

## APPENDIX F - WILDLIFE

The following is a compilation of species information and habitat descriptions for many of the vertebrate wildlife species found in the Beaver Creek Watershed

### Mammals

**Deer Mouse** (Peromyscus maniculatus). This species is common throughout the Pacific Northwest. Deer mice do not show a preference for particular stand ages (Thomas et al. 1990). They are often one of the most abundant mammals and constitute an important prey base for numerous forest predators. Recent pellet analysis conducted by Pacific Southwest Research Station - Redwood Sciences Lab on northern spotted owl (Strix occidentalis caurina) found that on the Klamath National Forest, Peromyscus sp. constituted 10.4% of the 1984 - 1991 Klamath NF pellet study (Ogan 1992).

**Black Bear** (Ursus americanus). Black bears are very adaptable and inhabit a wide variety of plant communities. They prefer forested and shrubby areas but use meadows, Riparian areas, ridge tops, burned areas, and avalanche chutes. Black bears prefer mesic over dry areas and forest over open areas. They use dense cover for escape, thermal protection, and bedding. Black bears are found throughout the Beaver Creek watershed; using low elevation southerly slopes in the spring and moving to higher elevation northerly and easterly slopes as summer progresses.

Black bears eat a wide variety of foods, relying most heavily on grasses, herbs, fruits and mast. They also feed on carrion and insects and sometimes will kill and eat rodents and fawns. Black bears also eat salmon and raid orchards, gardens, and trash bins of rural homes.

Maintaining well distributed populations of fruit-producing shrubs and mast-producing oaks is important in providing quality black bear habitat. High open road densities have been shown to reduce the quality of black bear habitat.

**Columbian black-tailed deer** (Odocoileus hemionus columbianus). Black-tailed deer are common throughout the Beaver Creek watershed. Depending on the season, they are found in all the vegetation communities. In winter, they inhabit the shrub and hardwood communities below 3,000 ft., and in the summer most move up to meadows, shrub fields, and open forests at higher elevations in the watershed. The Dry Lake and Sterling Mtn. areas are traditional summer ranges.

Black-tailed deer are primarily browsers, feeding on a wide variety of plant species across the watershed. At high population densities, black-tailed deer are capable of altering or damaging plant communities through overbrowsing. Black-tailed deer consume leaves, stems, and shoots of woody plants most often during late summer, fall and winter, while grasses and forbs compose the bulk of the spring and early summer diet.

Although black-tailed deer are often associated with early and mid-seral habitats, later seral conifer forests are important for hiding and thermal cover. Good quality fawning habitat, which consists of dense stands of young conifers or shrubs in proximity to water and succulent vegetation, is important in maintaining a healthy deer herd.

**Mountain lion** (*Felis concolor*). Mountain lions have the widest distribution of any native mammal in the western hemisphere. Mountain lions occupy a wide variety of plant communities, in the Siskiyou Mountains, they are primarily found in mixed conifer and brush habitats at mid-elevations. They are rare at higher elevations in pure conifer stands.

Mountain lion habitat is essentially the same as that of their primary prey. Within this habitat, mountain lions tend to use rocky cliffs, ledges, vegetated ridgetops, or other areas that provide undetected surveillance of prey. Riparian areas and ridgetops are often used as travel corridors and hunting routes.

Mountain lions maintain a fairly large home range (196 to 25 square miles). Home range size varies by sex and age of the mountain lion, season, and distribution and density of prey. Male mountain lion home ranges are typically larger than those of females and overlap a number of female home ranges.

Mountain lions feed primarily on large ungulate species (deer and elk). Smaller mammals are also eaten depending on local abundance. The composition of mountain lion diets often shifts seasonally, reflecting the abundance and availability of the various prey species.

Areas disturbed by human activities or by permanent human presence are less used by mountain lions than undisturbed areas. Mountain lions tend to avoid roaded areas, especially areas with hard-surfaced roads and maintained dirt roads (VanDyke 1986). The high open road density in the Beaver Creek watershed, could be a concern for good mountain lion habitat.

