CHAPTER 7: SPECIES and HABITAT - WILDLIFE

CHARACTERIZATION

Species of Concern[7]: Table WILD-1 lists the species of concern in this subwatershed as well as their relative abundance and distribution. With the exception of a few of the listed Threatened/Endangered species (northern spotted owl, marbled murrelet, and bald eagle), there have been few species-specific wildlife inventories in the Umpqua Resource Area. Inventories on vegetation associations have not been conducted, and thus information on wildlife/habitat relationships is also lacking. Included in the appendices is a list of amphibian, reptile, bird, and mammal species, and their associated primary habitats, which could be found within the area or in adjacent subwatersheds.

There are 48 special status animal species that could occur in the subwatershed. Special status species known to occur are northern spotted owls (NSO) and bald eagles. There are 6 NSO sites and approximately 2,392 acres of suitable habitat within this subwatershed. Two of these sites are Known Spotted Owl Activity Centers (as of January 1, 1994), which are outside the mapped LSR, but are managed as part of the reserve system.

There is approximately 2,392 acres of suitable habitat for MAMU within this subwatershed, but currently there are no known occupied sites. There have been 2 survey efforts for MAMU in the subwatershed. No detections were made when Roseburg BLM conducted inventories in Whipples Overlook (Sect. 7, T.23S., R.7W.), Kellogg (Sect. 17, T.23S., R.7W.), Mehl Creek (Sect. 19, T.23S., R.7W.), Maupin Road (Sect. 27, T.23S, R.7W.), Waggoner Creek (Sect. 31, T.23S, R.7W.), and McGee Creek (Sect. 33, T.23S, R.7W.) (Witt 1992). No detections were made during surveys for the Sawyer Bridge sale in 1995 and 1996 (Sect. 29, 32 and 33, T.22S., R.8W.)

The Umpqua River Corridor provides important habitat for the recovery of the bald eagle, and there are 6 known bald eagle nest sites and 2 golden eagle sites in the subwatershed. The Gould Creek nest site (NE¼, Sect.27, T.22S., R.8W.) is listed under “Current Nest Trees” in the Working Implementation Plan (Bald Eagle Working Team 1990). Eagles typically nest in the largest, most dominant Douglas-fir tree within a conifer stand. Live canopies usually cover the nest, and nests are located within the top 20 feet of the tree. Nests usually provide an unobstructed view of water, and are usually within 0.5 miles of open water. In an Oregon study, Isaacs *et al.* (1983) reported that 85% of the bald eagle nests were within 1 mile of major bodies of water. Snags and trees with exposed lateral limbs are important for perching. Refer to the Bald Eagle Recovery Plan (USFWS 1986) for further discussion of species abundance, distribution, and habitat characteristics.

Another species of concern for this area is the osprey. The Umpqua river also provides key nesting sites and foraging areas for this species, and there are 15 known osprey nesting sites in the subwatershed. Fourteen of these sites are on private land. Nest and roost trees within 1 mile of the Umpqua River are critical habitat components for the osprey.

Northern goshawks may be present in the older aged stands within the subwatershed. However, surveys conducted by Roseburg BLM did not find northern goshawks in the adjacent drainages. No surveys have been conducted for the other bird species listed in Table Wild-1.

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[7] The phrase "species of concern" is used to refer to the group of species for which special management concern exists in the analysis area (consistent with the use in Watershed Analysis Guide Ver. 2.2) and is not to be confused with the species of concern list maintained by the U.S. Fish and Wildlife Service which is roughly analogous to the former Federal Candidate 2 species list.

	Species					Habitat Characteristics										Current Conditions	
							Special Habitats			Seral Stages							
Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Relative Abundance	Distribution[4]	Cliff(C) Talus (T)	Snags/ CWM	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth	Habitat Distribution	Habitat Condition[5]	Trend[6]
AMPHIBIANS & REPTILES																	
Southern Torrent Salamander *Rhyacotriton Variegatus*	S	J2 BT	SSC	Rare	L		CWM	X							Cold Streams Aquatic	Federal - F Private. - P	I D
Clouded Salamander *Aneides Ferreus*	S	BT	SSU	Uncommon	W		CWM		X	X	X	X			CWM Patchy	Federal - P Private. - P	I D
Tailed Frog *Ascaphus Truei*	S	J2 BA	SSV	Rare	W		CWM	X			X	X	X	X	Cold Streams Aquatic	Federal - F Private - P	I D
Red-Legged Frog *Rana Aurora*	K	BS	SSU	Uncommon	W			X	X						Riparian Patchy	Federal - F Private - P	I D
Northwestern Pond Turtle *Clemmys Marmorata Marmorata*	S	BS	SSC	Rare	W		CWM	X	X	X	X				Pond Patchy	Federal - F Private - P	S D
BIRDS																	
Osprey *Pandion Haliaetus*	K			Uncommon	W		S	X					X	X	Snag/water Patchy	Federal - F Private - P	D D
Bald Eagle *Haliaeetus Leucocephalus*	K	FT	ST	Uncommon	W		S	X						X	Nest Tree Patchy	Federal - F Private - P	S D
Golden Eagle *Aquila Chrysaetos*	K			Uncommon	W				X	X					Nest Tree Pachy	Federal - F Private - P	S S
Northern Goshawk *Accipiter Gentilis*	S	BS	SSC	Rare	W								X	X	OG Patchy	Federal - P Private - P	D D
Marbled Murrelet *Brachyramphus Marmoratus Marmoratus*	S	FT	ST	Rare	W									X	OG Patchy	Federal - F Private - P	S S
Northern Pygmy-Owl *Glaucidium Gnoma*	K	BT	SSU	Uncommon	W		S						X	X	Snags Patchy	Federal - F Private - P	D D
Northern Spotted Owl *Strix Occidentalis Caurina*	K	FT	ST	Rare	W		S						X	X	OG Patchy	Federal - F Private - P	S S
Pileated Woodpecker *Dryocopus Pileatus*	K	BA	SSV	Uncommon	W		S	X						X	Snag/OG Patchy	Federal - F Private - P	D D
Purple Martin *Progne Subis*	S	BA	SSC	Uncommon	L		S			X					Nest site Patchy	Federal - F Private - P	D D
Western Bluebird *Sialia Mexicana*	S	BA	SSV	Uncommon	W		S			X					Snags Patchy	Federal - F Private - P	D D

Common/Latin Name	Species: Presence	Species: Status Federal	Species: Status State	Species: Relative Abundance	Species: Distribution	Habitat Characteristics: Special Habitats: Cliff(C) Talus (T)	Habitat Characteristics: Special Habitats: Snags/ CWM	Habitat Characteristics: Special Habitats: Riparian/ Wetland	Habitat Characteristics: Special Habitats: Hardwood Forest	Habitat Characteristics: Seral Stages: Early	Habitat Characteristics: Seral Stages: Mid	Habitat Characteristics: Seral Stages: Late	Habitat Characteristics: Seral Stages: Mature	Habitat Characteristics: Old-Growth	Habitat Distribution	Current Conditions: Habitat Condition	Current Conditions: Trend
MAMMALS																	
Big Brown Bat *Eptesicus Fuscus*	S			Common	W	Cave C	S	X	X	X				X	Widespread	Federal - F Private - F	D D
Silver-Haired Bat *Lasionycteris Noctivagans*	S	J2, S/M BT	SSU	Unknown	W		S		X		X	X	X	X	Patchy	Federal - F Private - P	D D
Hoary Bat *Lasiurus Cinereus*	S	J2		Uncommon	W			X	X	X	X		X	X	Patchy	Federal - F Private - P	D D
California Myotis *Myotis Californicus*	S			Common	W	Cave C	S	X	X	X	X	X	X	X	Widespread	Federal - F Private - P	D D
Long-Eared Myotis *Myotis Evotis*	S	J2, S/M BT	SSU	Rare	W		S	X	X			X	X	X	Patchy	Federal - F Private - P	D D
Little Brown Myotis *Myotis Lucifugus*	S			Common	W	Cave	S	X	X	X	X		X	X	Widespread	Federal - F Private - P	D D
Fringed Myotis *Myotis Thysanodes*	S	J2, S/M BS	SSV	Rare	W	Cave C	S	X	X	X	X	X	X	X	Patchy	Federal - F Private - P	D D
Long-Legged Myotis *Myotis Volans*	S	J2 S/M BT	SSU	Unknown	W	Cave C	S	X	X		X	X		X	Patchy	Federal - F Private - P	D D
Yuma Myotis *Myotis Yumanensis*	S	BT	SSU	Common	W	Cave C	S	X	X	X			X	X	Widespread	Federal - F Private - P	D D
Pacific Western Big-Eared Bat *Corynorhinus Townsendii Townsendii*[5]	S	PB BS	SSC	Uncommon	W	Cave		X	X	X	X	X	X	X	Patchy	Federal - F Private - P	D D
Pallid Bat Antrozous pallidus	S	J2 PB		Uncommon	W	Cave C	S	X	X	X	X				Patchy	Federal - F Private - P	D D
American Marten *Martes Americana*	S	J2 BA	SSV	Rare	W		S CWM						X	X	Patchy	Federal - P Private - P	D D
Fisher *Martes Pennanti*	S	J2 BS	SSC	Rare	W	T	S CWM						X	X	Patchy	Federal - P Private - P	D D
White-Footed Vole *Arborimus Albipes*	S	BS	SSU	Unknown	L		CWM	X					X		Patchy	Federal - U Private - U	U U
Red Tree Vole *Arborimus Longicaudus*	S	S/M		Uncommon	L							X	X	X	Unknown	Federal - U Private - U	U U

[1] Presence in subwatershed: S - Suspected, but has not been documented. K - Known (most sightings documented in Resource Area files).
[2] Status Federal: FE - Federally Endangered. FT - Federally Threatened. FC - Federal Candidate. BS - Bureau Sensitive. BT - Bureau Tracking. BA - Bureau Assessment. S/M - Survey and Manage. PB - Protection Buffer.
[3] Status State: SE - State Endangered. ST - State Threatened. SSC - State Sensitive- Critical. SSV - State Sensitive/Vulnerable. SSP - State Sensitive/Peripheral or Naturally Rare. SSU - State Sensitive/Undetermined.
[4] Distribution: L - Local. W - Wide. [5] Habitat Condition: G - Good. F - Fair. P - Poor. U - Unknown. [6] Habitat Trend: I - Increasing. S - Stable. D - Decreasing. U - Unknown.
Sources: Brown et. al. (1985), Coos Bay District PRMP (USDI 1994), FEMAT (1993), Appendix J2 (Holthausen et al. 1994), Maser et al. (1981), Marshall et al. (1996), Thomas et al. (1993), Perkins (1983) and URA - Loon Lake Unit Resource Analysis (USDI 1977). Distribution, Relative Abundance, and Trend rating for some of the species were from Thomas et al (1993) and Appendix J-2 (Holthausen et. al. 1994).

Table WILD-1: Species of Concern for the Upper Middle Umpqua Subwatershed.

Survey and Manage animal species with a high probability of occurring in the subwatershed include the red tree vole and four bat species. Protection Buffer animal species that are likely to occur within the subwatershed are the pallid bat and Pacific Western big-eared bat. Inventory lists are not available for arthropods, terrestrial mollusks, insects, or other invertebrate species and these lists are not expected to be available any time soon.

