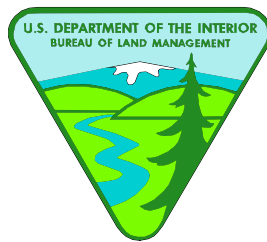


**BLM ADDENDUM FOR**

**Lower North Umpqua Watershed Assessment**

**Fifth Field Watershed**  
**HUC #1710030112**

**Roseburg District BLM**



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## Table of Contents

<b>List of Addendum Figures, Maps, and Tables .....</b>	<b>204</b>
<b>A1. BLM Management Direction and Key Questions .....</b>	<b>205</b>
A1.1. Upcoming BLM decisions expected In Lower North Umpqua.....	205
A1.1.1. Lower North Umpqua Watershed key questions for the BLM .....	205
<b>A2. BLM Vegetative Characterization .....</b>	<b>207</b>
A2.1. Unmanaged forest stand development.....	207
A2.2. Managed forest stands .....	207
A2.3. Stand structure classification and seral stage.....	208
A2.4. Arrangement of forest stands and current conditions .....	210
<b>A3. Wildlife Habitat and Species .....</b>	<b>212</b>
A3.1. Management of riparian reserves for wildlife objectives .....	212
A3.2. Special status species .....	214
A3.2.1. Federally threatened and endangered species and proposed listings .....	214
A3.2.2. State of Oregon listed species .....	217
A3.2.3. Bureau sensitive species.....	218
A3.2.4. Survey and manage species.....	218
A3.3. Forest and wildlife habitat recommendations .....	219
A3.3.1. Commercial harvest objectives .....	219
A3.3.2. Wildlife objectives for riparian reserve treatments.....	220
<b>A4. Roads Within the Lower North Umpqua .....</b>	<b>222</b>
<b>A5. Special Status Plants and Noxious Weeds.....</b>	<b>224</b>
A5.1. Special status plants .....	224
A5.1.1. Federally listed species .....	224
A5.1.2. State of Oregon listed.....	225
A5.1.3. Bureau sensitive species.....	225
A5.1.4. Assessment species .....	226
A5.1.5. Tracking species.....	226
A5.1.6. Survey and manage bryophyte, lichen, fungi and plant species .....	226
A5.2. Noxious weeds.....	227
A5.2.1. Noxious and invasive weeds in the Lower North Umpqua Watershed .....	227
A5.2.2. Weed control in the Lower North Umpqua Watershed .....	228
A5.2.3. Noxious weed recommendations for the Lower North Umpqua Watershed .....	230
<b>Addendum Appendices .....</b>	<b>232</b>
Addendum appendix 1: Wildlife - Additional special status species and special attention species.....	233
Addendum appendix 2: Noxious weeds – Douglas County policy, control ratings, weed lists, and management. ....	243
Addendum appendix 3: Noxious Weeds - Comprehensive list of Douglas County noxious weeds.....	247
<b>Addendum Maps.....</b>	<b>249</b>

## List of Addendum Figures, Maps, and Tables

### **Figures**

Figure A-1: BLM vegetative type and age class within Lower North Umpqua .....	211
Figure A-2: Lower North Umpqua BLM Forest Classes within Riparian Reserves Outside North Bank Habitat Management Area .....	214
Figure A-3: Lower North Umpqua road categories.....	222

### **Maps**

Map A-1: Lower North Umpqua BLM Forest Age Classes .....	250
Map A-2: Northern Spotted Owl Habitat Distribution and Marbled Murrelet Zone 2...	251
Map A-3: Columbian White-tailed Deer Distribution .....	252

### **Tables**

Table A-1: BLM vegetative type and age class by subwatershed in Lower North Umpqua.....	211
Table A-2: Lower North Umpqua, acres of suitable, dispersal, and critical spotted owl habitat.....	215
Table A-3: Lower North Umpqua, acres of spotted owl habitat types on BLM land.....	216
Table A-4: Miles of road categories within the Lower North Umpqua Watershed.....	222
Table A-5: Documented noxious weeds in the Lower North Umpqua. ....	229
Table A-6: Terrestrial Wildlife Special Status Species, Presence or Expected Presence in Lower North Umpqua Watershed.....	239

## **A1. BLM Management Direction and Key Questions**

### ***A1.1. Upcoming BLM decisions expected In Lower North Umpqua***

Within the Lower North Umpqua watershed, BLM has acquired approximately 6,600 acres of land specifically to manage habitat to enhance the Columbian White-tailed Deer (CWTD). This area is called the North Bank Habitat Management Area (NBHMA) and will be managed as described in the NBHMA Environmental Impact Statement. The BLM also manages an additional 5,780 acres for multiple use objectives. These lands are mostly scattered in the headwater region in the north and northwest of the watershed.