**Dusky-footed Woodrat** (*Neotoma fuscipes*). This species is limited in distribution to parts of western Oregon and most of California. Woodrats are associated with vegetative seral stages that have abundant understory vegetation course woody debris such as stand conditions found in older forest seral stages (Lujan et al. 1992). This species serves as an important prey species for forest predators. Owl pellet analysis conducted on the Klamath from 1984 through 1991 determined prey to be constituted of 37.5% Dusky-footed Woodrat. The Beaver Creek Watershed Provides abundant habitat for this species.

**Roosevelt Elk** (*Cervis canadensis roosevelti*). Roosevelt elk were nearly exterminated from the Klamath Mountains at the early in this century. Recent reintroduction programs have help to re-establish populations which include the Mt. Ashland area. Presently a small herd located in the Hilt Valley, California has been recorded using the upper portions of the Beaver Creek Watershed. Though not entirely and older forest obligate, elk are associated with older forests as this habitat provides high quality hiding and thermal cover as well as some forage. Older forests in the watershed likely have the highest elk habitat value where they occur adjacent to the open wet meadows of the Siskiyou Crest. As elk herd numbers increase, sightings along the Siskiyou Crest are becoming more common. This species is highly sensitive to disturbances of open roads.

**Red Tree Vole** (*Phenacomys* spp.) and **Western Red-backed Vole** (*Clethrionomys californicus*). Both of these species are prey of forest predators throughout the Beaver Watershed. Little is

known on their habitat associations. Generally, there is a trend of high species abundance with increasing age of stand. They have limited dispersal capabilities and connectivity of older forests may be important for long-term viability of the species (Thomas et al. 1993).

**Pacific Fisher** (Martes pennanti). The fisher is a forest mustelid that is directly associated with older forests (Ruggiero 1994). The largest trees in a stand are particularly important for denning and resting sites. Forest components such as snags, large live trees and downed logs are all required habitats for fisher. Home ranges of fisher can be as large as six square miles, however 10-25% can be in younger age classes as these areas provide edges for hunting purposes and prey diversity (Heinmeyer 1994). Generally fisher home ranges occur at elevations below 5,000 ft. elevation. Fisher surveys have been made in a few areas within the Beaver Creek Watershed. These surveys have followed standardized techniques of camera and track plate methods. Results of these surveys have documented the presence of two fisher in the west fork of Beaver Creek.

**American Marten** (Martes americana). Marten habitat requirements are similar to that of fisher but generally are at higher elevations (above 5,000 ft. elevation). As in fisher habitat, large number of snags and downed logs are important components for denning and resting areas. Though much potential and currently suitable marten habitat occurs in the upper portions of the watershed, there are no known recent records.

**Northern Flying Squirrel** (Glaucomys sabrinus). Northern flying squirrels have a broad distribution throughout coniferous forests and are found in mid and upper portions of the Beaver watershed. Flying squirrels are arboreal mammals and are not known to occur in recent clearcut areas (Lujan 1992). They nest in cavities of both live and dead trees. This species is known to be an important prey species for forest predators. Northern spotted owl pellet analysis determined an 35% occurrence in the 1984 through 1991 Klamath sample. Older forest areas of the watershed provide current suitable habitat for this species.

**Other Older Forest Related Rodents.** The FEMAT Report has documented five other groups of rodents that are associated with older forest habitat. Though no baseline surveys have been conducted for these species in the watershed, incidental sightings have been recorded. These groups of species generally have a tie to dense canopy closures, well developed understories and snag/downed log components. All are important prey for forest related predators. The five species groups are: **Douglas' Squirrel** (Tamiasciurus douglasii), **Shrew-mole** (Neotichus gibbsii), **Townsend's Chipmunk Complex** (Eutamias spp.), **Pacific/Fog Shrew Complex** (Sorex spp.).

**California Wolverine** (Gulo gulo luteus). Prefers high mountains near timberline. Solitary and wilderness conditions. Has not been recorded in watershed. However, documented sitings exist in Grider Creek to the SW, Alex Hole (further west along the Siskiyou Crest), and a third siting location along the Scott River. It is highly possible that the watershed could be at the outer edge of home ranges for wolverines potentially located to the west.