Habitat: Wildlife habitat in the subwatershed is characterized by steep upper slopes, and broad valley bottoms along the Umpqua River. Key habitat characteristics for this subwatershed include: riparian areas and the Umpqua River corridor, snags, downed logs, hardwood forests, and late-successional forest. Table WILD-1 on the following page lists the habitat characteristics by species, and how these are distributed. The main disturbances to these characteristics include timber harvests, fragmentation, and road densities.

CURRENT CONDITIONS

Refer to Table WILD-1 for ratings of the current habitat condition and trend for the species of concern. Refer to the wildlife appendix for an explanation of how condition and trend ratings were assigned.

Cliff and Talus: Inventories for cliff and talus habitat have not been funded. Reviews of aerial photographs and FOI data indicate that most of this habitat is less than 1 acre in size. The exceptions are a large rockfall in T.23S., R.8W., Sect. 27 (No. 23-8-27.19 on the Landslide History Map on file at the Coos Bay District Office) and a rockfall/talus area on private land in T.23S., R.7W., Sect. 9 (No. 23-7-9.1 on the Landslide History Map).

Snags and Coarse Woody Material: Snags, whether standing or on the ground, are used as homes for 178 wildlife species (14 amphibians and reptiles, 115 birds, and 49 mammals) (Brown et al. 1985). At least 39 of these birds and 14 of the mammals require a cavity in dead or live trees for either nesting, feeding, or resting. The current habitat condition and trend for snags and coarse woody material (CWM) was estimated, as there has not been funding nor staffing to complete inventories for these special habitats.

Riparian and Wetland: See the Vegetation Section for a discussion of current condition.

Hardwood Forest: The current habitat condition for oak woodlands is poor and the trend is decreasing. The oak woodland habitat is predominately on the flat river valley, which is not under Federal Administration. Most of this habitat has been converted to agriculture purposes, or to conifer plantations. Oak woodlands on BLM-administered lands have decreased due to the lack of fire, and encroachment of conifers. The age classes in the BLM-administered Riparian Reserves are shown in Table WILD-2. Map WILD-5 shows Riparian Reserves by Seral Stages. The BLM has not surveyed the current condition of red alder dominated riparian areas, but some information is available in the stream habitat inventories conducted by ODFW in 1994 and 1996.

Table WILD-2: Stand Age Classes in the Riparian Reserves (based on FOI).

Age class in years	Acres	Percent of Total
non-forest	17	<1
0-40	1,635	64
41-80	29	1
81-120	117	5
121-160	67	3
161-200	520	20
201+	160	6
Total	**2,545**	**100**

Seral Stages: We do not have accurate mapping for Seral stages or habitat types within the subwatershed. Stand ages for this document are extrapolated from the Forest Operation Inventory (FOI) data. The problem encountered using this information is that it categorizes numerous polygons based on conifer overstory species that are easily distinguishable on aerial photographs, into one treatment polygon. This database typically does not identify hardwood inclusions, or small hardwood dominated areas. The FOI does not accurately determine understory composition or structural components such as snags and CWM. A detailed vegetation structure inventory is needed to adequately evaluate wildlife habitats.

Table WILD-3 shows the current distribution of approximated seral stages on BLM lands within the subwatershed. The seral stage distribution, for both BLM and private land, is shown in Chapter 3: Vegetation on Table VEG-2.

Table WILD-3: Age Class and Seral Stand Distribution of BLM Land in the Subwatershed

Age Class (from FOI)	Seral Stage Approximation (RMP)	Acres of BLM Land	Seral Stage Percentage
Non-Forest	Non-Forest	292*	Trace (0.4)
0 - 10	Early	1497	21
11 - 40	Mid	3093	43
41 - 80	Mid	225	3
81 - 120	Late	279	4
121 - 200	Mature	1446	20
200+	Old-Growth	677	9
TOTAL		7509	100

* Includes 23 acres of non-forest agriculture, 1.8 acres of grassland, 0.4 acres of water, and 3.82 acres of non-forest cultural development.

Late-Successional Forests: The majority of the species of concern for this subwatershed rely on late-successional forests and/or riparian habitat. For detailed discussions on wildlife species associated with late-successional forests, the reader can refer to the FEMAT (1993), FSEIS\ ROD-NSO (USDA; USDI 1994), and ROD-RMP (USDI 1995).

The landscape pattern is a mixture of mature and old-growth patches interspersed with even-aged stands of various ages (See Map Wild-1: Timber Age Class Map [Wildlife Emphasis]). Late-successional forests are defined as forest seral stages that include mature and old-growth age classes, 80 years and older (USDI 1995). Approximately 33% of the BLM land in the subwatershed is over 80-years-of-age (Table Wild-3 and Map Wild-1). Due to the fragmented stand ages and the extensive road system, the amount of suitable interior habitat for mature and old-growth seral stages is most

likely low throughout the subwatershed. However, this same situation should favor edge-associated species that are common to early seral stages.

The older-aged stands in the GFMA are currently providing late-successional habitat. If these stands are left unharvested, they can continue to serve this function while younger aged stands in the Late-Successional Reserve (LSR) and Riparian Reserves mature. These GFMA areas are also providing more interior habitat than many of the smaller, fragmented late-successional stands within the LSR.

In general, federal forest stands greater than 80-years old that provided nesting, roosting, and foraging habitat were designated as suitable habitat for the NSO. Suitable habitat conditions for NSO's in the subwatershed are poor. The U.S. Fish and Wildlife Service uses a 40% suitable habitat level on Federal land within the median home range radius of the owl as a key threshold. NSO sites below the 40% level are considered to be marginally viable. The median home range from site centers in the Oregon Coast Range Providence is 1.54 miles. All 6 nest sites are below this 40% suitable habitat level (Table Wild-4).

Table WILD 4: Percent of Suitable Habitat on Federal Land within 1.54 miles of Known NSO Nest Sites.

Site Name	Land Use Allocation	Suitable Habitat on Federal Land (%)
Sawyer Creek	LSR	14
Hedden Creek	LSR	17
Fitzpatrick Creek	LSR	18
Mehl (#6204)	LSR	Unknown
Coos Bay Roadside	GFMA	10
Mehl Creek (#2206)	GFMA	6

Late-Successional Reserves and Connectivity/Dispersal Blocks[8]: One function of LSRs is to provide habitat for late-successional related species. The current condition of the LSR is fair, as 61% of the federal land in the LSR is in an early seral stage (Table Wild-5). Due to the young age class of the majority of the forest stands within this designation, and to the fragmentation of the remaining late-successional patches, this area is not yet functioning as a block of late-successional habitat. These younger stands may be missing vital components such as snags, CWM, and/or vegetative diversity. High initial stocking rates of Douglas-fir, followed by precommercial thinnings, have created homogenous, simple structure stands that may not reach the complexity of natural forests in the next 100 years or more.

Reforestation and PCT practices narrow the range of stand densities, which all but eliminates stocking level extremes that occurred under natural conditions. Where humans have replaced mature and old growth forests with young stands, we have lost the stand complexities that only come about with a combination of stand maturity and a succession of disturbances that occur over time. For example: small disturbances like individual tree and group mortality, and spatially large impacts like ground fire provide the structural elements of snags and CWM. The disturbances also set the stage for recruiting understories, which result in species diversification and multi-layered canopies. The stand maturing process results in large structural elements and changes in individual tree crown architecture.

[8] Late-Successional Reserves and Connectivity/Dispersal Blocks will be analyzed in a District Late-Successional Reserve Assessment, so this document only contains a cursory review of these Land Use Allocations.

On BLM administered lands, the remaining stands that are over 80-years of age are fragmented as a result of past harvesting. Fragmentation is also caused by the checker board ownership with private lands that are in general support stands younger than 80-years old. The trend for late-successional habitat on Federal land is upward. However, it will take at least 40 years for the majority of the mid-seral stage forests to reach 80 years of age.

Table WILD-5: Seral Stages of Federal Land in the Late-Successional Reserve.

Seral Stage	Acres	Percent of Total
Non Forest	Trace	Trace
Early	3027	61
Mid	254	5
Late	1711	34
Total	**4992**	**100**

Another function of LSRs is to provide connectivity/dispersal habitat for the NSO (USDI 1995). Dispersal habitat is increasing in trend. On Federal land, 64% of the subwatershed, and 61% of the LSR, is younger than 40 years (mid seral stage), and thus is not providing dispersal habitat. In managing LSRs, one must also consider the condition of adjacent habitats for dispersal to suitable habitat in other LSRs or other land ownerships. Weyerhaeuser is the major land owner adjacent to this LSR. According to Weyerhaeuser's Habitat Conservation Plan (1994), by the year 2044, 40% of the Tree Farm will provide roosting and foraging habitat for the NSO, and will continue to provide suitable habitat at least through the end of their 50-year Plan. The Tree Farm will provide dispersal habitat between the federal LSRs to the north and south, and to the Elliot State Forest. Under current plans, Weyerhaeuser will be managing for a general landscape condition of suitable dispersal habitat, rather than for distinct corridors. Dispersal habitat is important because the potential for local extinction increases if the species becomes isolated. Dispersal habitat across other private land will fluctuate and will be driven by market conditions.

Connectivity and dispersal should also be provided by the Connectivity/Diversity Blocks. The ROD-RMP's direction is to maintain 25-30% of each Block in late-successional forest (USDI 1995). The Connectivity/Diversity Blocks total 206 acres. The proximity to the Umpqua River for both of the Connectivity Blocks means that these areas are extremely important in the Bald Eagle Recovery Plan. The habitat condition is in an upward trend for these blocks, mainly due to the Standard and Guideline stating that these areas will be managed on a 150-year rotation. The late-successional habitat condition of the Block in section 7 is good, as the area is mature forest, and is a 48-acre block. The late-successional habitat condition for the block in T. 23 S., R. 07 W., Sec. 21 is poor, as the trees are approximately 22-years old (excluding the 10-acre stand that is 136-years old). It will take many years before the young stands in Section 21 begin to function as connectivity habitat.

Road Densities: The subwatershed is within the Tioga Big Game Management Area. The goal for the management area is to maintain 1.1 road miles/mi^2 per watershed when all classes of roads are considered (USDI 1995). On BLM-administered land in the subwatershed, there are 3.2 road miles/mi^2 of BLM-controlled roads. There are 1.1 road miles/mi^2 of BLM-controlled roads across all ownerships within the subwatershed. See the Road Appendix for additional information.

REFERENCE CONDITIONS:
Information on the historical distribution of individual wildlife species can be found in identification

guides (Burt and Grossenheider 1980, National Geographic Society 1983, and Leonard 1993). These maps and accounts show the geographic distribution at a large scale, but suitable habitat must have been present within the range in order for the species to be present.

In general, historic distribution and abundance of most of the species of concern would have been higher as these species are associated with late-successional forests. Bald eagle nesting and perching sites would have been more common due to the presence of scattered, large Douglas-firs created by the fire history. The fire history in the late-successional stands would also have produced a greater number of snags in various decay classes, which would have increased the habitat availability and abundance of snag-related species (18 of the species of concern). The large Douglas-firs would have provided a high volume of CWM and provided abundant habitat for terrestrial amphibians, furbearers, and the white-footed vole. Fire charring of the CWM would have been variable, depending on the microclimate and topography near the CWM, and the fire pattern and intensity. Purple martin and Western bluebird abundance would have been common due to the availability of open oak woodlands along the Umpqua River floodplain, and the open savanna areas on the upper-slopes. For a more detailed discussion of Reference Conditions, refer to the Vegetation Section.

SYNTHESIS AND INTERPRETATION:
Table WILD-6 lists the causes of change between historical and current species distribution and habitat quality for species of concern in the subwatershed.