Within the next five to ten years, it is likely that the Swiftwater Field Manager will need to be involved in some aspect of decision-making on those 5,780 acres with the following general areas. These areas have been used to help guide the key questions, the information to answer those questions, and the resulting management opportunities:

- Noxious weed control;
- Commercial thinning in GFMA & Connectivity;
- Regeneration harvest in GFMA & Connectivity;
- Density management in Riparian Reserves for fish & wildlife objectives;
- Road rehabilitation/restoration (decommission or treatment candidates); and
- Culvert replacement or removal because of high risk of failure.

A major assumption in the development of these key questions is that the Roseburg District Resource Management Plan (RMP) has given some prescriptive measures through the landscape land use allocations. Because the RMP sets standards and guidelines on each land use allocation and the kinds of activities that can occur in those land uses, this watershed assessment seeks to provide information to guide decision making within those overarching planning parameters. Guided by the above potential decision making areas, the key questions below seek to further focus the kinds of information that will be the most helpful.

#### **A1.1.1. Lower North Umpqua Watershed key questions for the BLM**

##### **Forest vegetation**

- What is the current BLM seral age class distribution?
- Where are opportunities within the next 5-10 years for BLM commercial thinnings in GFMA & Connectivity?

**Wildlife habitat and species**

- What is the occurrence of federally listed terrestrial species and their designated core areas under the RMP? What is the occurrence of bureau-sensitive (S&M, state listed) terrestrial species?
- What wildlife objectives can be obtained through management in Riparian Reserves?
- What are the management implications of federally listed species within Lower North Umpqua Watershed?

**Special status plants, non-native species and noxious weeds**

- Describe any Special Status Plant or Survey and Manage species that have been discovered within the watershed, their habitat, abundance and distribution.
- What are the relative abundance, distribution, and trends of non-native plants and noxious weeds?

**Road related sediment**

- Where are the roads on BLM that are likely to influence erosion and sediment rates and most likely to impact aquatic resources?

**Fish and aquatic habitat**

*The following question is answered in the main text of the Umpqua Basin Watershed Council watershed assessment:*

- What is the known current distribution of fish species within the watershed (e.g., map of fish distribution by species) including federally listed, candidate aquatic species, their critical habitat, and Essential Fish Habitat?

## **A2. BLM Vegetative Characterization<sup>1</sup>**

### **A2.1. *Unmanaged forest stand development***

The dominant physical process responsible for change in Northwest forests is fire. Fire is the major disturbance event that leads to regeneration of Douglas-fir by removing the overstory shade and creating a bare mineral seedbed. If not for naturally occurring stand-replacing fires the forest would consist predominantly of shade tolerant conifers. The frequency and intensity of fires are variable and dependant on landform and climate. In general, low intensity surface fires are more prevalent than intense, stand replacing fires. Fires create openings in the canopy and remove much of the understory vegetation thus sustaining the health of the dominant trees and provide for regeneration of shade intolerant plants. Many of the largest and oldest Douglas-fir trees have survived numerous past fires and exhibit varying degrees of decadence. Fires create structures including snags, defective live trees, and large down logs. The result is a mosaic of stands of varying age and structures across the landscape. Fires reduce competition to the plants that survive, and may reduce populations of insects and diseases that attack trees. As such, fire has been a key component in maintenance of forest health.

Openings created by fires and other disturbances are rapidly reestablished with the plants that existed prior to the disturbance. Roots and seeds that survive the fire in the soil sprout and germinate soon after. Adjacent plants shed seed on these areas, and the process of regeneration begins. The progression is not so much a well-defined succession of new plants as it is a reoccurrence of the previously established plants. The length of time required for Douglas-fir to reestablish and dominate is variable and dependent on seed sources and the degree to which the site is occupied by other plants. The age of the trees in natural stands is usually not even, but rather a range that may span 200 or more years. The term even-aged often does not accurately define natural stands. A better term may be *a single cohort* and is defined as all the trees that have resulted after a single disturbance event (Oliver et. al. 1990). A *multi-cohort* stand is one where minor disturbance events have created openings in a patch like nature and younger cohorts exist interspersed with older cohorts.