## Bats

**Big Brown Bat** (*Eptesicus fuscus*). This species is generally common throughout its range. They occur in most vegetation types and are the probably the most familiar North American bat (Maser 1981). They are suspected to occur in the watershed (Cross 1973). This species was collected at a site in Oregon close to the watershed (Cross 1994).

**California Myotis** (*Myotis californicus*). These are the smallest bats in NW California and SW Oregon. They occupy a wide variety of habitat but are best characterized as crevice-dwellers, roosting in mines, caves, hollow trees, and beneath flakes of rock and loose bark (Maser 1981). This species has been collected in the Ashland Research Natural Area, near the Beaver Creek watershed (Cross 1973).

**Fringed Myotis** (*Myotis thysanodes*). This species is rarely seen throughout its range. Very little is known about the habitat in which it forages. Caves, mines, rock crevices, and buildings are favored roosting sites (Maser 1981). This species has been collected in the Ashland Research Natural Area (Cross 1973).

**Hoary Bat** (*Lasiurus cinereus*). This species is the most widely distributed bat in North America. It appears to be associated with forested areas, primarily coniferous or mixed coniferous-deciduous forests (Maser 1981). They typically roost in the foliage of trees about 3 to 5 meters above the ground. Females with young and solitary young, however, will roost higher. They have also been recorded to roost in abandoned nest-cavities in tall, dead trees (Maser 1981). They are thought to occur in the watershed (Cross 1973) and have been collected on the Dead Indian Plateau (Cross 1994), as well as in the Little Applegate River drainage (Clayton 1995).

**Long-eared Myotis** (*Myotis evotis*). They occur throughout the West Coast in appropriate habitat. They primarily inhabit coniferous forest. Often use buildings and loose bark of dead trees as day roosts (Maser 1981). Caves appear to be primarily used as a night roost (Barbour 1969). They are thought to occur in the watershed and have been collected recently just east of the watershed (Cross 1994) and are common in the Little Applegate drainage to the west (Clayton 1995).

**Long-legged Myotis** (*Myotis volans*). They occur throughout the West Coast in appropriate habitat. Very little is known about this species. They are known to inhabit coniferous forests of various ages (Maser 1981). They are thought to occur in the watershed and have been collected at four different sites to the east of the watershed in Oregon (Cross 1994).

**Pallid Bat** (*Antrozous palidus*). This species occurs in the Pacific Northwest and throughout the Southwest of the U.S. It prefers the more Sonoran life zones and thus does not inhabit the coastal ranges of Northern California, Oregon, and Washington. It is known to use caves, mine tunnels, crevices in rocks, buildings, and trees for roosts (Burt 1976). This species has been documented

in SW Oregon using large decadent snags (Clayton 1995). It may potentially occur in the watershed. This species has been collected just east (Cross 1994) and west of the watershed (Clayton 1995).

**Silver-haired Bat** (*Lasionycterus noctivagans*). This species is a familiar species throughout the Coastal Ranges of California, Oregon, and Washington, and the mountainous portion of the Western U.S. They dwell primarily in trees and are associated with wooded areas. They are often associated with mature conifers as well as immature conifer stands. The spaces between pieces of loose bark and the trunks of trees are probably their most typical roosting sites during the day. They are known to roost in hollow trees, woodpecker holes, and birds' nests (Maser 1981). They were the most abundant species in an inventory taken by Cross. They were located at sites just east of the watershed (Cross 1994) and are suspected to occur within the watershed. Over forty have been netted in the Little Applegate drainage (Clayton 1995).

**Yuma Myotis** (*Myotis yumanensis*). This species occurs throughout the western states and is closely associated with water. They can be found along large streams, rivers, ponds, and lakes (Maser 1981). They feed close to the surface of the water and thus need ample room to maneuver. They are suspected to be present in the watershed. The scattered water developments in the watershed could provide foraging habitat. This species was recently inventoried at a site just east of the watershed (Cross 1994) and is common on the Applegate Ranger District to the west (Clayton 1995).