Table WILD-6: Causes of Change Between Historical and Current Species Distribution and Habitat Quality.

Species of Concern	Change	Primary Cause
Southern Torrent Salamander	- Decrease of cold clear stream habitat	- Timber harvest practices
Tailed frog	- Increase in fine sedimentation	- "
Red-legged Frog	- Higher stream temperature	- "
	- Increase in dispersal barriers	- Culverts, road construction
Terrestrial amphibians	- Loss of large diameter CWM	- Timber harvest practices - Salvage
Northern Spotted Owl Marbled Murrelet Northern Goshawk	- Loss of late-successional habitat	- Timber harvest of late-successional habitats
Northern Spotted Owl	- Loss/fragmentation of dispersal habitat	- Timber harvest
Cavity Nesting Species & Bats	- Loss of snags	- Timber harvest & conversion of land to agriculture/residential
	- Loss of older seral stages	- "
	- Interruption of snag legacy	- Thinning from below, timber harvest
Eagles and Osprey	- Loss of nest trees	- Timber harvest/ road construction
	- Loss of potential nest sites	- Harvest on private/public land within 1 mile of the Umpqua River.
	- Interruption of nesting	- Man-made disturbances within line of site of the nest tree
	- Unsuccessful nesting	- Pesticides
American Marten and Fisher	- Loss of late-successional habitat	- Timber harvest
	- Degradation of riparian habitat	- "
	- Loss of CWM and snags that are used for hiding/resting/denning	- "
	- Increased human disturbance	- Road construction

Species of Concern	Change	Primary Cause
White-footed Vole	- Loss of natural alder riparian areas	- Timber harvest methods - Inadequate riparian buffers
Big Game	- Human harassment and poaching - Loss of thermal and hiding cover - Loss of calving areas	- Construction of roads and spurs - Timber harvest - "
All species	- Loss of vegetative & structural diversity	- Planting Douglas-fir monocultures, PCT, brush/hardwood removal

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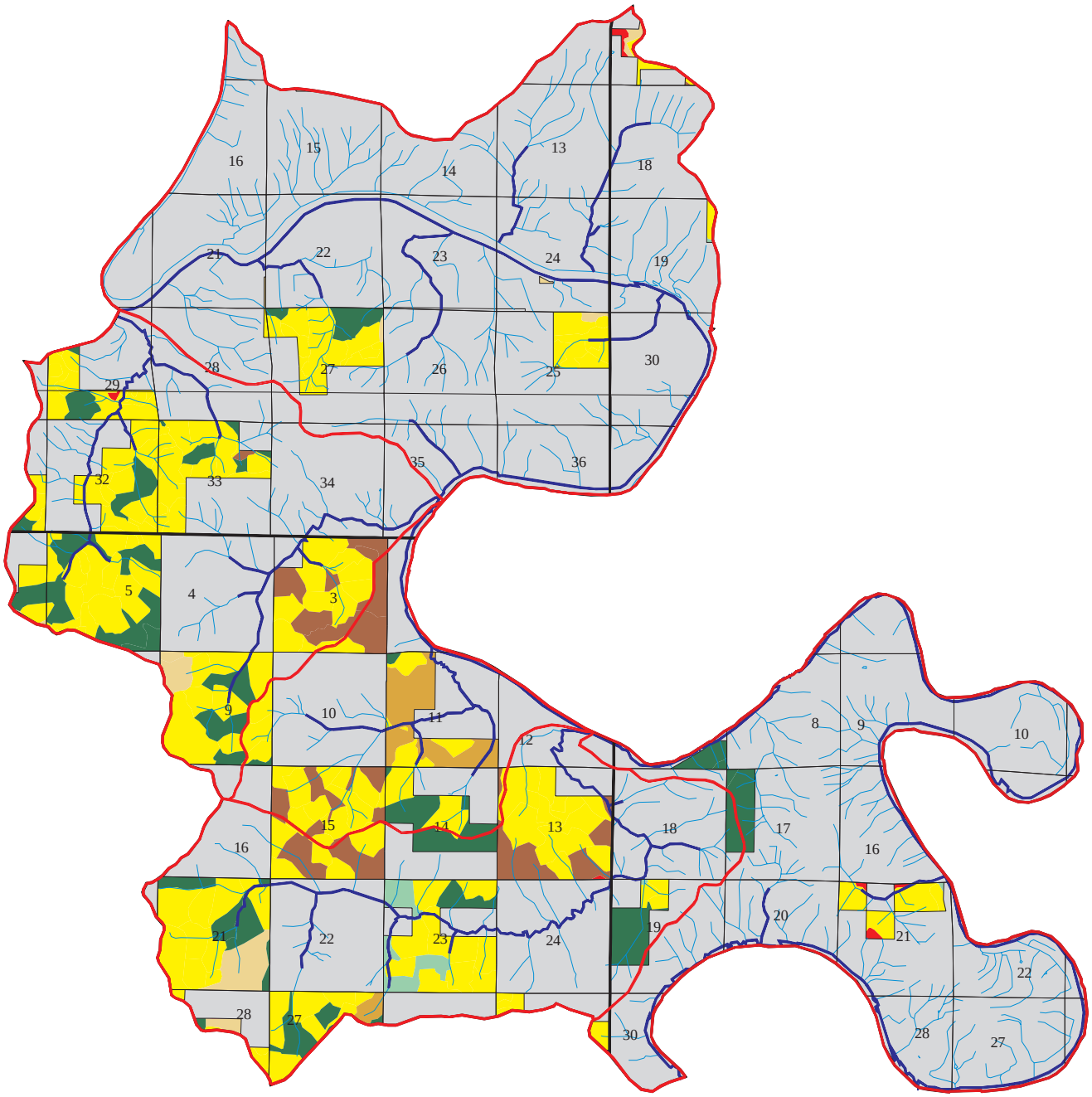
CHAPTER 8: SPECIES and HABITAT - BOTANY

CHARACTERIZATION

Special Status Plants and Habitats: There are no known occurrences of special status plants (including Survey and Manage strategy 1 & 2 species) in this subwatershed. For populations and/or habitats of special status plants that may occur in the subwatershed, see Table BOT-1 In the

MAP WILD −1 Timber Age Class Map (Wildlife Emphasis)

UPPER MIDDLE UMPQUA SUBWATERSHED



MAP FEATURES

- *Nonforest (BLM Land, Birthdate 0)*
- *FOI Ages 0-40*
- *FOI Ages 41-80*
- *FOI Ages 81-120*
- *FOI Ages 121-160*
- *FOI Ages 161-200*
- *FOI Ages 201 +*
- *USDA Forest Service Lands*
- *State, Private or Other Lands*
- *Fish-Bearing Streams*

Note: Some map features shown in the legend may not appear in the mapped area.

