are extremely sensitive to disturbance of roosting sites; a single human disturbance may result in abandonment of the roost. Pacific western big-eared bats feed primarily on moths.

Spotted Bat
Habitat Use and Status: Distribution and abundance of this species is unknown. No surveys for spotted bats have been conducted on the Eldorado National Forest. The spotted bat is considered to be one of North America's rarest mammals. It has been found in only two locations in California and is thought to occur in foothill, mountain, and desert regions. In the Sierras,

optimum habitat is thought to be riparian deciduous forest, oak woodland, and mixed conifer, in association with meadows. Spotted bats forage over wet meadows with still water. Roost site characteristics and site localities are poorly known, but thought to be crevices and cracks in cliff faces. Cliffs provide optimum roosting habitat, but crevices in secluded caves or snags may also be used. Unlike many other bats which roost in large numbers, spotted bats appear to be solitary. Moths, captured in flight, are the principal food source.

Foothill Yellow-Legged Frog

Habitat Use and Status: No surveys specific to foothill yellow-legged frogs have been conducted on the Eldorado National Forest, but amphibian surveys were conducted by a contractor during 1992 and 1993. Amphibian occurrence on the Eldorado National Forest has also been documented during fish stream surveys beginning in 1992 and incidental to various other field activities. Foothill yellow-legged frogs have been identified only in four watersheds on the forest; Middle Creek, Bark Shanty Canyon Creek, and Lower and Upper Camp Creek. The foothill yellow-legged frogs range extends from sea level to 6,000 feet elevation. This frog is found in or near rocky streams in a variety of habitats, including mountain meadow, riparian deciduous, hardwood/conifer, mixed conifer, oak woodland, and chaparral. They are rarely found far from permanent water. Breeding and egg-laying usually occur after spring flooding, from mid-March to May, depending upon water conditions. Adults eat both aquatic and terrestrial invertebrates.

Mountain Yellow-Legged Frog

Habitat Use and Status: No surveys specific to mountain yellow-legged frogs have been conducted on the Eldorado National Forest, but amphibian surveys were conducted by a contractor in 1992 and 1993. Amphibian occurrence on the Eldorado National Forest has also been documented during fish stream surveys beginning in 1992 and incidental to various other field activities. Mountain yellow-legged frogs have been identified from a variety of streams, lakes, and ponds, all above 6000 feet elevation. Most of the sightings have occurred in Desolation and Mokelumne Wilderness Areas. However, mountain yellow-legged frogs have also been identified in eight watersheds outside the wilderness including Blue Lakes, Bear River Reservoir, Cole Creek, Anderson Canyon Creek, Bark Shanty Canyon Creek, Forni Creek, Bassi Creek, and Barrett Creek. In the Sierra Nevada, mountain yellow-legged frogs range from 4,500 to 12,000 feet elevation. This frog inhabits streams, lakes, and ponds in montane riparian, subalpine conifer, lodgepole pine, and wet meadow habitat types. They prefer gentle slopes and moderate rocky banks with grasses, sedges, or clumps of willows growing between the rocks. They avoid long, sandy beaches or steep banks with large rocks. Breeding and egg-laying occurs between late April and August, depending upon ice melt. Adults eat both terrestrial and aquatic invertebrates, and favor terrestrial insects.

Mount Lyell Salamander

Habitat Use and Status: Little information regarding distribution and abundance of this species is known. A population was reported in Desolation Wilderness at Smith Lake in 1980, but not confirmed. No surveys specific to

Mount Lyell salamanders have been conducted on the Eldorado National Forest. All amphibian surveys to date have been conducted in association with aquatic habitats. These salamanders inhabit moist terrestrial habitats outside the scope of current survey techniques. The Mount Lyell salamander has small populations scattered in isolated patches where suitable habitat occurs. They are almost always associated with massive rock areas in mixed conifer, red fir, lodgepole, and subalpine habitat types. They require wet areas in the high Sierra--edges of snowbanks, seeps, wet meadows--between 4,000 to 11,600 feet in elevation. Individuals retreat to moist areas within deep rock fissures as snow retreats and the substratum dries. This salamander eats a variety of insects and spiders.