Other disturbance events that add to plant diversity include landslides, wind, disease, insects, and climatic change. These disturbances, as well as low intensity fire, generate biological legacies and new cohorts of trees through time and create and maintain heterogeneity spatially within stands (Franklin et al. 2002).

### **A2.2. *Managed forest stands***

Forest development has replaced fire as the dominant disturbance event. Logging, road building and planting have converted much of the original forest into young Douglas-fir plantations. To some extent clear cutting and burning mimics a major disturbance event, but there are many differences. Traditional clear cutting leaves little or no above ground structural legacy. A network of logging roads is needed for logging, reforestation, and

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<sup>1</sup> Al James contributed this section.

forest protection. Prior to the Northwest Forest Plan most of the merchantable material was removed in the harvest operation. The limbs and tops of trees are often burned following harvest to clear ground area for planting seedlings and to reduce the fire hazard. Typically between 450 and 650 seedlings per acre are planted in order to have 250 to 300 trees per acre at the first commercial entry. Pre-commercial thinning is often required about 15 years after planting. Past management plans were designed to produce stands that are uniform and even-aged. There are fewer dead and defective trees and less coarse woody debris in managed stands than what is normally found in un-managed stands.

### ***A2.3. Stand structure classification and seral stage***

Structural and compositional characteristics will be used to define three distinct seral stages: Early, mid and late. This is probably a gross simplification of how natural stands become old growth (for example Franklin et al. suggests 7 stages that span 800 to 1200 years (Franklin 2002), but it is presented in this way because it can be used with our inventory data and it is a good match for what we know about our young stands. It will be used to describe a reasonable set of recommendations for young stand management now and in the near future. Each of these seral stages contains characteristic structures that can be defined.

- Early Seral is the time when the available growing space is occupied and shared by many species of plants. These early successional plants, including grasses, brush species, as well as trees are sometimes referred to as pioneers, and may be short or long lived. In plantations these early plants compete with trees and are often removed as part of management. Conifers become established and eventually expand to exclude many of the early plants so that eventually competition is primarily between trees. In general stand age is less than 30 years, and the average diameter of trees is less than 10 inches.
- Mid seral begins when trees and/or other plants have captured all of the available growing space. The area is fully occupied and new plants will normally not invade unless there is further disturbance. The dominant plants are competing with each other for the available growing space, often forming a continuous closed canopy that allows very little light to reach the soil surface. Shade intolerant trees that are not in a dominant canopy position begin to die out and there are fewer shrubs, herbaceous plants and grasses. Growing space becomes available slowly as trees die from competition, and tree growth rates decline.

Mid seral stands range in age from about 30 to 80 years, and the diameters of trees average from about 10 to over 20 inches.

- Stand differentiation often begins in the mid seral stage of development.

In natural stands, differences in the age, size, and genetic potential of trees, micro site, and the abundance and arrangement of plants leads toward stand differentiation. Individuals or groups of larger and older trees in mix with smaller trees and shrubs characterize these stands. Canopy gaps allow for shrubs, hardwoods and conifer regeneration.

In managed plantations, trees are more uniform in size, age, spacing, and genetic potential. Other plants are often excluded as part of management. It is more likely that the trees in these stands will all grow up together and reach a condition where competition between trees results in substantially reduced growth. It probably takes much more time for stands in this condition to differentiate. These are stands where density management may be needed to meet the objectives of the current Resource Management Plan.

- Late seral is defined as having the following characteristics:
  - Vertical diversification: Shade tolerant species grow into intermediate and co-dominant canopy positions and old Douglas-firs re-establish lower crowns by developing epicormic branches. These processes can produce a continuous canopy from the ground to canopy top, and is sometimes referred to as “multiple canopies”. It is estimated that this developmental stage may take 200 to 350 years in Douglas-fir stands (Franklin et al. 2002) and may not often occur in our area because of the frequency of fire.
  - Diverse tree size, form and condition: Trees are not evenly spaced and may exist in clumps, and tree size and forms are affected by this variable distribution and density. Trees that are open grown typically have large diameter stems and full crowns. Tall, cylindrical stems with narrow crowns are found when trees grow close together. Large old conifers are present. Many of the oldest conifers are fire scarred and hollow, have broken tops, and contain heart and butt rots.
  - Canopy gaps and natural openings: Late successional forests contain openings. The degree to which a stand is open, and the size and spatial arrangement of openings depend on the processes that create them. Stand age, frequency and intensity of fire, disease, insects, wind, and soil movement all have an effect.
  - Large snags in various stages of decay: Fire, insects and disease are primarily responsible for the creation of large snags. This is a highly variable characteristic. Some large snags are present in late successional forests even when fires occur frequently.
  - Coarse woody debris: The processes that create snags also create coarse woody debris. The amount that exists may depend on the frequency and intensity of fire.