Scale 1:89027

0.5 0 0.5 1 miles

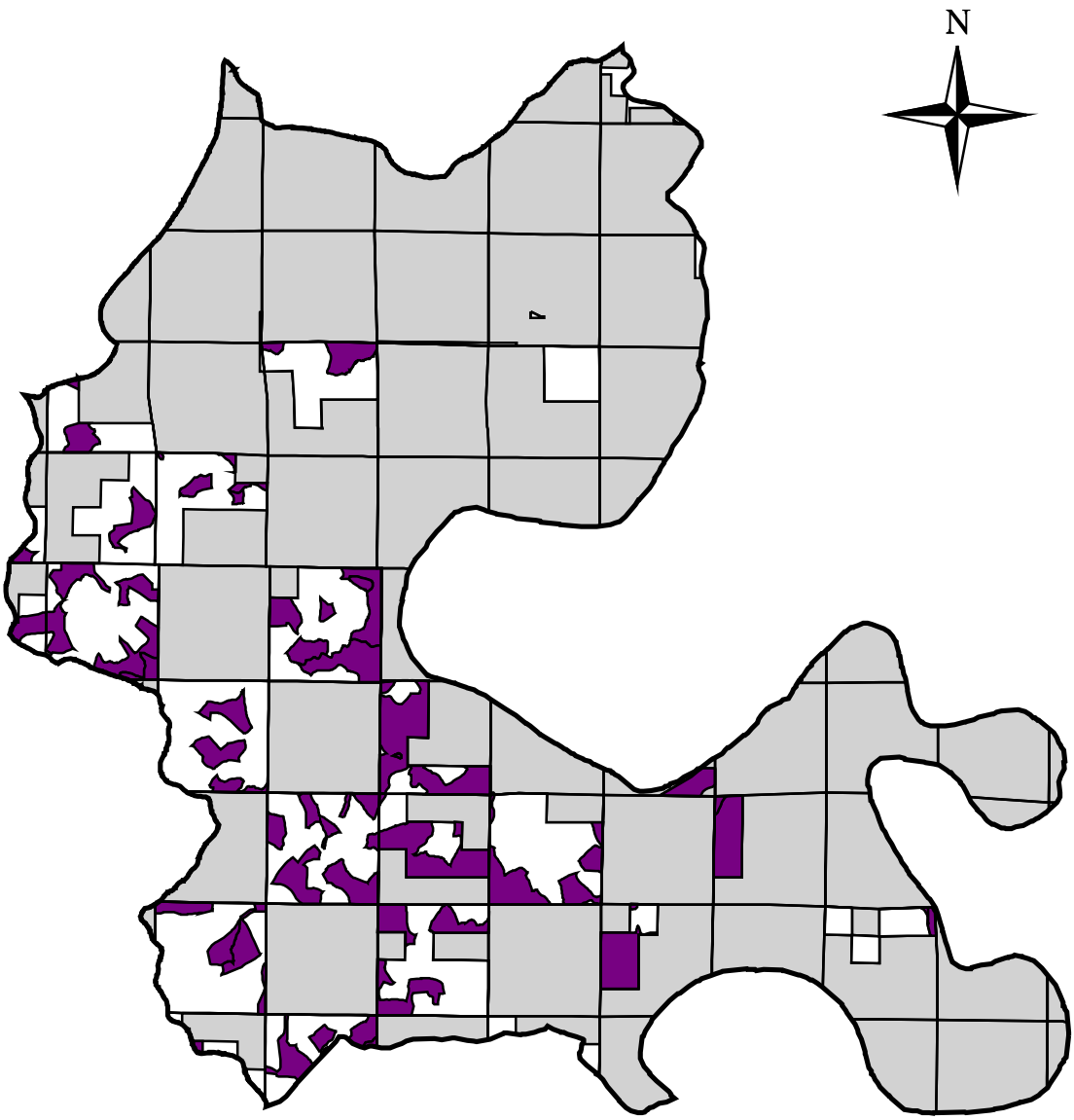
0.5 0 0.5 1 1.5 km

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data

N

award 10/10/97 /nfs/or4003/usr10/umpqua/wsa/up_mid_ump/fnl_dk_wl.aml

MAP WILD-2
Suitable Marbled Murrelet Habitat
Upper Middle Umpqua Subwatershed

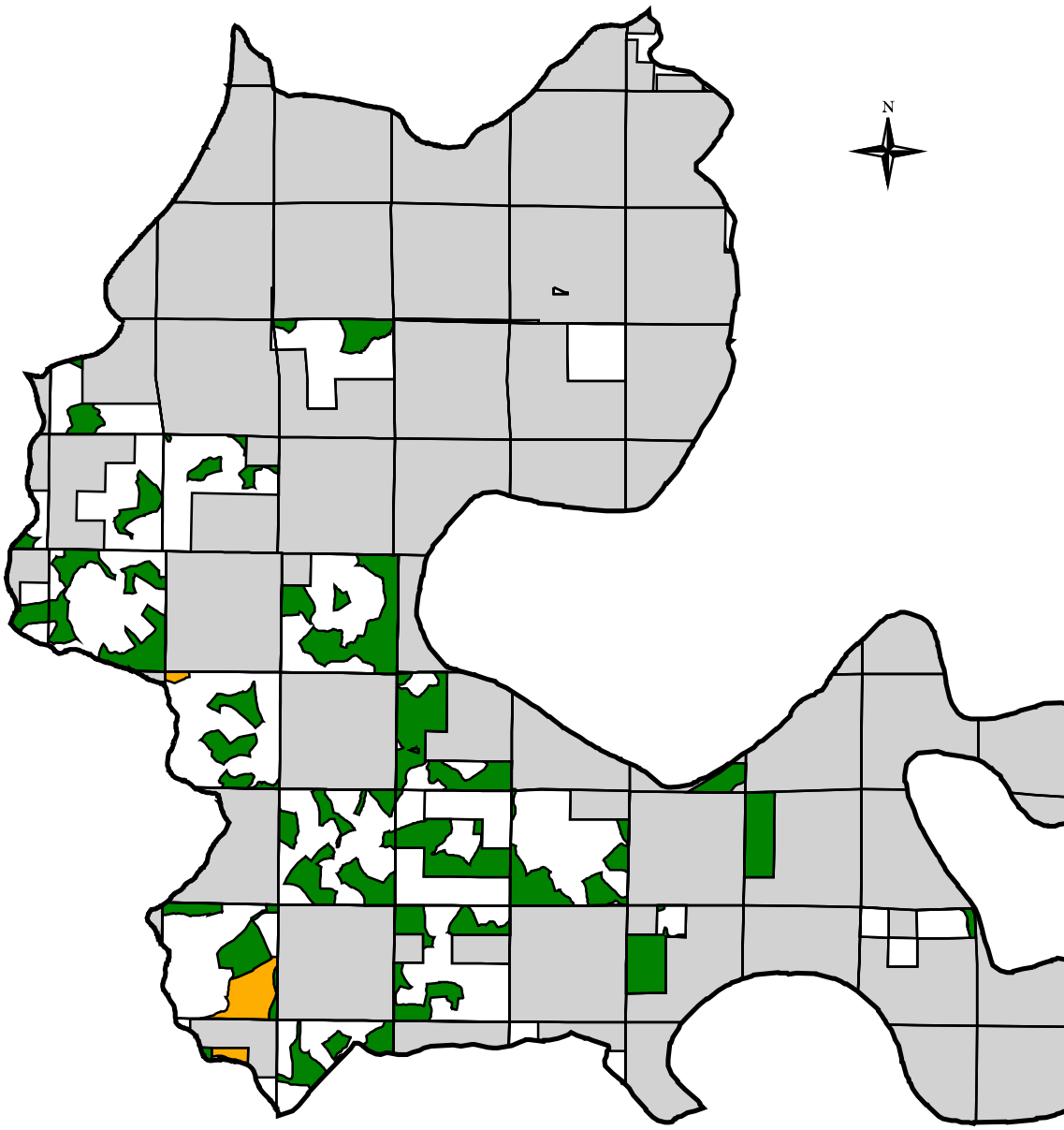


1 0 1 2 3 Miles

Non-BLM Lands

Suitable Marbled Murrelet Habitat

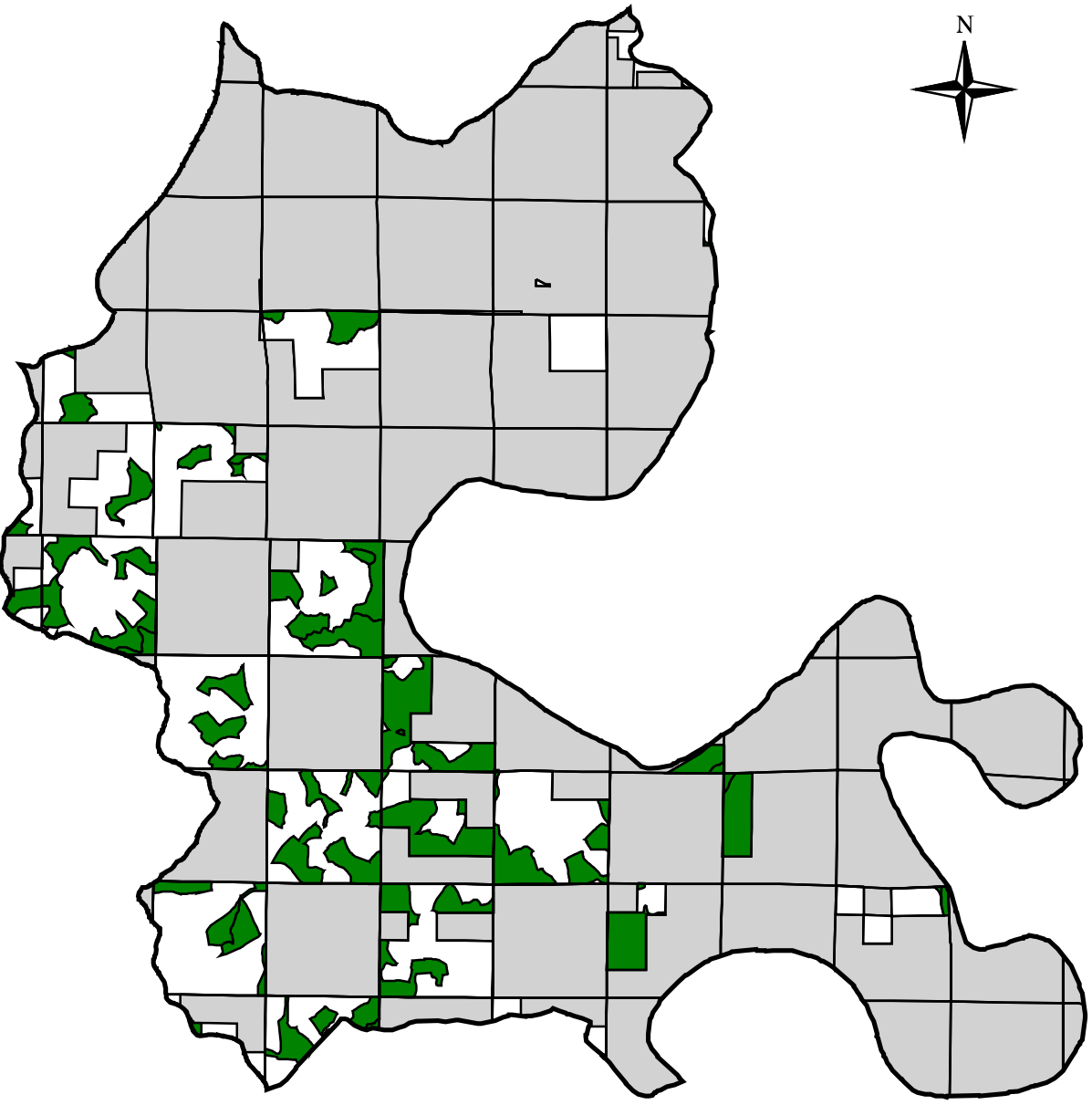
MAP WILD-3
Suitable Habitat for the Northern Spotted Owl
Upper Middle Umpqua Subwatershed



1 0 1 2 Miles

Non-BLM Land
NSO Suitable Habitat (Q1)
NSO Suitable Habitat (Q2)

MAP WILD-4
FOI Units 80 Years and Older
Upper Middle Umpqua Subwatershed

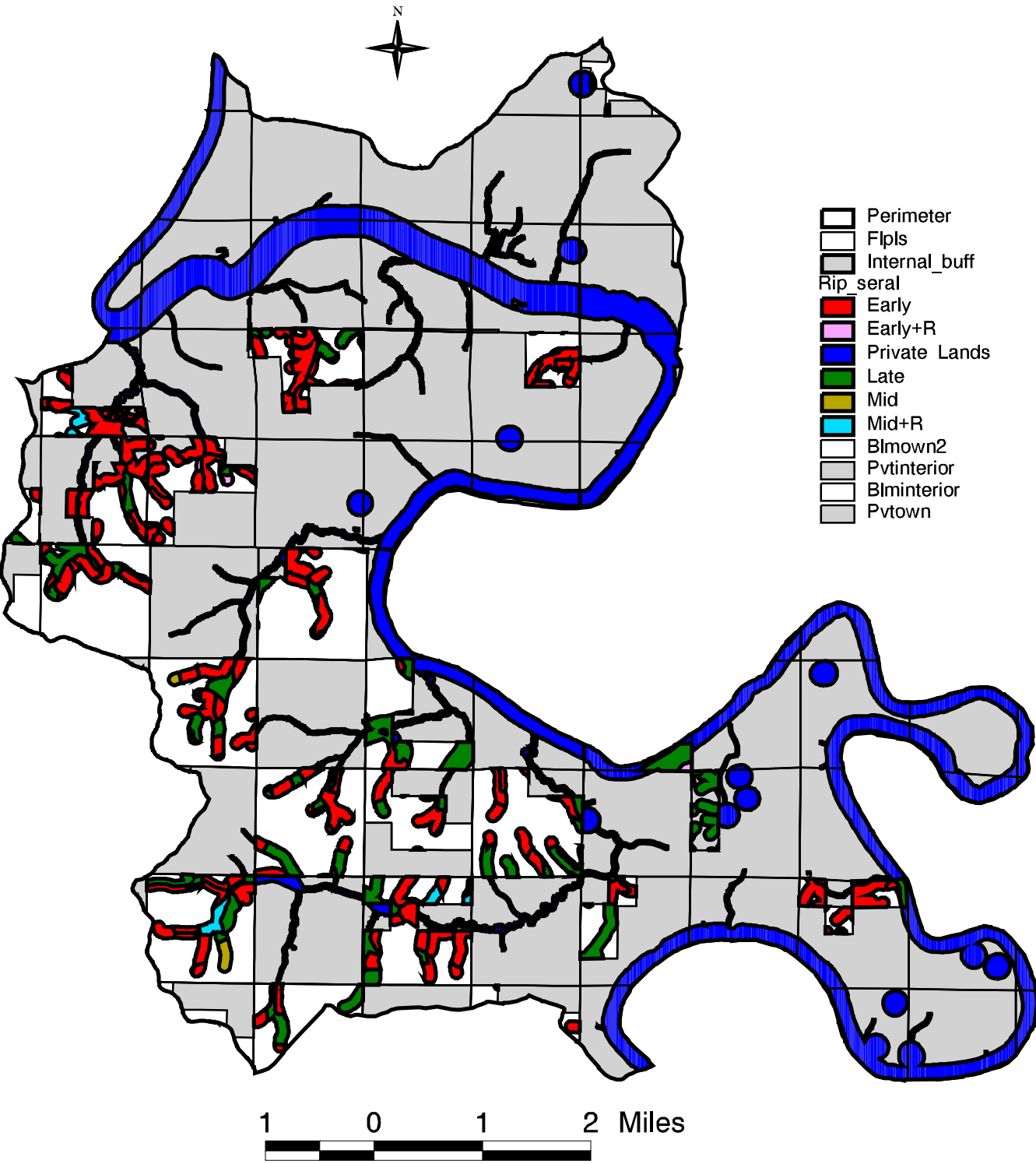


1 0 1 2 3 Miles

Non-BLM Lands

FOI 80 yrs plus

MAP WILD-5
Upper Middle Umpqua Subwatershed
Riparian Reserves by Seral Stage



WILDLIFE APPENDICES
TABLE OF CONTENTS

I. EXPLANATION OF SPECIES OF CONCERN TABLE (TABLE WL-1).

Species of Concern for the subwatershed were selected using the following criteria:

- Wildlife that were classified as "Known" or "Suspected to Occur" in the subwatershed.
- Wildlife that had Federal or State Status ranking.
- Wildlife that are in the Survey and Manage category, or are associated with the Survey and Manage species (i.e. California myotis)
- Wildlife that have unique/special habitats directly related to the subwatershed (i.e. osprey, golden eagle).