Yosemite Toad

Habitat Use and Status: No surveys specific to this species have been conducted on the Eldorado National Forest, but amphibian surveys were conducted by a contractor in 1992 and 1993. Amphibian occurrence on the Eldorado National Forest has also been documented during fish stream surveys beginning in 1992 and incidental to various other field activities. No Yosemite toads have been reported from the Eldorado National Forest as a result of these surveys. However, a hybrid Yosemite/western toad population was identified in the Blue Lakes area between 7900 and 8200 feet elevation during the 1992 and 1993 contract surveys. There are no historic records of this species on the Forest. In the central Sierras, the Yosemite toad is restricted to wet meadows at high elevations (6,400 to 11,300 feet). They prefer mountain meadow, lodgepole pine, and alpine meadow types. They are also found in all successional stages of mixed-conifer, Jeffrey pine, and red fir types. This toad eats a variety of invertebrates such as ants, beetles, mosquitoes, and spiders.

## II. DESCRIPTION OF PROPOSED PROJECT

Big Meadows Campground is located near Hell Hole Reservoir on the Georgetown Ranger District of the Eldorado National Forest. The legal location is T. 14 N., R. 14 E., Section 8, on the Bunker Hill Quadrangle. This BE will address all improvement projects and routine maintenance projects which occur within the vicinity of Big Meadows Campground. These projects may include, but are not limited to the following:

a) cleaning fire places including replacement of stoves;
b) cleaning restrooms, digging septic tank leach lines, and pumping vaults;
c) replacing barriers, removing old barriers, and replacing barriers with boulders;
d) Removing flammable material from campsites, toilets, and other structures;
e) repairing, replacing, or installing water lines;
f) working on water source/spring;
g) removing hazard trees;
h) maintaining roads;
i) replacing or repairing restrooms; and
j) cleaning and replacing sumps at water faucets.

In addition, this BE addresses a campground improvement project which would improve 14 camping spurs, replace access barriers, and install vehicle pullouts within Big Meadows Campground as follows:

a) eight spurs will be widened and extended in length;
b) three spurs will be widened at the road;
c) three spurs will be re-aligned to provide greater vehicle access,
d) four spurs will be removed from service;
e) two existing access barriers constructed of wood posts will be removed and replaced with boulders; and
f) five pullouts will be constructed along the campground road.

The above work may involve the use of chain saws, septic pumping trucks, general maintenance vehicles, and heavy equipment such as 10-wheel dump-trucks, backhoes, loaders, graders, and chip sealing equipment.

## III. EXISTING ENVIRONMENT

The analysis area for this project was developed by addressing all potential disturbances within a 1/2 mile radius of Big Meadows Campground. The analysis area legal description is T. 14 N., R. 14 E., Sections 8, 9, 16 and 17. Section 9 to the east of the project site, and Section 17 to the south are private property. Sections 8 and 16 are Forest System land.

Bald Eagle: Individual bald eagles have been observed wintering at Hell Hole Reservoir, 3/4 mile from Big Meadows Campground, during winter surveys (1988 and 1994). Bald eagles are commonly observed on the District around reservoirs and large rivers. There is no known nesting habitat on the District. The closest nesting habitat is Union Valley Reservoir (Pacific Ranger District). The analysis area does not include any identified bald eagle nesting or wintering habitat. There has been no recorded sightings of bald eagles within the analysis area.

Peregrine Falcon: General Forest surveys have recorded peregrine falcons on the District. Breeding status surveys for peregrine falcons conducted between 1989 and 1994 have not recorded nesting peregrine falcons on the Forest. The nearest potential nesting habitat for peregrine falcon is located within cliff habitat in the southern half of Section 8, more than 1/4 mile from Big Meadows Campground. This habitat is thought to be of low quality for peregrine falcon nesting (Aulman: pers. comm.). No detections have been recorded in the analysis area.