- Species diversity: Species diversity is high in late seral forests, many of which are difficult to inventory and describe. The late seral stage includes areas of early and mid seral development interspersed.

For the sake of this analysis stands that are typed as being 80 years of age and older are considered late seral. These are naturally occurring stands that contain many of the characteristics that define late seral forest.

#### ***A2.4. Arrangement of forest stands and current conditions***

The arrangement of stands is dependent on the processes that created them, and results in a mosaic of single and multi-cohort stands across the landscape. In the past this was primarily due to the timing and intensity of disturbance events. Private lands are interspersed with federal lands throughout the watershed. Private timberlands are usually managed as tree farms to produce wood fiber on short rotations. On BLM lands natural stands are interspersed with younger, managed plantations. Map A-1 shows the arrangement of BLM stands and Table A-1 and Figure A-1 show the breakdown in acres by age class. These are based on forest operations inventory information (FOI). Typing forest stands in the FOI usually lumps older un-managed stands into one polygon with one birth date. For example, an old unmanaged stand that is composed of scattered large trees greater than 200 years old in mix with a younger cohort that established around 1910 might be typed as having a birth date of 1780 or 1910. It might depend on which cohort seems to be the most prevalent, or on the management objectives for a particular cohort. In either case the stand would be considered late seral.

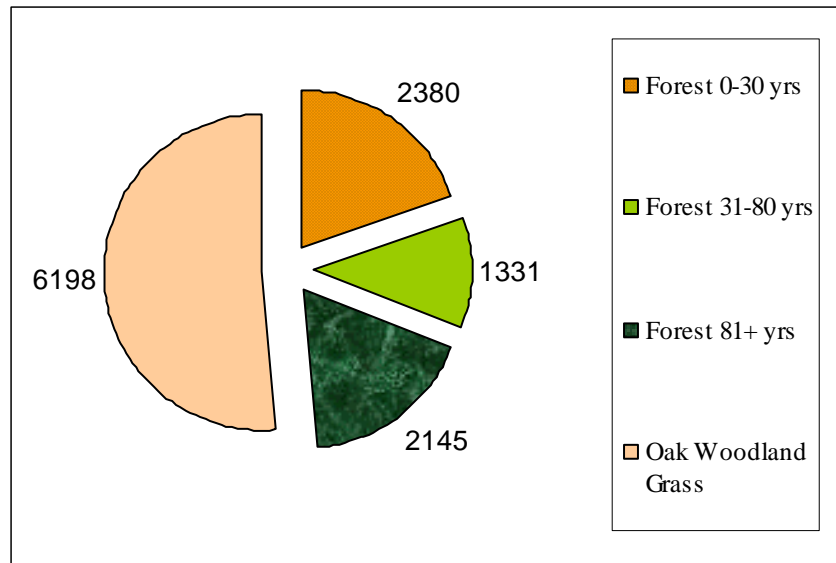
Table A-1 and Figure A-1 show about 2,145 acres that are typed as greater than 80 years old and are considered late seral forest. Past management in these stands is pretty much limited to roadside salvage and fire suppression. Mid seral stands between the ages of 30 and 80 total about 1,331 acres. Most of these stands were established following a regeneration harvest (clear cut). Stands less than 30 years of age are considered early seral and there are about 2,380 acres in this condition. All of these stands were established following regeneration type harvests. The investment in managed stands includes all or some of the following: Reforestation and plantation maintenance, pre-commercial thinning, fertilization and pruning. The majority of the managed stands are fairly uniform Douglas-fir plantations that were designed to support a commercial thinning.

The North Bank Habitat Management Area (The ranch) is within this watershed. All but about 400 acres of the ranch is typed as non-forest and is managed as a habitat area for the Columbian white tailed deer. The timberlands found on the ranch are a low priority for forest management at this time.