Explanation of Habitat Condition and Trend Ratings

The habitat condition for aquatic amphibians is rated as "fair" on Federal land and "poor" on private due to the widths of pre-existing riparian buffers. The trend of Federal land is increasing, due to the Riparian Reserve widths of the Northwest Forest Plan. The trend on private lands is decreasing, as the current riparian buffers are not adequate to protect the riparian habitat (Thomas et al. 1993). The same conditions would apply to the red-legged frog.

Due to past timber harvest practices and salvage, the habitat condition is poor for the clouded salamander. Coarse woody debris levels on Federal land should increase under the Forest Plan, so there is an increasing trend for the habitat of the clouded salamander.

Osprey and eagles require snags and old remnant trees for nesting and roosting. The condition for these species is fair on Federal and poor on private, as most of the timbered stands within the birds' nesting range of the Umpqua River have been harvested. Due to the Bald Eagle Recovery Plan, the trend is stable on Federal land. The trend is in decline on Private land as potential sites could be harvested, thus decreasing the availability of this critical habitat.

The trend is stable on Federal land for birds that rely on old growth habitat (Northern goshawk, marbled murrelet, and Northern spotted owl), assuming that the Forest Plan, and the Recovery Plan for the Northern Spotted Owl, are fully implemented.

The habitat condition on managed forests, for species who rely on snags, is fair on Federal land and poor on Private. These rating reflect past harvest practices, and snag felling contracts. The slightly higher rating for federal land is due to the 1983 BLM policy that required leaving wildlife trees for snag recruitment. Wildlife trees were not left on private land until 1991. The trend for both landownerships is downward. This is a cumulative trend as we will loose existing snags when stands are harvested. The Standards and Guidelines for the GFMA call for a minimum retention to meet the 40 percent population level of cavity-nesting birds (2 snags/acres). This is low compared to the 100 percent population level of 6 snags/acre (Marcot 1991). Potential snags have also been removed from the managed stands through silvicultural practices.

The above factors also account for the downward habitat trend for bat species that utilize snags as primary habitat. The hoary bat only utilizes large, live trees for roosting. The trend for the hoary bat is in decline due to the loss of large trees in the GFMA, and fragmentation of the remaining late-seral forests. The Pacific Western big-eared bat's habitat condition is in decline mainly due to human harassment and destruction to caves and other structures used for roosting, hibernaculum, and nursery sites.

The pileated woodpecker requires late-successional forest habitat that contain hard snags greater than 25" DBH (Brown et al 1985). The trend for this species is downward as it is sensitive to timber harvests that remove large trees and snags. Even with wildlife tree retention, the small tree size, location, and lack of overstory canopy in these stands will decrease the availability of suitable snag habitat for this species

Pileated woodpecker nests cavities are used by a host of secondary nesting species. Purple martins and Western bluebirds are two secondary cavity nesters that utilize abandoned pileated woodpecker cavities. Purple martins typically occur along rivers or other water bodies, but are also found away from water in old forest burns. The birds require open flyways to forage for high-flying insects (Marshall 1996). The habitat trend for the martin is downward, due to the scarcity of nesting sites and increased competition for these nesting sites with other species; currently martins may be solely dependent upon artificial nest boxes for nesting (Marshall 1996).

The subwatershed is within the Western bluebirds' breeding range. The bluebird nests mainly in two habitat types: 1) agricultural lands typically 5 to 10 acre in size: and 2) clearcuts with standing snags normally 15" DBH and greater (Marshall 1996). They also may use open oak woodlands in and above the Umpqua river valleys. The Western bluebirds' habitat trend is downward for the following factors: 1) timber harvests with the loss of cavities and potential snags for nesting; 2) agricultural and silvicultural practices that have decreased the availability of oak woodland and snag habitat; 3) competition with the European starlings and other species for the use of cavities; 4) insect control; and 5) large-scale urbanization (Marshall 1996).

The trend is downward for the habitat condition of the marten and fisher. There is doubt that the amount and distribution of late-successional forests would be sufficient to maintain populations (though the species populations have been extirpated from significant portions of their historic range) (Holthausen et al. 1994). Fragmentation of late-successional forests, the loss of large CWM, and human disturbance all contribute to the decline in trend of the habitat condition.

"Confidence Level" for the Ratings of Habitat Condition and Trend:

The ratings were based mainly on professional judgement, and the confidence level is fair. Trends for some of the species were based on reports in Thomas et al. (1993) and Holthausen et al. (1994). The assumption for all nonfederal land was that forested areas would follow the minimum requirements under the Forestry Practices Act, and that restoration of late-successional habitat would not be a part of the management strategy. It was also assumed that the open bottomlands near the Umpqua River would continue to be managed for agricultural products and for urban dwellings.

II. GENERAL REVIEW OF SNAG AND COARSE WOODY MATERIAL HABITAT:

Snags, whether standing or on the ground, are used as homes for 178 wildlife species (14 amphibians and reptiles, 115 birds, and 49 mammals) (Brown et al. 1985). At least 39 of these birds and 14 of the mammals are cavity-dependent, requiring a cavity or hole in dead or live trees for either nesting, feeding, or as a place to sleep. Woodpeckers are primary cavity species who make their own cavities - while others, including wood ducks, bluebirds, and squirrels, move into natural or previously constructed holes and use them as nest sites or dens. Snags that are greater than 25 inches wide and have decayed cavities are used by black bears, bobcats, raccoons, and porcupines. American martens and fishers use cavities

for resting, and as den sites that are out of reach of predators. Bats require snags for maternity roosts, day and night roosts and as hibernaculas. Migrating bats may roost under bark in small groups-and these colonies may use several roosts during a season as temperature and weather change.

Stage of deterioration also influences which wildlife species will utilize snags at a given time. Snags without much deterioration contain woodboring beetles that are eaten by woodpeckers. Snags with stable large limbs provide perches for raptors. After a few years of decay the tree becomes attractive to red-breasted nuthatches who will nest near its top. Decayed snags (class 3) are preferred by northern flickers, along with brown creepers and little brown bats who crawl underneath the loosened bark to roost and nest. Brown creepers and chestnut-backed chickadees can be found in all age classes of stands if well-decayed snags are present.

Snags eventually deteriorate, collapse, and become downed woody debris. Some trees, such as alder and cottonwood, are very susceptible to decay and thus remain for a relatively short time. Other species, such as fire-charred Douglas fir, have persisted an estimated 470 years (Brown et al.1985). Decayed downed logs act like a sponge, sucking up moisture and holding it through the summer. Many species of salamanders, newts, snakes and small mammals require this cool, moist microhabitat.

Wood-boring beetles, carpenter ants, and termites tunnel in, eating and nesting in the moist inner wood. When the interior of the log rots away, shrews and voles burrow inside. Western red-backed voles find cover and a rich source of fungi underneath the wood. Small mammals also use the protective cover of logs as travel pathways through the forest and clearcuts. Woody debris is essential for many species of vascular plants, fungi, liverworts, mosses and lichens. Downed logs also serve as sites for nitrogen fixation by nonsymbiotic bacteria and as places for tree seedlings to establish. Inventories of snag and CWM densities and composition are needed to identify areas deficient in these structural components.

III. WILDLIFE RECOMMENDATIONS:

Refer to the text section of the document for site-specific recommendations for the Upper Middle Umpqua Subwatershed. The following are general recommendations that could be applied on a local or landscape scale. Specific recommendations on wildlife management projects cannot be given due to the lack of inventories on wildlife species presence and existing vegetative composition and structure. Completion of the wildlife-related inventories listed under Critical Data Gaps is highly recommended.

Wildlife Species and Habitats

- A variety of seral stages are needed to provide habitat for early, mid, and late-seral associated species. Different management actions are needed for these seral stages. Due to the checkerboard ownership, land management actions of the adjacent landowners are important to consider. The majority of BLM land in this subwatershed is designated as LSR, and through time will provide late-successional habitat. Private lands will provide early-seral habitat. The Matrix (19% of BLM-administered land in the subwatershed) will also provide habitat for early and mid-seral species through timber-related activities.

- Habitat management that will benefit deer and elk include: creation of small openings for foraging areas, native grass/forb seeding units, fertilizing, and decreasing road densities.

- Habitat improvement projects that will benefit black bear populations include: fertilizing, road closures, and snag and downed woody material recruitment/retention.

- Provide bat roosting structures by installing bat boxes under BLM bridges and in large culverts (> 6' high).

- To protect habitat for the white-footed vole, riparian areas that were historically dominated by red alder should not be considered for riparian conversion projects.

- Establish a network of forest patches and riparian corridors to provide connectivity between refugia, mature, and old forest habitats throughout the subwatershed.

- Initiate a prescribed fire plan to reestablish key areas of oak woodlands on BLM-administered land (Also see Botany Recommendations).

- Based on TMO output, close roads where feasible in the LSR. The RMP goal for BLM-administered land in the subwatershed is a road density of 1.1 road miles/mi^2. Currently, the subwatershed does meet this level, but closures are recommended to enhance wildlife habitat. Closures are recommended for: roads that dissect mature and late-successional stands in the LSR: roads within Riparian Reserves that are contributing fine sediment to the stream; and roads near known special status species sites. Closure techniques that actually limit vehicle traffic (i.e., tank traps) would decrease wildlife harassment and poaching. Closures would also decrease the edge-effect of the road if vegetation closes over the road bed.

- Allocate buffers and management strategies for special habitat areas. Inventories will need to be conducted to locate the special habitats (i.e., wetland, pond, meadow, cliff, talus, cave)

- Threatened and Endangered Wildlife Species: No action should be taken that will jeopardize populations of federally listed or proposed species. Management should avoid contributing to the need to list species, and all actions need to be consistent with those recovery plans now in effect or those being developed. The Pacific bald eagle recovery plan should be implemented for this subwatershed. Implementation of Recovery Plans and Habitat Conservation Plans is one way to hopefully save species from extinction. A better strategy would be to maintain population numbers before listing (and corresponding planning) is necessary. In order to better understand which wildlife species and their primary habitats are in the subwatershed - and within the District as a whole - inventories on vegetation composition and presence of wildlife species is critical. Once this knowledge is attained, land management within the subwatershed could then be designed to protect or enhance suitable habitat for special status wildlife species - with the goal of delisting and population stabilization. An even more noble goal would be to implement management plans that would maintain viable populations of all native wildlife species within the subwatershed.

Timber Harvest Activities

- Silvicultural treatments such as thinning could be used in the younger managed stands in the LSR to encourage a multi-storied forest that would reach desired old-growth characteristics at a younger stand age than with no treatment. The natural species mix should be maintained, which would include minor tree species and hardwoods. Variable spaced thinnings would release small existing minor tree species and provide openings for multilayered stands. Shade tolerant tree species could be planted to

increase diversity within the stand. Prescribed burning and under planting in thinned stands could also be implemented to provide habitat diversity for wildlife. In stands deficient in snags, consider the creation of 1 snag/acre that is greater than 16" DBH.