Valley Elderberry Longhorn Beetle: Suitable habitat for valley elderberry longhorn beetles does not occur within the analysis area. Big Meadows Campground is over 5,000 feet elevation. The upper elevation range for this species is 2,500 feet.

California Red-legged Frog: No surveys have been conducted and no sightings of this species have been recorded within the analysis area. Potential habitat

for red-legged frogs occurs within the analysis area on South Fork Long Canyon and its tributaries. The habitat is low quality because the stream is intermittent. No historic habitat exists. No habitat is present within Big Meadows Campground. According to Karen Miller, Wildlife Biologist with the USDI Fish and Wildlife Service (pers. comm.), the California red-legged frog is believed to have been extripated from the Sierran foothills.

California Spotted Owl: California spotted owl data is based on surveys conducted within the analysis area since 1978. Surveys have been conducted since 1990 by Humboldt State University crews, meeting or exceeding Region 5 spotted owl protocol. There are several reported spotted owl detections within the analysis area (data on file, Georgetown District Office) including the following:

Sec. 8: PAC PC007 is located within Section 8. Numerous sightings of male and female owls have been recorded in 1990 and 1991 at least xxxxxxxx xxxxxxxxx of the project site. In 1992 two juveniles and an adult pair were recorded within xxxxxxxx xxxxx of Big Meadows Campground xx xxxxxxxxxxxxxxxxxxxxxx. One nest site was recorded in 1993 within xxx xxxxxxxxxx of the campground xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx. Two juvenile birds were recorded at the nest.

Sec. 9: (Private property) In addition to the sightings described above, numerous other sightings were recorded in 1993 xxxxxxxxxxxxxxxxxxx xxxx.

Sec. 16: No sightings of spotted owls have been recorded.

Sec. 17: (Private property) One pair of adult owls was recorded xxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxxx in 1993. The sightings were within xxx xxxx of Big Meadows Campground.

The project site and analysis area are located within PAC PC007. This PAC is approximately 400 acres in size, encompassing the southeast 1/2 of Section 8. Past logging activity, poor site production, and checkerboard ownership limits the availability of suitable habitat. Suitable habitat is primarily found xxxxxxxxxxxxxxxxxxxxxxxxxxx, xxxxxxxxxxxxxx, xxxxxxxxxxxxxxxxxxxxx xxxxxxxxxxxxxxxxxxxxxxxxx. Big Meadows Campground offers suitable foraging habitat. Spotted owls may occasionally forage within and around the campground, however, no sightings have been reported in Big Meadows Campground.

Northern Goshawk: One goshawk sighting was recorded in Section 16. The sighting was xxxxxxxxxxxxxxxxxxxxxx of Big Meadows Campground. No other sightings are known. No surveys have been conducted.

Although no habitat typing specific to goshawks has been conducted, habitat requirements overlap with those of California spotted owl. In the analysis area, suitable habitat for goshawks exists within PAC PC007, and scatted throughout Sections 9, 16, and 17. Goshawks may occasionally forage within and around Big Meadows Campground, however, due to goshawks low tolerance for disturbance, it is anticipated this use is rare.

Great Gray Owl: Surveys have not been conducted for great gray owl. There is one meadow within the analysis area, however it is smaller than the 25 acres recommended to maintain viable great gray owl nesting sites (Beck: pers. comm.; field survey and review). No sightings of great gray owls have been recorded in the analysis area.

Willow Flycatcher: Surveys for willow flycatcher have not been conducted. There are no recorded sighting of this species within the analysis area or on the District. General Forest review indicates no optimal habitat for willow flycatchers exists on the District. Potential habitat for this species could possibly occur within the analysis area along South Fork Long Canyon. The stream is within 1/4 mile from Big Meadows Campground.

Pacific Fisher, American Marten, and Sierra Nevada Red Fox: Specific surveys have not been conducted for Pacific fisher, American marten, or Sierra Nevada red fox within the analysis area. There are no recorded sighting of these species within the analysis area.