**Townsend's Big-eared Bat** (*Plecotus townsendi*). This species occurs throughout the western U.S. They frequent caves, tunnels, mines, and buildings. When roosting they prefer to hang from open ceilings versus crawling into cracks and crevices (Maser 1994). *Plecotus* is suspected to occur in the Beaver Creek watershed. One bat was inventoried south of Butte Falls (Cross 1994) and over twenty are documented on the Applegate Ranger District (Clayton 1995).

## **Birds**

**Northern Goshawk** (*Accipiter gentilis*). The northern goshawk breeds in older forest habitat with open understory. Often multiple nest trees exist in a stand. These are used in alternating years. Goshawks use interspersed openings and edge for foraging. The watershed has had no formal surveys for this species however many incidental sightings have been documented. Most older and mature forest with open understories have the potential for suitable goshawk habitat.

**Northern Spotted Owl** (*Strix occidentalis caurina*). Federally Threatened. (see detailed Northern Spotted Owl Appendix)

**Great Gray Owl** (*Strix nebulosa*). This species prefers pine and fir forests adjacent to montane meadows (Hayward 1994). They use broken top snags or abandon stick nests of other raptors. Along the Siskiyou Crest there is older forest habitat adjacent to open high elevation meadows. Though no formal surveys have been completed in the Beaver Creek watershed for this species, records do exist. Due to the high component of snags and older forest adjacent to open meadows

along the Siskiyou Crest, the potential for the presence of Great Gray Owl in the Beaver Creek watershed is high.

**Flammulated Owl** (Otus flammeolus). This small forest owl has an uses ponderosa pine and Douglas Fir Forests and associated meadow edge (McCaullum 1994). Flammulated owls feed on numerous insects including moths. Their habitat needs appear to be associated with forests with open understory. Through many decades of wildfire exclusion understory vegetation within the watershed has significantly increased. This fire exclusion may have affected habitat quality for this species. No formal surveys have been conducted for this species.

**Willow Flycatcher** (Empidonax trailii). This migratory species is listed as "endangered" by the State of California and "Sensitive" by the Forest Service. It is a riparian obligate that is associated particularly with dense willow that occurs in both wet meadows and streamside riparian habitat. Little is known on nesting success within the watershed, however, during each season between 1992-1994 singing male willow flycatchers have been documented at the southslope of Mt. Ashland. This could be indicative of a breeding pair. Throughout the entire State of California willow flycatchers populations have been severely dropping. The reasons are suspected to be habitat losses related to agricultural wetlands conversions, impacts of cattle grazing, and brood parasitism by brown-headed cowbirds. The Klamath Mountains may be a key area within the willow flycatcher's range where breeding occurs on a regular basis. Nest searches in the Mt. Ashland vicinity are planned for the 1995 season.

**Songbirds** (migratory and resident assemblages). Between 1992 and 1994 the upper portion of the Beaver Creek Watershed was surveyed for songbirds using the point count methods as outlined by the Pacific Southwest Research Station - Redwood Sciences Lab, Arcata, California. A total of 8 route covering 280 points were surveyed documenting all birds heard or seen within 50 meters. Vegetation parameters were recorded to determine habitat associations.

Though analysis of this survey effort has yet to be completed, an initial grouping of species assemblages has been made. The assemblages have been classed into these four different groups.

\* = Resident or Short-Distance Migrant

M = Neotropical Migrant

**Cavity Nesting Assemblage.** These species require cavities in conifers or hardwood trees for nesting. Snags and hardwoods play an important role in this assemblage's life needs. This species group occurs throughout the watershed. Stand replacing wildfire could severely reduce the availability of habitat for cavity nesting species.