Not all stands however should be thinned. The dense, unthinned patches provide habitat to species such as Coopers' and sharp-shinned hawks who nest in dense, unthinned mid and late-seral stands. Certain songbirds also utilize dense forests during the nesting season and these stands provide hiding and thermal cover to big game and other wildlife species.

- Salvage: Allow no salvage sales of CWM less than 10 acres in size (S&Gs, pg C-14), or snags within the LSR. Allow no salvage of CWM in the Riparian Reserve. If snags within the Riparian Reserve are deemed a safety hazard, the snag should not be sold, but should be left onsite.

- Timber sale plans should reflect natural disturbance patterns. Sale units should have irregular shapes and should retain structural components including coarse woody material, snags, and wildlife trees with hardwood and minor conifer species components according to guidelines in the ROD and RMP. Edges between stands should be designed to reflect a wildfire's pattern with broad, feathered edges. If a portion of a large block of forest is scheduled for harvest, the harvest should begin with units on the edge of the block to reduce fragmentation of the existing habitat. This would also decrease the amount of new roads that would be constructed within the interior of the forest block.

- In the GFMA, exceed the minimum retention levels for coarse woody material (CWM). Due to past harvest practices on both federal and private timberland, the level of CWM in the subwatershed is assumed to be low. To alleviate this deficit, retain 1,243 ft3/ac (approximately 890' of 16" DBH logs) that would be composed of all decay classes in regeneration harvest units (Sandy-Remote Watershed Analysis 1996). This retention level is based on the low end of availability of CWM in natural mature stands (Spies et al. 1988).

- In the GFMA, close access roads after planting is completed on regeneration harvest units.

IV. THINGS TO THINK ABOUT IN FUTURE ITERATIONS:

Additional Key Questions:

- Where are the special habitat areas?
- What impact are roads having on wildlife?
- How does the managed landscape pattern affect wildlife and plant species populations and habitats (i.e. fragmentation, simplification of forest stands, distribution of age classes)?
- What management strategies (i.e. silvicultural treatments) can be used in the LSR to enhance the succession towards old-growth communities?
- What management strategies could be used to maintain/restore wildlife habitats within the different Land Use Allocations?

Management of LSR: Because of time restrictions and data gaps, this analysis does not cover management of the LSR. Documents that would contain useful information for working on this issue would be:

- Late-Successional Reserve Assessment, Oregon Coast Province, Southern Portion, Version 1.2. October, 1996. USDA, Siuslaw National Forest, and USDI, BLM - Salem, Eugene, Roseburg, and Coos Bay Districts.

- Watershed Analysis Documents for: Mill Creek, and West Fork Smith River.

V. REFERENCES FOR APPENDIX:

Brown, E.R. et. al. 1985. Management of wildlife and fish habitats in forests of western Oregon and Washington. 2 vols. USDA, FS PNW. Portland, Oregon.

Holthausen, R.S. et al. 1994. Appendix J2 results of additional species analysis for: *FSEIS on Management of Habitat for late-successional and old-growth forest related species within the range of the Northern spotted owl*. USDA and USDI.

Marcot, B. G. 1991. Snag recruitment simulator model, ver. 2.52w.

Marshall, D.B., M.W. Chilcote and H. Weeks. 1996. Species at risk: sensitive, threatened and endangered vertebrates of Oregon. 2nd ed. Oregon Department of Fish and Wildlife. Portland, Oregon.

Sandy-Remote Watershed Analysis. 1996. Coos Bay Bureau of Land Management. North Bend, Oregon.

Spies, T.A, J.F. Franklin, and T.B. Thomas. 1988. Coarse woody debris in Douglas-fir forests of Western Oregon and Washington. Ecology. 69(6):1689-1702.

Thomas, J.W. et al. 1993. Viability assessments and management considerations for species associated with late-successional and old-growth forests of the Pacific Northwest. USDA For. Serv. Research. VI.

ARCVIEW MAPS

Map Wild 2: Suitable Marbled Murrelet Habitat

Map Wild 3: Suitable Habitat for the Northern Spotted Owl

Map Wild 4: FOI Units 80 Years and Older

Map Wild 5: Riparian Reserves by Seral Stage

VII. WILDLIFE SPECIES LISTS FOR THE UPPER MIDDLE UMPQUA SUBWATERSHED

The following species list was compiled by wildlife biologists for the Coos Bay District BLM. It is intended to be a comprehensive list of all vertebrate wildlife species known or suspected to utilize the District, and will continue to be updated as new information becomes available. The determination of species presence within the Upper Middle Umpqua subwatershed was made using a combination of documented sightings, professional knowledge of and review of distribution information found in field guides and the Oregon Natural Heritage Database. The codes used for Presence, Federal and State Status are given below.

[1] Presence in Upper Middle Umpqua subwatershed

- N - Not thought to be present within the subwatershed at any time.
- S - Suspected to be present within the subwatershed, but has not been documented and local biologists have no direct evidence of presence.
- K - Known to be present within the subwatershed through observations by trained biologists, most sightings documented in Resource Area files.

[2] Status Federal

- FE - Federally Endangered Species
- FT - Federally Threatened Species
- FC - Federal Candidate Species
- BS - Bureau Sensitive Species
- BT - Bureau Tracking Species
- BA - Bureau Assessment Species

[3] Status State

- SE - State Endangered Species
- ST - State Threatened Species
- SSC - State Sensitive- Critical Species
- SSV - State Sensitive- Vulnerable Species
- SSP - State Sensitive- Peripheral or Naturally Rare Species
- SSU - State Sensitive- Undetermined Status Species

[4] Represents some type of change from the published version of Table C-3 of the Coos Bay District Record of Decision and Resource Management Plan (May 1995). Changes are due to administrative and legal changes in species status by federal and state agencies, changes to lists maintained by the Oregon Natural Heritage Program and correction of errors in the published version of Table C-3.

[5] Represents change to a common or scientific name for a Special Status Species from the name provided in the published version of Table C-3 of the Coos Bay Distict Record of Decision and Resoure Management Plan (May 1995).

[6] Introduced species.

[7] This species is not associated with the primary habitat characteristics listed in this table.

Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Special Habitats: Cliff(C) Talus (T)	Special Habitats: Dead/ Down	Special Habitats: Riparian/ Wetland	Hardwood Forest	Seral Stage: Early	Seral Stage: Mid	Seral Stage: Late	Seral Stage: Mature	Old-Growth
AMPHIBIANS												
NORTHWESTERN SALAMANDER *AMBYSTOMA GRACILE*	S				X	X	X	X		X	X	
LONG-TOED SALAMANDER *AMBYSTOMA MACRODACTYLUM*	S				X	X		X	X	X		
PACIFIC GIANT SALAMANDER *DICAMPTODON TENEBROSUS*	S				X	X	X	X		X	X	X
SOUTHERN TORRENT SALAMANDER *RHYACOTRITON VARIEGATUS*	S	BT	SSC[4]		X	X						
CLOUDED SALAMANDER *ANEIDES FERREUS*	S	BT	SSU		X		X	X	X	X		
ENSATINA *ENSATINA ESCHSCHOLTZII*	S				X	X	X		X			
DUNN'S SALAMANDER *PLETHODON DUNNI*	S			T	X	X				X	X	X
WESTERN RED-BACKED SALAMANDER *PLETHODON VEHICULUM*	S			T	X	X			X	X	X	X
ROUGH-SKINNED NEWT *TARICHA GRANULOSA*	K					X	X	X	X	X	X	X
WESTERN TOAD *BUFO BOREAS*	N	BT	SSV		X	X	X	X				
PACIFIC TREEFROG *PSEUDACRIS REGILLA*	K				X	X	X	X	X	X	X	X
TAILED FROG *ASCAPHUS TRUEI*	S	BA[4]	SSV		X	X			X	X	X	X
RED-LEGGED FROG *RANA AURORA*	S	BS[4]	SSU			X	X					
FOOTHILL YELLOW LEGGED FROG *RANA BOYLII*	S	BS[4]	SSV			X						
BULLFROG [6] *RANA CATESBEIANA*	S					X						
SPOTTED FROG *RANA PRETIOSA*	N	FC	SSC			X						
REPTILES												
PAINTED TURTLE *CHRYSEMYS PICTA*	N	BA[4]	SSC			X						
NORTHWESTERN POND TURTLE[5] *CLEMMYS MARMORATA MARMORATA*	S	BS[4]	SSC		X	X	X	X	X			
NORTHERN ALLIGATOR LIZARD *ELGARIA COERULEA*	S				X		X	X	X			
SOUTHERN ALLIGATOR LIZARD *ELGARIA MULTICARINATA*	S			T			X	X				

Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Special Habitats: Cliff(C) Talus (T)	Special Habitats: Dead/ Down	Special Habitats: Riparian/ Wetland	Seral Stage: Hardwood Forest	Seral Stage: Early	Seral Stage: Mid	Seral Stage: Late	Seral Stage: Mature	Seral Stage: Old-Growth
REPTILES (CONT.)												
WESTERN FENCE LIZARD *SCELOPORUS OCCIDENTALIS*	S				X	X		X	X			
WESTERN SKINK *EUMECES SKILTONIANUS*	S			T	X		X					
RUBBER BOA *CHARINA BOTTAE*	S				X			X	X			
RACER COLUBER CONSTRICTOR	S						X	X				
SHARPTAIL SNAKE *CONTIA TENUIS*	S	BA[4]	SSV	T	X	X						
RINGNECK SNAKE *DIADOPHIS PUNCTATUS*	S				X	X	X	X	X			
COMMON KINGSNAKE *LAMPROPELTIS GETULUS*	S	BA[4]	SV[4]			X						
GOPHER SNAKE *PITUOPHIS CATENIFER*	S						X					
WESTERN AQUATIC GARTER SNAKE *THAMNOPHIS COUCHI*	S					X	X					
WESTERN TERR.GARTER SNAKE *THAMNOPHIS ELEGANS*	S				X	X	X					
NORTHWESTERN GARTER SNAKE *THAMNOPHIS ORDINOIDES*	S					X		X				
COMMON GARTER SNAKE *THAMNOPHIS SIRTALIS*	S					X	X					
WESTERN RATTLESNAKE *CROTALUS VIRIDIS*	K			C	X							

Appendix Wild - II. Bird Species and Their Primary Habitat Associations Likely to Occur Within the Upper Middle Umpqua Subwatershed[1].