Analysis based on the reports Evaluation of Habitat Requirements for Fisher and Marten on the Eldorado National Forest (Lipton: 1993) and Biological Evaluation of the Habitat Requirements for Fisher on the Eldorado National Forest in Relation to Twenty-Four Sold Sales (Bombay: 1994) determined a Fisher Movement Corridor exists within the analysis area curving around Big Meadows Campground from northeast to southeast in direction. The Fisher Movement Corridor is within 1/4 mile of the campground. No Fisher Use Areas occur within the analysis area; the closest (Fisher Use Area I) is located south of Hell Hole Reservoir on the Pacific District.

Potentially suitable habitat occurs within the analysis area and overlaps that of California spotted owl. The habitat is low quality, fragmented, not contributing to any large blocks of late seral habitat, and not identified as critical to Pacific fisher, American marten, or Sierra Nevada red fox. Big Meadows Campground is not considered suitable habitat.

Northwestern Pond Turtle: No surveys have been conducted and no sightings have been reported for this species within the analysis area. Potential habitat for northwestern pond turtles may occur within the analysis area on South Fork Long Canyon and tributaries. The habitat is thought to be low suitability for breeding northwestern pond turtles because the stream is intermittent. The project area may provide suitable habitat for overwintering turtles.

California Horned Lark: Potential habitat for this species may occur within openings and meadow habitat in the analysis area. Surveys for California horned lark have not been conducted. There are no recorded sighting of this species within the analysis area. The meadow is located within 1/4 mile of Big Meadows Campground.

Loggerhead Shrike: No surveys have been conducted and no sightings have been recorded in the analysis area for this species. Suitable habitat of lower

elevation oak savanna, gray pine/oak woodland, open riparian, and chaparral with low percent canopy closure (less than 40%) does not exist within the analysis area.

California Wolverine: Specific surveys have not been conducted for this species within the analysis area. There are no recorded sighting of wolverines on the District. Suitable habitat is present within the analysis area, similar to Pacific fisher, American marten, and Sierra Nevada red fox. The habitat is low quality, fragmented, and not contributing to any large blocks of late seral habitat. Big Meadows Campground is not considered suitable habitat.

Sierra Nevada Snowshoe Hare: There have been no reported sightings of Sierra Nevada snowshoe hare in the project or analysis areas. Potential habitat occurs within the analysis area along edges of forest openings and meadows. Surveys for Sierra Nevada snowshoe hare have not been conducted. The closest meadow is 1/4 mile from Big Meadows Campground.

Greater Western Mastiff Bat, Pacific Western Big-eared Bat, and Spotted Bat: Specific surveys have not been conducted for greater western mastiff-bat, Pacific western big-eared bat, or spotted bat. There have been no reported sightings of these bats in the analysis area. Potential roosting and foraging habitat exists within the analysis and project areas. Roosting habitat in the form of caves, cavities, rock cliffs, snags, or large trees may exist within the analysis areas. No caves or rock cliffs occur in the Big Meadows Campground area. Pacific western big-eared bats forage in foliated areas; riparian, mixed conifer, and deciduous hardwood appear to be preferred areas (Pierson: pers. comm.). Greater western mastiff-bats are believed to forage over open grass or shrub areas with little moisture, and spotted bats forage over wet meadows with still water (Pierson: pers. comm.). Foraging habitat occurs within the analysis and project areas.

Foothill Yellow-legged Frog, and Mountain Yellow-legged Frog: No surveys have been conducted for these species in the analysis area. No confirmed sightings of foothill or mountain yellow-legged frogs are known on the Georgetown Ranger District. The analysis area lies in the elevation range for both species. Potential habitat for these species may occur within the analysis area on South Fork Long Canyon and tributaries. The habitat is thought to be low suitability because the stream is intermittent.