**Table A-1: BLM vegetative type and age class by subwatershed in Lower North Umpqua.**

	Acres & % of BLM by Subwatershed by Age Class								TOTAL
Subwatersheds	Forest 0-30 yrs	%	Forest 31-80 yrs	%	Forest 81+ yrs	%	Oak Woodland Grass	%	ACRES
Bradley Creek	973	35%	676	24%	1141	41%	0	0%	2790
Oak Creek	0	0%	28	100%	0	0%	0	0%	28
Plat I	503	31%	199	12%	606	37%	341	21%	1649
Round Timber	884	12%	428	6%	394	5%	5857	77%	7563
Winchester	20	83%	0	0%	4	17%	0	0%	24
<b>TOTAL</b>	2380	20%	1331	11%	2145	18%	6198	51%	12054

**Figure A-1: BLM vegetative type and age class within Lower North Umpqua.**



## **A3. Wildlife Habitat and Species<sup>2</sup>**

### ***A3.1. Management of riparian reserves for wildlife objectives***

The management direction outlined in the Northwest Forest Plan (NFP) is specifically intended to benefit a diversity of wildlife species, especially those associated with older forests. Late-seral forests are important to many species because of the variety of microclimates and special habitats that exists within these forests. Habitat requirements for the late-successional forest species can vary significantly by species. Of the approximate 230 species of terrestrial wildlife that occur in the watershed, approximately 160 species use late-successional or old growth and/or riparian habitats. Thirty-three of these species are Special Status Species.

Because the NFP addresses broad issues concerning wildlife habitat, it is believed that the overall diversity of wildlife species across the Cascade Range and within the Lower North Umpqua watershed will be maintained. Some of the NFP objectives to benefit wildlife species includes: (1) maintaining a functional, interactive, late-successional and old growth ecosystem, (2) providing connectivity among Late Successional Reserves (LSR) and providing habitat for a variety of organisms associated with both late-successional and younger forests, (3) enhancing and maintaining biological diversity and ecosystem health to contribute to healthy wildlife populations, (4) protecting special habitats, and (5) protecting, managing, and conserving Special Status Species. The success of the NFP, with respect to achieving wildlife objectives, is dependent on the integrity and composition of the reserve system, including the riparian reserves, the LSRs, connectivity systems and other reserves designated for special status species. The Lower North Umpqua watershed contains only riparian areas as part of the reserve system.

This analysis of the watershed focuses primarily on density management stands (early and mid seral forest as described in the Vegetation Section) within the watershed and treatment of riparian areas within those stands. Structural components of riparian reserves are typically even-aged, single canopied stands lacking vegetative diversity, structural diversity, snags, and coarse woody debris (CWD). Treatments within these stands would improve the integrity and functionality of these reserves for terrestrial wildlife species. Implementation of treatments would help treated stands reach desired stand characteristics more rapidly.

Riparian reserves were designated to help provide dispersal opportunities for late-seral associated and riparian dependent species. Many terrestrial wildlife species rely on the riparian habitat for forage, nesting/breeding habitat, and cover. The presence of a variety of overstory and understory vegetative layers and species, as well as downed wood, produces the typically cooler and moister microhabitats, which many terrestrial organisms prefer. These microhabitats near, at, and below ground level are important for the survival of many amphibian species. Riparian reserves serve as natural corridors or

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<sup>2</sup> Melanie Roan contributed this section.

migration routes for numerous mammal and avian species and as connecting corridors between areas of suitable habitats in fragmented environments.

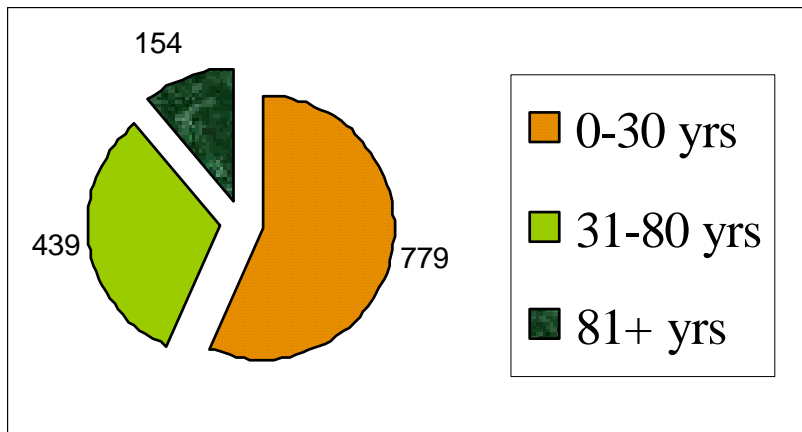
Riparian reserves in the Lower North Umpqua in federal ownership are primarily in the upland reaches, providing some connectivity to adjacent watersheds. Effective travel corridors for species within the watershed would depend on restoration and maintenance of functioning riparian areas on private lands to allow movement around and through urban and agricultural areas.