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
PACIFIC LOON *GAVIA PACIFICA*	N					X										
COMMON LOON *GAVIA IMMER*	N	BA				X				X						
PIED-BILLED GREBE *PODILYMBUS PODICEPS*	S				X					X						
EARED GREBE *PODICEPS NIGRICOLLIS*	N				X	X				X						
DOUBLE-CRESTED CORMORANT *PHALACROCORAX AURITUS*	N				X	X	C			X						
AMERICAN BITTERN *BOTAURUS LENTIGINOSUS*	N				X	X				X						
REAT EGRET *ARDEA ALBA*	N	BT[4]			X	X				X						
SNOWY EGRET *EGRETTA THULA*[4]	N				X	X				X						
CATTLE EGRET *BUBULCUS IBIS*	N				X	X										
GREAT BLUE HERON *ARDEA HERODIAS*	S					X				X						
GREEN HERON *BUTORIDES VIRESCENS*	S				X	X				X						
BLACK-CROWNED NIGHT HERON *NYCTICORAX NYCTICORAX*	N				X	X				X						
TUNDRA SWAN *CYGNUS COLUMBIANUS*	N					X				X						

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
GREATER WHITE-FRONTED GOOSE *ANSER ALBIFRONS*	N			X		X				X						
CANADA GOOSE BRANTA CANADENSIS	N			X		X				X						
ALEUTIAN CANADA GOOSE BRANTA CANADENSIS LEUCOPAREIA	N	FT	SE			X				X						
CACKLING CANADA GOOSE BRANTA CANADENSIS MINIMA[4]	N			X						X						
DUSKY CANADA GOOSE BRANTA CANADENSIS OCCIDENTALIS	N	BA[4]		X		X				X						
WOOD DUCK AIX SPONSA	S			X				X		X				X	X	
GREEN-WINGED TEAL ANAS CRECCA	S			X		X				X						
MALLARD ANAS PLATYRHYNCHOS	S			X		X				X						
NORTHERN PINTAIL ANAS ACUTA	S			X		X				X						
BLUE-WINGED TEAL ANAS DISCORS	N			X		X				X						
CINNAMON TEAL ANAS CYANOPTERA	S			X						X						
NORTHERN SHOVELER ANAS CLYPEATA	N			X		X				X						
GADWALL ANAS STREPERA	N			X		X				X						
EURASIAN WIGEON ANAS PENELOPE	N			X		X				X						

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
AMERICAN WIGEON ANAS AMERICANA	N			X		X				X						
CANVASBACK AYTHYA VALISINERIA	N			X		X				X						
REDHEAD AYTHYA AMERICANA	N			X		X				X						
RING-NECKED DUCK AYTHYA COLLARIS[4]	N			X						X						
GREATER SCAUP AYTHYA MARILA	N			X		X				X						
LESSER SCAUP AYTHYA AFFINIS[4]	N			X		X				X						
COMMON GOLDENEYE BUCEPHALA CLANGULA	S			X		X		X		X						
BARROW'S GOLDENEYE BUCEPHALA ISLANDICA	N					X		X		X						
BUFFLEHEAD BUCEPHALA ALBEOLA[4]	N			X		X		X		X				X	X	
HOODED MERGANSER LOPHODYTES CUCULLATUS	S			X				X		X				X	X	
COMMON MERGANSER MERGUS MERGANSER	S			X		X		X		X				X	X	
RED-BREASTED MERGANSER MERGUS SERRATOR	S			X		X		X		X				X	X	
TURKEY VULTURE CATHARTES AURA	S				X		C				X				X	
OSPREY PANDION HALIAETUS	K					X		X		X				X	X	

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
WHITE-TAILED KITE ELANUS LEUCURUS	N	BT								X						
BALD EAGLE HALIAEETUS LEUCOCEPHALUS	K	FT	ST			X		X		X					X	
GOLDEN EAGLE AQUILA CHRYSAETOS	K										X					X
NORTHERN HARRIER CIRCUS CYANEUS	N									X						
SHARP-SHINNED HAWK ACCIPITER STRIATUS	S												X	X	X	
COOPER'S HAWK ACCIPITER COOPERII	S												X	X	X	
NORTHERN GOSHAWK ACCIPITER GENTILIS	S	BS[4]	SSC											X	X	
RED-SHOULDERED HAWK BUTEO LINEATUS	N									X						
RED-TAILED HAWK BUTEO JAMAICENSIS	S										X				X	X
ROUGH-LEGGED HAWK BUTEO LAGOPUS	N									X						
AMERICAN KESTREL FALCO SPARVERIUS	S							X		X	X					
MERLIN FALCO COLUMBARIUS	S	BA								X						
AMERICAN PEREGRINE FALCON FALCO PEREGRINUS ANATUM[5]	N	FE	SE			X	X			X						X
RING-NECKED PHEASANT PHASIANUS COLCHICUS	S			X						X						

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
BLUE GROUSE DENDRAGAPUS OBSCURUS	K			X							X	X	X	X	X	
RUFFED GROUSE BONASA UMBELLUS	K			X						X						X
WILD TURKEY MELEAGRIS GALLOPAVO	K			X												X
CALIFORNIA QUAIL CALLIPEPLA CALIFORNICA	S			X												X
MOUNTAIN QUAIL OREORTYX PICTUS[4]	S			X							X	X				X
VIRGINIA RAIL RALLUS LIMICOLA	N				X					X						
SORA PORZANA CAROLINA	N				X					X						
AMERICAN COOT FULICA AMERICANA	S			X		X				X						
KILLDEER CHARADRIUS VOCIFERUS	S					X				X						
SPOTTED SANDPIPER ACTITIS MACULARIA	S				X	X				X						
COMMON SNIPE GALLINAGO GALLINAGO	S			X	X	X				X						
MARBLED MURRELET BRACHYRAMPHUS MARMORATUS MARMORATUS	S	FT	ST[4]			X									X	
BAND-TAILED PIGEON COLUMBA FASCIATA	K			X		X				X						X

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
ROCK DOVE COLUMBA LIVIA	S					X	C									
MOURNING DOVE ZENAIDA MACROURA	S									X						
BARN OWL TYTO ALBA	S							X			X					X
WESTERN SCREECH-OWL OTUS KENNICOTTII	K							X		X						
GREAT HORNED OWL BUBO VIRGINIANUS	S									X	X			X	X	X
NORTHERN PYGMY-OWL GLAUCIDIUM GNOMA	K	BT	SSU					X						X	X	
BURROWING OWL ATHENE CUNICULARIA	N	BS	SSC			X										
NORTHERN SPOTTED OWL STRIX OCCIDENTALIS CAURINA	K	FT	ST					X						X	X	
BARRED OWL STRIX VARIA	S							X						X	X	
SHORT-EARED OWL ASIO FLAMMEUS	N				X					X						
NORTHERN SAW-WHET OWL AEGOLIUS ACADICUS	S	BA[4]									X			X	X	X
COMMON NIGHTHAWK CHORDEILES MINOR	S				X	X	T			X	X					X
BLACK SWIFT CYPSELOIDES NIGER	N				X		C									
VAUX'S SWIFT CHAETURA VAUXI	S				X			X		X	X	X			X	

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ANNA'S HUMMINGBIRD CALYPTE ANNA	S															X
RUFOUS HUMMINGBIRD SELASPHORUS RUFUS	K				X					X	X	X		X		X
ALLEN'S HUMMINGBIRD SELASPHORUS SASIN	S	BT[4]			X						X	X				X
BELTED KINGFISHER CERYLE ALCYON	S				X	X	C	X		X						
LEWIS' WOODPECKER MELANERPES LEWIS	N	BA[4]	SSC					X	X							
ACORN WOODPECER MELANERPES FORMICIVORUS	S	BT[4]						X								X
RED-BREASTED SAPSUCKER SPHYRAPICUS RUBER	S								X	X						
DOWNY WOODPECKER PICOIDES PUBESCENS	S							X		X						
HAIRY WOODPECKER PICOIDES VILLOSUS	S							X	X					X	X	
BLACK-BACKED WOODPECKER PICOIDES ARCTICUS	N	BA[4]	SSC					X								
NORTHERN FLICKER COLAPTES AURATUS	K							X	X		X			X	X	X
PILEATED WOODPECKER DRYOCOPUS PILEATUS	K	BA[4]	SSV[4]					X	X						X	
OLIVE-SIDED FLYCATCHER CONTOPUS BOREALIS	K				X									X	X	
WESTERN WOOD-PEWEE CONTOPUS SORDIDULUS	S													X	X	

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WILLOW FLYCATCHER EMPIDONAX TRAILLII	K									X						
HAMMOND'S FLYCATCHER EMPIDONAX HAMMONDII	S													X	X	
DUSKY FLYCATCHER EMPIDONAX OBERHOLSERI[7]	S															
PACIFIC SLOPE FLYCATCHER EMPIDONAX DIFFICILIS	S														X	
BLACK PHOEBE SAYORNIS NIGRICANS	N	BT			X		C			X						
WESTERN KINGBIRD TYRANNUS VERTICALIS[7]	S															
HORNED LARK EREMOPHILA ALPESTRIS	S					X										
PURPLE MARTIN PROGNE SUBIS	K	BA[4]	SSC			X		X		X	X					
TREE SWALLOW TACHYCINETA BICOLOR	S							X		X	X				X	X
VIOLET-GREEN SWALLOW TACHYCINETA THALASSINA	S						C	X		X						
NORTHERN ROUGH-WINGED SWALLOW STELGIDOPTERYX SERRIPENNIS	S						C			X						
BANK SWALLOW RIPARIA RIPARIA	N	BT[4]	SSU[4]				C			X						
CLIFF SWALLOW HIRUNDO PYRRHONOTA	S						C									
BARN SWALLOW HIRUNDO RUSTICA	S									X						X

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
GRAY JAY PERISOREUS CANADENSIS	S											X	X	X	X	
STELLER'S JAY CYANOCITTA STELLERI	K											X	X	X	X	
SCRUB JAY APHELOCOMA CALIFORNICA	S															X
AMERICAN CROW CORVUS BRACHYRHYNCHOS	K									X					X	
COMMON RAVEN CORVUS CORAX	K						C				X	X		X	X	X
BLACK-CAPPED CHICKADEE PARUS ATRICAPILLUS	S							X		X						
MOUNTAIN CHICKADEE PARUS GAMBELI	S							X								
CHESTNUT-BACKED CHICKADEE PARUS RUFESCENS	K							X				X	X	X	X	
BUSHTIT PSALTRIPARUS MINIMUS	S															X
RED-BREASTED NUTHATCH SITTA CANADENSIS	K							X	X					X	X	
WHITE-BREASTED NUTHATCH SITTA CAROLINENSIS	S							X								
BROWN CREEPER CERTHIA AMERICANA	K							X						X	X	
BEWICK'S WREN THRYOMANES BEWICKII	S								X		X					X
HOUSE WREN TROGLODYTES AEDON	S							X	X		X					

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
WINTER WREN TROGLODYTES TROGLODYTES	K								X					X	X	
MARSH WREN CISTOTHORUS PALUSTRIS	S									X						
AMERICAN DIPPER CINCLUS MEXICANUS	S					X				X						
GOLDEN-CROWNED KINGLET REGULUS SATRAPA	S												X	X	X	X
RUBY-CROWNED KINGLET REGULUS CALENDULA	S										X	X		X	X	
WESTERN BLUEBIRD SIALIA MEXICANA	S	BA[4]	SSV					X			X					
TOWNSEND'S SOLITAIRE MYADESTES TOWNSENDI	S						C		X		X	X		X	X	
AMERICAN ROBIN TURDUS MIGRATORIUS	K									X	X	X				X
SWAINSON'S THRUSH CATHARUS USTULATUS	K				X						X	X	X	X	X	X
HERMIT THRUSH CATHARUS GUTTATUS	S										X	X		X	X	
VARIED THRUSH IXOREUS NAEVIUS	K													X	X	X
WRENTIT CHAMAEA FASCIATA	K					X										
MOCKINGBIRD MIMUS POLYGLOTTOS	N					X										
AMERICAN PIPIT ANTHUS SPINOLETTA	S					X				X						