Mount Lyell Salamander: No surveys have been conducted in the analysis area for this species. Habitat for Mount Lyell salamander may exist at large rock outcrops associated with moisture. Large lava outcrops exist approximately 1/4 mile from Big Meadows Campground. Suitability of these rock outcrops for Mount Lyell salamanders is unknown.

Yosemite Toad: Specific surveys for Yosemite toad have not been conducted. Big Meadows Campground is below 5,400 feet in elevation. The lower elevation

range for this toad is 6,400 feet. Suitable habitat does not exist within the analysis area.

## IV. EFFECT OF THE PROPOSED ACTION

Potential effects upon threatened, endangered, or sensitive wildlife species fall into three categories: direct effects from activity related disturbance, indirect effects from reduction of habitat and prey, and cumulative effects.

### A. Direct and Indirect Effects

Bald Eagle: Suitable habitat does not exists within the analysis or project areas. No direct or indirect effects to bald eagles are anticipated.

Peregrine Falcon: Suitable cliff habitat for peregrine falcons does exist over 1/4 mile away from Big Meadows Campground. No nesting has been documented and no peregrine falcons have been observed in this habitat. The habitat is thought to be of low quality for peregrine falcon nesting (Aulman: pers. comm.). Direct or indirect effects to peregrine falcons are not expected.

Valley Elderberry Longhorn Beetle: No suitable habitat exists within the analysis area. Direct or indirect effects to this insect are not anticipated.

California Red-Legged Frog: Potential habitat for this species may occur within the analysis area. South Fork Long Canyon is within 1/4 mile of Big Meadows Campground. No projects are planned within the riparian/stream area. No direct or indirect effects to this species are expected.

California Spotted Owl: Big Meadows Campground lies within PAC PC007. California Spotted Owl Interim Guidelines (USDA: 1993) adopt CASPO recommendations (Verner et al: 1992). These guidelines establish PAC's around known owl activity centers and are specifically aimed at providing management options for spotted owls for an interim period. All stand altering activities should be avoided within PAC's including live tree, snag, or cull removal. The Interim Guidelines address timber related activities, but do not apply to non-timber activities. Non-timber activities include management of administrative sites, including campgrounds, and projects designed to mitigate human health and safety concerns, such as the removal of eminent hazard snags (Regional Forester letter: September 1, 1994). Project activities outlined in this BE fall into the non-timber category.

Big Meadows Campground projects do not conform with California Spotted Owl Interim Guidelines. Aspects of the campground projects which would not meet Interim Guidelines follow:

a) Removal of hazard trees to protect human safety. Green trees and snags may be removed as necessary. Once fallen, these trees (dependant upon size) would most likely be removed from Big Meadows Campground or used as road barriers. If left in the campground, smaller down trees would most likely be taken by campers for wood.

b) Removal of saplings, small green trees, and/or snags in order to complete the road and spur modifications in Big Meadows Campground or other improvement or maintenance projects. Trees would be removed from the campground or used as road barriers.

The impacts to spotted owls from not following Interim Guidelines would be alteration of foraging habitat. Any alteration of foraging habitat is expected to be minor; project activities would remove only a small percentage of saplings, small trees, or snags which are not substantially contributing to the suitability of habitat. The impacts to spotted owls would be minor because the change in habitat would be small, the prey base should not be impacted, and the Big Meadows Campground area is already highly disturbed and altered, therefore, not optimum foraging habitat. No impacts to prey species are anticipated. California spotted owls in PAC PC007 are not likely to be substantially directly or indirectly impacted by loss of foraging habitat from Big Meadows Campground projects.

California spotted owls in PAC PC007 could be disturbed by project generated noise if within 1/4 mile of an active nest site during the breeding season (March 1 to August 15). Projects that use heavy equipment, chain saws, road sealing machinery, etc. may result in disturbance from noise. The closest known spotted owl nest is xxxxxxxxxxxxxxxxxxxxxxxxxxx. Adults with juveniles have been detected xxxxxxxxxxxxxx of Big Meadows Campground. Project generated noise could distress breeding spotted owls resulting in nest abandonment. If noise generating projects are conducted during the breeding season, the spotted owl nesting location for PAC PC007 would need to be located, and if within 1/4 mile of project activities, a Limited Operating Period (LOP) imposed. If noise generating projects are not conducted during the breeding season, or the nest location is greater than 1/4 mile from project activities, no LOP would be necessary and no impacts from disturbance would be expected.