The federal ownership pattern in the watershed does not provide connectivity of habitat in the watershed except within the eastern portion. The Lower North Umpqua watershed also does not provide an east – west dispersal corridor for forest species to other watersheds to the west. This is due to large urban and agricultural areas in the central and western portion of the watershed that interrupt the continuity of forest habitat across the valley. Primary connection of suitable habitat is from and through the eastern portion of the watershed. Federal lands provide some dispersal corridors to the Middle North Umpqua and Rock Creek watersheds to the east and the Calapooya watershed to the North. The Rock Creek and Middle North Umpqua watersheds contain a higher percentage of federal ownership that consists of suitable habitat 1 and 2. The connectivity to the east also ties to Critical Habitat Unit (CHU) OR-27 in the Middle North Umpqua and CHU OR-24 in the Calapooya.

Riparian reserves, outside the North Bank Habitat Management Area, make up about 1,372 acres (Figure A-2) in the watershed with 154 of these acres in late-successional type forests. Functional habitat as described above for late-successional related species is more important than stand age. Creating functional habitat is possible in the next few decades in the 439 acres of mid seral forest age classes in the riparian reserves.

Outside of Riparian Reserves, 1,991 acres are late seral forest stands and functioning as dispersal habitat including 535 acres designated as unmapped late successional reserves, Northern Spotted Owl (NSO) core areas. The 1,456 acres outside NSO core areas would be available for commercial harvest under the constraints of 15% retention of late successional forests within the Lower North Umpqua watershed (pg. 34 RMP). Treatment, including commercial thinning, for the development of late seral characteristics on 1331 acres of mid seral age stands, will provide additional dispersal habitat in the long term.

**Figure A-2: Lower North Umpqua BLM Forest Classes within Riparian Reserves Outside North Bank Habitat Management Area**



### **A3.2. Special status species**

Approximately 230 terrestrial vertebrate species occur within the Lower North Umpqua watershed of which 33 are classified as Special Status Species. Special Status Species include Federally Threatened (FT), Federally Endangered (FE), Federally Proposed for Listing (P), Bureau Sensitive (BS), Bureau Tracking (BT), Bureau Assessment (BA), or Oregon state listed species (Appendix - Wildlife). The 24 Bureau Tracking (BT) species do not require special management direction at this time. Other species of interest are Special Attention Species (Survey and Manage Species) in the Northwest Forest Plan or Oregon Department of Fish and Wildlife (ODFW) priority species. Species that are of special interest to the general public or other agencies (i.e. ODFW), include elk, bats, wild turkey, osprey, raptors, and neotropical birds.

Those species that are most relevant to management within the Lower North Umpqua watershed are addressed in this section. Brief discussions about the remaining Special Status Species and species of interest can be referenced in Appendix - Wildlife.

The North Bank Habitat Management Area covers 6581 acres of Columbian white-tailed deer habitat. Management of these acres is addressed in the North Bank Habitat Management Area / ACEC Environmental Impact Statement (2001). For the purpose of this analysis, these acres have not been included in habitat discussions for other special status species. The majority of these acres consist of oak woodlands, oak savannah, and grasslands.

#### **A3.2.1. Federally threatened and endangered species and proposed listings**

Four terrestrial species known to occur on the Roseburg BLM District are legally listed as Federally Threatened (FT), Federally Endangered (FE), Federally Proposed for Listing (P), or Federally Proposed for Delisting (PD). These species include the American bald eagle (*Haliaeetus leucocephalus*) (FT, PD), marbled murrelet (*Brachyramphus*

marmoratus) (FT), northern spotted owl (Strix occidentalis caurina) (FT), and Columbian white-tailed deer (Odocoileus virginianus leucurus) (FE, PD). The Roseburg BLM District occurs within the suspected ranges of the Canada lynx (Felix lynx canadensis) (FT), the Fender's Blue butterfly (Icaricia icarioides fenderi) (FE), and the vernal pool fairy shrimp (Branchinecta lynchi) (FT), but their occurrence has not been documented.