\* Acorn Woodpecker (Melanerpes formicivorous) Northern Pygmy Owl (Glaucidium gnome) Northern Saw-Whet Owl (Aegolius acadicus) \* Pileated Woodpecker (Dryocopus pileatus) \* Red-breasted Sapsucker (Sphyrapicus ruberi) \* Red-breasted Nuthatch (Sitta canadensis)M Vaux's Swift (Chaetura vauxi) M Western Bluebird (Sialia mexicana) \* Western Screech Owl

(Otus kennicotti) \* White-breasted Nuthatch (Sitta carolinesis) White-headed Woodpecker  
(Picoides albolarvatus)

**Forest Related Assemblage.** This species assemblage has a variety of habitat needs. Some individuals may be tied to an adjacent riparian zone. Many of these species are ground nesters while others more commonly nest in the higher canopy layers. Dense understory and downed logs may be significant components for key species of this group. Overall this group has an association with dense coniferous forests. Most of the watershed currently provides habitat for these species. Stand replacing wildfire could significantly alter the habitat conditions

**Hammond's Flycatcher** (Empidonax hammondi). A common summer resident of high elevation coniferous forests. Arrives in late-April to mid-May. Last seen in mid-August. Aerial, insectivorous feeder and it is thought that it is essential in feeding to have the presence of tree layers. Prefers to feed in pine and fir vegetative elements and tree/grass edges. Nesting usually occurs in mixed conifer, red fir, and Jeffery or ponderosa pine habitats. Needs dense canopy closures of 60-100% in medium to large trees (150 feet tall and dbh of 30"+) for cover and reproduction. Usually rests in moist forest habitats close to water. Needs intact stand of 37 acres or larger. Sensitive to wildfires and logging. Fire suppression or activities which result in fuel loading which lead to increased chance of catastrophic wildfire could likewise be detrimental to the habitat of this species.

**Western Wood-pewee** (Contopus sordidulus). Found throughout western North America in summer. Arrives late-April through early-May and leaves its breeding grounds by mid-August and is transient through September. It is an inconspicuous flycatcher eating mainly flies and wasps. It uses tree tops and dead, exposed lower branches as perches from which to hawk its prey in mid-air. Needs natural edges or meadows, streams, lakes, and other moist habitat. Prefers later seral stages for nesting. Activities which reduce natural openings in the forest or eliminates mature stands will have a negative effect on this species. Removal or thinning of small vegetation or underburning may improve nesting habitat for species.

**Riparian Assemblage**. Like the previous group, this assemblage may not be entirely riparian habitat obligates. Many upland and adjacent habitats could contribute to the life history needs. Riparian habitat offers much in the way of microclimatic conditions, dense multi-layered understory, abundant insects, travel corridors, and water. Riparian habitats in the watershed can be classified as two types; 1) wet meadow riparian, which occurs at the headwaters of streams along both aspects of the Siskiyou Crest and 2) stream/riverine riparian type, which occurs along most stream courseways of the watershed. Riparian habitat in Beaver Creek may be the key habitat that links all other habitat areas.



**Early Successional and Shrub Assemblage.** This group of species shows an affinity for early-successional and shrub type vegetation. Generally this habitat has a dense low growing layer with scattered conifers or hardwoods as an overstory. This habitat is susceptible to intense wildfire. As early-successional areas (clearcuts) that occur within the watershed are managed back to mid to late-successional forests there will be a degree of habitat loss for these species. Much of the remaining shrub habitats occur in small inclusions within forested stands and along lower elevations of the watershed. These areas should remain intact through time as they help to provide important biodiversity within the entire watershed.

## Amphibians/Reptiles

### Aquatic

**Black Salamander (Aneides flavipunctatus).** The Black salamander barely enters the Pacific Northwest in the Siskiyou Mountains of southern Oregon (Nussbaum 1983). It is otherwise restricted to northwestern California. It inhabits deciduous and coniferous forests and is chiefly ground-dwelling. It is often found near forest streams and seeps mostly in adjacent rocky substrate. It resides beneath rocks, talus of road cuts, under logs, bark, and within cracks of logs (Stebbins 1985). The species has been confirmed in Beaver Creek Watershed. Aneides have been located in lower Beaver Creek in, as well as riparian associated rock habitats.

**Pacific Chorus Frog (Pseudacris regilla).** Common frog of northwest occurs in a variety of conditions. Requires water or wetlands for breeding and can successfully breed in an ephemeral source. Abundant throughout the Beaver Watershed.