Northern Goshawk: Potential habitat for this species may occur within the analysis and project areas. Project activities may remove components of foraging habitat within or adjacent to Big Meadows Campground. Saplings, small trees, or snags may be removed in small numbers. Foraging habitat available to goshawks at Big Meadows Campground is of low suitability due to open canopy, campground activities, and goshawks low tolerance for disturbance. Impacts from decreasing the suitability of foraging habitat would not substantially impact goshawks. No impacts to prey species are anticipated. Direct or indirect impacts from Big Meadows project activities are expected to be very low.

As described for spotted owls, goshawks could be disturbed by project generated noise if within 1/4 mile of an active nest site during the breeding season (March 1 to August 15). A single goshawk was sighted xxxxxxxxxxxx from Big Meadows Campground. Because the area has not been surveyed to protocol it is

unknown if nesting goshawks are present but not detected. Project generated noise could distress breeding goshawks resulting in nest abandonment. If noise generating projects are conducted during the breeding season, goshawk surveys would need to be conducted, and if detected, nesting goshawk pairs protected by imposing a LOP. If noise generating projects are not conducted during the breeding season, no LOP would be necessary and no impacts from disturbance would be expected.

Great Gray Owl: No suitable habitat exists within the analysis area. No direct or indirect impacts are anticipated.

Willow Flycatcher: Potential habitat for willow flycatcher along South Fork Long Canyon is not typical of areas willow flycatchers have been found in the Sierra Nevada. No projects would occur in the meadow. Projects within riparian areas are not expected. Direct or indirect impacts are not anticipated.

Pacific Fisher, American Marten, and Sierra Nevada Red Fox: Suitable habitat for these species occurs within the analysis area. The habitat is low quality, fragmented, not contributing to any large blocks of late seral habitat, and not identified as critical to these species. Big Meadows Campground is not considered suitable habitat. Project activities would not substantially decrease the current suitability of habitat adjacent to the campground; only occasional saplings, small trees, and snags would be removed during project activities. Pacific fisher, American marten, and Sierra Nevada red fox are not expected to be impacted by Big Meadows Campground projects.

There is a Fisher Movement Corridor within the analysis area approximately 1/4 mile from Big Meadows Campground. Saplings, small trees, or snags may be removed from this corridor through project activities. Removal of a small number of these trees and snags would not alter the suitability of the corridor. The short duration of project activities would not substantially hinder wildlife movement through the area. No impacts are anticipated to wildlife using the Fisher Movement Corridor.

Big Meadows Campground and adjacent areas do not provide optimum denning sites for these species due to low quality of habitat, fragmentation, and disturbance. No direct impacts from disturbance are anticipated to breeding Pacific fisher, American marten, or Sierra Nevada red fox.

Northwestern Pond Turtle: Potential habitat for northwestern pond turtles occurs on South Fork Long Canyon, 1/4 mile from Big Meadows Campground. Breeding turtles may travel away from water, up to 1/4 mile, to nest. Due to the intermittent nature of South Fork Long Canyon, it is improbable that western pond turtles are breeding in the campground vicinity. Impacts to breeding northwestern pond turtles are not expected.

There is potential for mortality to overwintering turtles from project activities in Big Meadows Campground vicinity. The distance traveled to overwintering sites is not documented, so impacts from this disturbance are

unknown. No projects are planned in riparian areas and the timing of projects would be outside of the winter/snow period, therefore, impacts to overwintwering northwestern pond turtles should be low.

California Horned Lark: Suitable habitat for California horned lark may exist in openings, clearings, and the meadow adjacent to Big Meadows Campground. The meadow is within 1/4 mile of the project site. No projects are proposed for the meadow area, and habitat in openings or clearings would not be lost. No direct or indirect impacts are expected.