### **Northern spotted owl**

Individual northern spotted owl sites may have been followed since 1985, or before. There are 5 Master Sites, which include 6 known northern spotted owl activity centers, in the Lower North Umpqua watershed (Map A-2). Under the Northwest Forest Plan, five residual habitat areas were established (535 acres) within the watershed. Six Master Sites, with five associated spotted owl residual habitat areas, occur outside but within 1.2 miles of the watershed boundary.

Within the home range of any northern spotted owl site, treatment of managed plantations and thinned stands (early and mid seral age classes) and riparian areas would emphasize maintenance or enhancement of the habitat to increase the connectivity and suitability of the habitat. Prescriptions would maintain the following habitat features: roosting and foraging habitat, nesting or potential nesting structures, snags, and CWD.

The Endangered Species Act describes northern spotted owl habitat in three different categories: Suitable, Dispersal, and Critical Habitat. Table A-2 gives a summary of the amount of that habitat within Lower North Umpqua.

**Table A-2: Lower North Umpqua, acres of suitable, dispersal, and critical spotted owl habitat.**

Suitable habitat	Dispersal Habitat	Critical Habitat
2126	1047	0

### Suitable habitat

Roseburg BLM District biologists identified forest habitat important to the northern spotted owl on BLM-administered lands. This inventory used on-the-ground knowledge, inventory descriptions of forest stands, and known characteristics of the forest structure and was placed in GIS. Four habitat types were described and labeled. Habitat 1 (HB1) describes forest stands that provide nesting, foraging, and roosting. Habitat 2 (HB2) describes forest stands that provide foraging and roosting components. A few of these stands also contain nesting components. Habitat 1 and 2 together are considered to be suitable northern spotted owl habitat and is estimated to be 2126 acres on BLM-administered lands (Table A-2 and A-3). Habitat 3 (HB3) refers to forest stands that have the potential within 50 years to develop into Dispersal Habitat or Suitable Habitat 2. This habitat type (3522 acres, Table A-3) would mostly consist of early and mid seral conifer stands on BLM lands. Habitat 4 (HB4) refers to areas that would not develop into suitable habitat in the foreseeable future. This does not include the North Bank Habitat

Management Area acres. Table A-3 shows the number of acres present and Map A-2 shows the distribution for these four habitats within the watershed.

**Table A-3: Lower North Umpqua, acres of spotted owl habitat types on BLM land.**

Habitat 1	Habitat 2	Habitat 3	Habitat 4
378	1748	3522	202

#### Dispersal habitat

Dispersal habitat refers to forest stands that provide cover, roosting, foraging, and dispersal components that northern spotted owls use while moving from one area to another (Thomas et al. 1990, USDI 1992a, and USDI 1994). Habitat 1 and 2 (Suitable Habitat) is assumed to function as dispersal habitat, however for this analysis, forested stands 31-80 years of age are considered current dispersal habitat. There are 1331 acres of dispersal habitat within the watershed (derived from Table A-1).

#### Critical habitat

Designated Critical Habitat includes the primary constituent elements that support nesting, roosting, foraging, and dispersal of the northern spotted owl. It also includes habitat that is currently unsuitable, but has the capability of becoming suitable habitat in the future. There is no designated Critical Habitat for the recovery of the northern spotted owl within the Lower North Umpqua.

#### **Marbled murrelet**

The marbled murrelet is unlikely to be found more than 50 miles from the Oregon coast (USDA and USDI 1994a, and USDI 1992c). The western portion of the Lower North Umpqua watershed is located within the 35-50 mile zone (Conservation Zone 2) for the marbled murrelet as identified in the Marbled Murrelet Recovery Plan. There are 104 acres of federal land in the watershed that fall within Zone 2, of which 61 acres are suitable murrelet habitat.

Any forested area within 50 miles of the ocean containing a residual tree component, small patches of residual trees, or one or more platforms is potential murrelet habitat (Pacific Seabird Group [PSG] 2000). The potential suitable murrelet habitat within the watershed is in two isolated parcels located 46 and 49 miles from the coast. No marbled murrelet surveys have been completed in the area. The nearest known, occupied murrelet site is located over 8 miles away. Due to the small size and fragmented nature of the murrelet habitat in the watershed, presence of nesting murrelets is not expected. These parcels have been identified in the RMP for disposal through exchange or sale (RMP EIS vol.2, Appendix D, p. appendices 27-28).