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
CEDAR WAXWING BOMBYCILLA CEDRORUM	K				X											X
NORTHERN SHRIKE LANIUS EXCUBITOR[7]	N															
LOGGERHEAD SHRIKE LANIUS LUDOVICIANUS[4]	N	BT[4]			X					X						
EUROPEAN STARLING STURNUS VULGARIS	S							X								X
SOLITARY VIREO VIREO SOLITARIUS	S													X	X	
HUTTON'S VIREO VIREO HUTTONI	S															X
WARBLING VIREO VIREO GILVUS	S															X
ORANGE-CROWNED WARBLER VERMIVORA CELATA	S				X						X	X				X
NASHVILLE WARBLER VERMIVORA RUFICAPILLA	S				X											X
YELLOW WARBLER DENDROICA PETECHIA	K				X											X
YELLOW-RUMPED WARBLER DENDROICA CORONATA	S				X						X	X	X	X	X	X
BLACK-THROATED GRAY WARBLER DENDROICA NIGRESCENS	K										X	X	X	X	X	X
TOWNSEND'S WARBLER DENDROICA TOWNSENDI	K				X									X	X	
HERMIT WARBLER DENDROICA OCCIDENTALIS	K				X								X	X	X	

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
PALM WARBLER DENDROICA PALMARUM	N				X					X						X
BLACK-AND-WHITE WARBLER MNIOTILTA VARIA	N				X											
MACGILLIVRAY'S WARBLER OPORORNIS TOLMIEI	K				X					X						
COMMON YELLOWTHROAT GEOTHLYPIS TRICHAS	S				X					X						
WILSON'S WARBLER WILSONIA PUSILLA	K				X											X
YELLOW-BREASTED CHAT ICTERIA VIRENS[7]	K															
WESTERN TANAGER PIRANGA LUDOVICIANA	K				X						X			X	X	
BLACK-HEADED GROSBEAK PHEUCTICUS MELANOCEPHALUS	S				X											X
LAZULI BUNTING PASSERINA AMOENA[7]	K				X											
RUFOUS-SIDED TOWHEE PIPILO ERYTHROPHTHALMUS	K										X	X				X
CHIPPING SPARROW SPIZELLA PASSERINA	S				X						X	X				X
VESPER SPARROW POOECETES GRAMINEUS	S	BT[4]	SSC[4]		X	X										
SAVANNAH SPARROW PASSERCULUS SANDWICHENSIS	S									X						
FOX SPARROW PASSERELLA ILIACA	S															X

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-Tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
SONG SPARROW MELOSPIZA MELODIA	K									X						X
LINCOLN'S SPARROW MELOSPIZA LINCOLNII	K				X					X						
GOLDEN-CROWNED SPARROW ZONOTRICHIA ATRICAPILLA	K									X						
WHITE-CROWNED SPARROW ZONOTRICHIA LEUCOPHRYS	S				X						X					X
HARRIS' SPARROW ZONOTRICHIA QUERULA[7]	N															
DARK-EYED JUNCO JUNCO HYEMALIS	K										X	X		X	X	X
LAPLAND LONGSPUR CALCARIUS LAPPONICUS	S					X										
SNOW BUNTING PLECTROPHENAX NIVALIS	N					X										
WESTERN MEADOWLARK STURNELLA NEGLECTA[7]	S	BA[4]														
RED-WINGED BLACKBIRD AGELAIUS PHOENICEUS	S				X	X				X						
YELLOW-HEADED BLACKBIRD XANTHOCEPHALUS XANTHOCEPHALUS	S				X					X						
BREWER'S BLACKBIRD EUPHAGUS CYANOCEPHALUS	S				X	X				X	X					X
BROWN-HEADED COWBIRD MOLOTHRUS ATER	S				X					X	X	X				X
BULLOCK'S ORIOLE ICTERUS BULLOCKII	S				X					X						

Common Name	Presence	Status Federal	Status State	Game Bird	Neo-tropical	Coastal	Cliff Talus	Snags	Dead & Down	Riparian Wetland	Early Seral	Mid Seral	Late Seral	Mature	Old-Growth	Hardwood Forests
PURPLE FINCH CARPODACUS PURPUREUS	S											X			X	
HOUSE FINCH CARPODACUS MEXICANUS[7]	S															
PINE SISKIN CARDUELIS PINUS	K									X	X	X	X	X	X	X
LESSER GOLDFINCH CARDUELIS PSALTRIA	S									X						
AMERICAN GOLDFINCH CARDUELIS TRISTIS	K															X
RED CROSSBILL LOXIA CURVIROSTRA	S													X	X	
EVENING GROSBEAK COCCOTHRAUSTES VESPERTINUS	K										X	X	X	X		
HOUSE SPARROW PASSER DOMESTICUS[7]	S															

MAMMALS

		Status		**Special Habitats**				**Seral Stage**				
Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Cliff(C) Talus (T)	Dead/ Down	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth
VIRGINIA OPOSSUM *DIDELPHIS VIRGINIANA*	S				S,D/D	X	X					
PACIFIC WATER SHREW *SOREX BENDIRII*	S				D/D	X						
PACIFIC SHREW *SOREX PACIFICUS*	S				D/D	X	X	X				
TROWBRIDGE'S SHREW *SOREX TROWBRIDGII*	S				D/D		X			X	X	X
VAGRANT SHREW *SOREX VAGRANS*	S					X		X				
SHREW-MOLE *NEUROTRICHUS GIBBSII*	S				D/D	X	X			X	X	
PACIFIC MOLE *SCAPANUS ORARIUS*	S					X	X	X	X			

Status **Special Habitats** **Seral Stage**

Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Cliff(C) Talus (T)	Dead/ Down	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth
TOWNSEND'S MOLE *SCAPANUS TOWNSENDII*	S					X		X				
BIG BROWN BAT *EPTESICUS FUSCUS*	S			C	S	X	X	X				X
SILVER-HAIRED BAT *LASIONYCTERIS NOCTIVAGANS*	S	BT	SSU		S		X		X	X	X	X
HOARY BAT *LASIURUS CINEREUS*	S					X	X	X	X		X	X
CALIFORNIA MYOTIS *MYOTIS CALIFORNICUS*	S			C	S	X	X	X	X	X	X	X
LONG-EARED MYOTIS *MYOTIS EVOTIS*	S	BT	SSU		S	X	X			X	X	X
LITTLE BROWN MYOTIS *MYOTIS LUCIFUGUS*	S				S	X	X	X	X		X	X
FRINGED MYOTIS *MYOTIS THYSANODES*	S	BS	SSV	C		X	X	X	X	X	X	X
LONG-LEGGED MYOTIS *MYOTIS VOLANS*	S	BT[4]	SSU[4]	C	S	X	X		X	X		X
YUMA MYOTIS *MYOTIS YUMANENSIS*	S	BT[4]	SSU[4]	C	S	X	X	X			X	X
PACIFIC WESTERN BIG-EARED BAT *CORYNORHINUS TOWNSENDII TOWNSENDII*[5]	S	BS[4]	SSC			X		X	X	X	X	X
COYOTE *CANIS LATRANS*	K				D/D	X	X	X	X			
GRAY FOX *UROCYON CINEREOARGENTEUS*	S				D/D		X					
RED FOX *VULPES VULPES*	S				D/D	X	X	X				
BLACK BEAR *URSUS AMERICANUS*	K				S&D/D	X	X	X	X	X	X	X
RINGTAIL *BASSARISCUS ASTUTUS*	N	BT	SSU	T			X					

						Status Special Habitats		**Seral Stage**				
Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Cliff(C) Talus (T)	Dead/ Down	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth
RACCOON *PROCYON LOTOR*	S				S	X	X	X	X	X	X	X

RIVER OTTER *LUTRA CANADENSIS*	S					X							
AMERICAN MARTEN *MARTES AMERICANA*	S	BA[4]	SSV[4]		S&D/D						X	X	
FISHER *MARTES PENNANTI*	S	BS[4]	SSC	T	S&D/D						X	X	
STRIPED SKUNK *MEPHITIS MEPHITIS*	S					X							
WESTERN SPOTTED SKUNK *SPILOGALE GRACILIS*	S				D/D	X	X	X	X				
SHORT-TAILED WEASEL *MUSTELA ERMINEA*	S			T	D/D		X	X		X	X	X	
LONG-TAILED WEASEL *MUSTELA FRENATA*	S				D/D		X	X	X				
MINK *MUSTELA VISON*	S				D/D	X							
MOUNTAIN LION *FELIS CONCOLOR*	K			C&T		X		X	X		X		
BOBCAT *FELIS RUFUS*	K			C&T	D/D	X		X	X				
ROOSEVELT ELK *CERVUS ELAPHUS*	K					X		X	X		X	X	
BLACK-TAILED DEER *ODOCOILEUS HEMIONUS*	K					X		X	X	X	X	X	
MOUNTAIN BEAVER *APLODONTIA RUFA*	S				D/D		X	X	X				
NORTHERN FLYING SQUIRREL *GLAUCOMYS SABRINUS*	S				S						X	X	
WESTERN GRAY SQUIRREL *SCIURUS GRISEUS*	S	BT[4]	SSU[4]		S		X						

				Status	Special Habitats		Seral Stage				
Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Cliff(C) Talus (T)	Dead/ Down	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth
CALIFORNIA GROUND SQUIRREL *SPERMOPHILUS BEECHEYI*[7]	S											
TOWNSEND'S CHIPMUNK *TAMIAS TOWNSENDII*	K			T	D/D				X	X	X	X
DOUGLAS' SQUIRREL *TAMIASCIURUS DOUGLASII*	K				S				X	X	X	X
WESTERN POCKET GOPHER *THOMOMYS MAZAMA*	S						X	X				
BEAVER *CASTOR CANADENSIS*	K					X						
NUTRIA *MYOCASTOR COYPUS*	N					X						
DEER MOUSE *PEROMYSCUS MANICULATUS*	S			T	D/D		X	X	X			
WESTERN HARVEST MOUSE *REITHRODONTOMYS MEGALOTIS*	N					X	X					
HOUSE MOUSE *MUS MUSCULUS*[7]	S											
WHITE-FOOTED VOLE *ARBORIMUS ALBIPES*	S	BS[4]	SSU		D/D	X					X	
RED TREE VOLE *ARBORIMUS LONGICAUDUS*	S									X	X	X
WESTERN RED-BACKED VOLE *CLETHRIONOMYS CALIFORNICUS*	S				D/D					X	X	X
LONG-TAILED VOLE *MICROTUS LONGICAUDUS*	S			T	D/D	X		X				
CREEPING VOLE *MICROTUS OREGONI*	S				D/D	X	X	X	X			
TOWNSEND'S VOLE *MICROTUS TOWNSENDII*	S					X		X				
PACIFIC JUMPING MOUSE *ZAPUS TRINOTATUS*	S					X	X	X				

					Status	Special Habitats		Seral Stage				
Common/Latin Name	Presence[1]	Status Federal[2]	Status State[3]	Cliff(C) Talus (T)	Dead/ Down	Riparian/ Wetland	Hardwood Forest	Early	Mid	Late	Mature	Old-Growth
BUSHY-TAILED WOODRAT *NEOTOMA CINEREA*	S			C&T	D/D		X			X	X	X
DUSKY-FOOTED WOODRAT *NEOTOMA FUSCIPES*	N						X	X	X	X	X	X
NORWAY RAT *RATTUS NORVEGICUS* [7]	S											
BLACK RAT *RATTUS RATTUS* [7]	S											
ONDATRA ZIBETHICUS	S					X						
PORCUPINE *ERETHIZON DORSATUM*	K			C	D/D		X	X	X	X	X	X
BRUSH RABBIT *SYLVILAGUS BACHMANI*	S						X	X	X		X	