Loggerhead Shrike: No suitable habitat for loggerhead shrike exists within the analysis area. Direct and indirect impacts are not anticipated.

California Wolverine: Suitable habitat for this species may occur within the analysis area. The habitat is low quality, fragmented, and not contributing to any large blocks of late seral habitat. Big Meadows Campground is not considered suitable habitat. Project activities would not substantially decrease the current suitability of habitat adjacent to Big Meadows Campground; only occasional saplings, small trees, and snags would be removed during project activities. No direct or indirect impacts to California wolverine are expected.

Big Meadows Campground and adjacent areas do not provide optimum denning sites for California wolverines due to low quality of habitat, fragmentation, and heavily disturbed area. No direct impacts from disturbance are anticipated to breeding California wolverine.

Sierra Nevada Snowshoe Hare: Potential habitat for Sierra Nevada snowshoe hare exists along the edges of open areas and meadows within the analysis area. No project activities are planned in suitable Sierra Nevada snowshoe hare habitat. Habitat would not be lost, therefore, no direct or indirect impacts to Sierra Nevada snowshoe hare are expected.

Pacific Western Big-Eared Bat: Potential roosting habitat does not occur within the project area. Foraging habitat is available in Big Meadows Campground and adjacent areas. Project activities would not alter the suitability of foraging habitat. No direct or indirect impacts to Pacific western big-eared bats are anticipated.

Greater Western Mastiff-Bat and Spotted Bat: Suitable habitat for these species may occur within the analysis area where suitable cliff sites area found. No cliff roosting habitat is present in Big Meadows Campground, but the campground may provide suitable roosts in large tree or snag crevices. Direct or indirect impacts could occur from loss of trees or snags. This impact is expected to be low due to both bat's preference for cliff roosts (Pierson: pers. comm.). No suitable foraging habitat is available in the Big Meadows Campground area, therefore, no impacts to foraging habitat are expected.

Foothill Yellow-Legged Frog and Mountain Yellow-Legged Frog: Potential habitat for these species may occur within the analysis area. South Fork Long Canyon is within 1/4 mile of Big Meadows Campground. No projects are planned within the riparian/stream area. No direct or indirect effects to this species are anticipated.

Mount Lyell Salamander: Suitable habitat may be present in the analysis area, however, no suitable habitat is located within the project site. No direct or indirect impacts are expected.

Yosemite Toad: No suitable habitat for Yosemite toads occurs within the analysis area. No direct or indirect impacts are expected.

B. Cumulative Effects

Previous activities that have occurred in Big Meadows Campground vicinity include Big Meadows water line, general campground maintenance, Boundary green timber sale, French House green timber sale, and numerous salvage sales in and adjacent to Big Meadows Campground. Big Meadows Campground receives recreational camping use during the summer months. Moderate to high camping use occurs on the weekends due to the proximity to Hell Hole reservoir.

Future recreation projects in the Big Meadows vicinity include general campground maintenance and a water line from Big Meadows Campground to Hell Hole Fire Station. Planned timber activities include silvicultural prescriptions (site preparation, tree planting, release, etc.) within past harvest units. No new green or salvage timber sales are planned. Recreation use is not expected to increase as a result of project activities.

All future projects will be prepared in compliance with Forest LRMP direction, and all projects which potentially affect threatened, endangered, or sensitive species will require a BE.

Cumulative effects to threatened, endangered, and sensitive species are discussed below:

Species which do not have suitable habitat within the analysis area including bald eagle, valley elderberry longhorn beetle, great gray owl, loggerhead shrike, and Yosemite toad: No cumulative effects are anticipated.

Late Seral Habitat dependant species such as California spotted owl, northern goshawk, Pacific fisher, American marten, Sierra Nevada red fox, and California wolverine: Negative cumulative impacts are not anticipated for these species since no planned projects would substantially alter suitable habitat. California spotted owls in PAC PC007 would benefit by land acquisition in Section 9. Silviculture treatment of clear cut units within the PAC should result in preferred habitat conditions for species dependant on late seral stands in a shorter time than would normally occur.