**Western Toad (Bufo boreas).** Abundant throughout western US. Associated with wetlands and riparian habitat and has showed localized signs of extinction recently in areas of its range. This is due to habitat degradation. Common prey to garter snakes. Can be found throughout the Beaver Watershed.

**Foothill Yellow-legged Frog (Rana boylei).** Mainly a frog of rocky or gravelly streams in southwestern Oregon and is seldom seen far from water (Nussbaum 1983). It is likely to occur in watershed (Cross 1973). Riparian Reserves should significantly help to protect integrity of habitat.

**Pacific Giant Salamander** (Dicamptodon tenebrosus). Dicamptodon is the largest salamander in the Pacific Northwest and possibly the world. It is located in the Coastal Ranges of Northern California, Oregon, and Washington with the exception of a population in north and central Idaho. They are restricted to moist coniferous forests where they can be found under logs and bark, under stones in streams, or walking along fully exposed on the forest floor during warm rainy weather (Nussbaum 1983). The species is located in the watershed and throughout the Klamath drainages. Specimens have been personally observed by the author.

**Red-Legged Frog** (Rana aurora). Red-legged frogs are medium-sized inhabitants of moist forests and valley riparian habitats west of the Cascades (Nussbaum 1981) and along the coastal range of California. They have been documented in the upper portion of Beaver Creek.

**Rough-skinned Newt** (Taricha granulosa). Taricha is the most common salamander encountered in the Pacific Northwest (Nussbaum 1983). This species is located in Northwestern California, the western half of Oregon and Washington, and the west coast of British Columbia, and the southwest portion of Alaska. They occur in a variety of habitats, including grasslands, woodlands, and forests (Stebbins 1985). They are extremely aquatic, but when on land, it may be found crawling in the open or hiding under rocks, logs, bark, and in rotten wood (Stebbins 1985). They have a high likelihood of occurrence in the Beaver watershed.

**Tailed Frog** (Ascaphus truei). This is the only species of anurans highly specialized for life in cold, clear, mountain streams (Nussbaum 1983). It frequents these rocky streams in humid deciduous/coniferous forests of Northwest California, Western Oregon and Washington, and Western Montana. It usually stays close to water but will venture into damp woods after a rain (Stebbins 1985). The tailed frog is known to inhabit Beaver Creek.

## **Terrestrial**

**Clouded Salamander** (Aneides ferreus). This salamander is a noted climber, climbing to heights of 20 feet (Stebbins 1985). This species is closely related to forested habitat, but they occur in forest edge habitats, and they are often very abundant in forest clearings caused by fire (Nussbaum 1983). Found in bark of standing (Stebbins 1985) and down dead trees, under bark on the ground, in rotten logs, and in cracks on cliff faces (Nussbaum 1983). Potentially occurs in the watershed.

**Siskiyou Mountains Salamander** (Plethodon stormi). This species range is limited to areas occurring on the Rogue River National Forest and the Klamath National Forest. It is associated with talus deposits and fissured rock outcrops in forested areas. During wetter weather it can be located under rocks, bark, and logs in close proximity to talus sites. Plethodons are lungless salamanders and thus respire through their moist skin. This necessitates a moist habitat. This species potentially occurs in the Beaver Creek watershed.

## **Reptiles**

**California Mountain Kingsnake** (Lampropeltis zonata). An extremely attractive snake it is often confused, by uninformed people, with the coral snake of the southwest. It inhabits moist woods, coniferous forests, and chaparral. It favors well lit rocky streams in wooded areas with

rotting logs in the vicinity (Stebbins 1985). It is known to inhabit the lower elevations of the watershed.

**Western Terrestrial Garter Snake (Thamnophis elegans)**. This species is associated with aquatic setting and riparian habitats. Beaver Creek may be eastern edge of its relative the Pacific Coast Aquatic Garter Snake.

**Northwestern Pond Turtle (Clemmys marmorata marmorata)**. Western Pond turtles inhabit marshes, sloughs, moderately deep ponds, and slow-moving portions of creeks and rivers (Nussbaum 1981). It has been seen in the lower portions of the Beaver watershed by the author. They have also been documented at the 4,500 ft. level in the Ashland Creek watershed (Cross 1990).

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