Species dependant upon aquatic, riparian, or meadow habitats such as California red-legged frog, willow flycatcher, northwestern pond turtle, Sierra Nevada snowshoe hare, foothill yellow-legged frog, and mountain yellow-legged frog: These species could be negatively impacted by future projects if they occur within riparian or meadow areas, and result in downstream sedimentation or water contamination. Utilizing Best Management Practices and designating streamside management zones should reduce any cumulative impacts. Planned projects do not occur within riparian or meadow areas, therefore, no cumulative effects are anticipated.

Other species: cumulative impacts are not anticipated for peregrine falcon or Mount Lyell salamanders because they rely on special habitat components which would receive protection from habitat alteration, habitat loss, and/or species disturbance. California horned larks should not be negatively impacted by future projects since habitat components would not be lost or altered. Pacific western big-eared bats should not be cumulatively impacted because mines or caves should not be impacted by future projects. Greater western mastiff-bats and spotted bats may have negative cumulative impacts due to removal of trees or snags which may be used as crevice roosts. Few trees or snags would be removed, therefore, this cumulative impact should be very low.

C. Compliance with Management Direction

The proposed Big Meadows Campground projects comply with direction in the Forest LRMP to utilize administrative measures to protect and improve habitat for threatened, endangered, and sensitive species. Big Meadows Campground projects do not conform with California Spotted Owl Interim Guidelines since green trees and/or snags would be removed through project activities. Big Meadows Campground projects can be described as other than timber or fuels management projects, therefore, they can be implemented without oversight committee review (Regional Forester letter: September 1, 1994).

## V. DETERMINATION OF EFFECTS ON SPECIES VIABILITY

Federally Listed Threatened or Endangered Species: Bald Eagle, Peregrine Falcon, Valley Elderberry Longhorn Beetle, and California Red-Legged Frog.

There are no impacts anticipated from the proposed activities. Big Meadows Campground project activities would have NO EFFECT on these species. Formal Consultation with the U.S. Fish and Wildlife service pursuant to section 7 of the Endangered Species Act is not required.

Region 5 Designated Sensitive Species:

California Spotted Owl, Northern Goshawk, and Northwestern Pond Turtle.

The Big Meadows Campground projects MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR LOSS OF VIABILITY. Current

or future management options for California spotted owls would not be precluded.

Great Gray Owl, Willow Flycatcher, Pacific Fisher, American Marten, and Sierra Nevada Red Fox.

Big Meadows Campground projects would have NO IMPACT on these species.

Region 5 Candidate Sensitive Species:

Greater Western Mastiff-Bat and Spotted Bat.

The Big Meadows Campground projects MAY IMPACT INDIVIDUALS BUT IS NOT LIKELY TO CAUSE A TREND TO FEDERAL LISTING OR LOSS OF VIABILITY.

California Horned Lark, Loggerhead Shrike, California Wolverine, Sierra Nevada Snowshoe Hare, Pacific Western Big-Eared Bat, Foothill Yellow-Legged Frog, Mountain Yellow-Legged Frog, Mount Lyell Salamander, and Yosemite Toad.

Big Meadows Campground projects would have NO IMPACT on these species.

## VI. RECOMMENDATIONS

1. If a California spotted owl or northern goshawk nesting location is found within 1/4 mile of any project activity, implement a Limited Operating Period (LOP) between March 1 and August 15. Boundaries of the LOP will be determined by the District Wildlife Biologist.

2. If any future projects occur within riparian or meadow locations of the analysis area, a re-assessment of this BE will be needed prior to project activities in order to determine effects on threatened, endangered, or sensitive species.

3. If during project activities, any of the above listed species are located in the project or analysis area, activities will cease, the Wildlife Biologist will be notified, and a re-assessment of this BE will be conducted.

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