The non-federal land within the watershed that falls within the murrelet zone is urban, agricultural or early seral forest and does not provide suitable habitat for the murrelet.

### **American bald eagle**

Midwinter raptor surveys and aerial surveys of bald eagle nest sites are completed annually, as part of a long-term monitoring effort in Oregon and Washington. Annual inventories (1972 to 2002) by Isaacs and Anthony (2002) of known bald eagle breeding territories in Douglas County, Oregon list one territory within the Lower North Umpqua watershed. The territory is located on federal land and has been an active, successful nest site from 1984 to 2002.

Habitat will be managed to develop or maintain forest structure needed to support nesting and foraging activities. Known and future occupied territories will be protected under management guidelines outlined in the Northwest Forest Plan. Management guidelines include: (1) maintaining or attaining stand characteristics preferred by bald eagles, (2) avoiding disturbance within 0.5 miles of an active nest sites from February 15 to August 31, and (3) provide an appropriate level of fire protection on lands managed for bald eagles and restrict the use of insecticides within 0.5 miles of bald eagle sites.

### **Columbian white-tailed deer**

The North Bank Habitat Management Area (NBHMA) covers over 6500 acres of white-tailed deer habitat, consisting of oak woodlands, riparian areas and open savanna, and is managed by the BLM to maintain quality habitat for recovery of the endangered deer. The entire habitat area falls within the Lower North Umpqua watershed and currently supports more than 300 deer. Ninety-one percent of the watershed falls within the range of the deer as mapped by ODFW and USFW for the proposed de-listing of the species (ODFW 2002) (Map A-3). The remainder of the federal ownership in the watershed does not consist of oak woodland habitat that is preferred by white-tailed deer and management in those stands would not negatively impact the deer population.

The RMP (p.48) discusses the need to acquire lands within the core area of the deer and restricts management on current timberlands in the area until such time as the deer is de-listed and adequate secure habitat is obtained. A Habitat Management Plan for the NBHMA was completed in 2001 and is currently being implemented. The Douglas County population of the Columbian White-tailed deer was proposed for de-listing in June 2002 (USFW 2002) based in part on the acquisition of secure habitat in NBHMA. Restrictions proposed in the RMP would no longer be necessary as management requirements for the deer have been, or are in the process, of being met.

The private ownership in the watershed supports a population of deer in open agricultural and oak woodland areas as well as in outlying suburbs. Deer populations in these areas would be impacted by residential development, additional brush, clearing and livestock use in riparian habitats. To address this concern, Douglas County zoning laws have been established to preserve riparian corridors in Essential Habitat Areas (DCPD 2000a:6-19).

### **A3.2.2. State of Oregon listed species**

There are 14 terrestrial wildlife species listed as threatened or endangered by the State of Oregon. The marbled murrelet, spotted owl, and bald eagle are also Federally listed. The peregrine falcon is no longer Federally Endangered but is listed as endangered by the State of Oregon and is discussed in Appendix - Wildlife.



### **A3.2.3. Bureau sensitive species**

Bureau Sensitive designation includes species that could easily become endangered or extinct in a state. They are restricted in range and have natural or human-caused threats to survival. Bureau Sensitive species are not federally or state-listed, but are eligible for federal or state listing or candidate status. Bureau manual 6840 policy requires that any Bureau action will not contribute to the need to list any of these species. There are six Bureau Sensitive vertebrate species occurring within the Lower North Umpqua watershed. These species, include western pond turtle, peregrine falcon, northern goshawk, purple martin, fisher, and Townsend's big-eared bat, and are discussed in Appendix - Wildlife.

### **A3.2.4. Survey and manage species**

At this writing, the Survey and Manage program under the Northwest Forest Plan is in a state of flux. This write-up reflects the current status however it is likely that within the next year the program will change. Survey and Manage Species are those species that are closely associated with late successional or old growth forests whose long-term persistence is of concern. Standards and guidelines have been designed as part of the Northwest Forest Plan to provide for the persistence of these late successional and old growth forest related species. Six terrestrial wildlife Survey and Manage Species occur on the Roseburg District, including three mollusk species, Del Norte salamander, red tree vole, and great gray owl (Appendix - Wildlife). The red tree vole, Crater Lake Tightcoil and Oregon Megomphix (mollusk species) are known to occur and have management implications within Lower North Umpqua.

#### **Oregon megomphix**

The Oregon Megomphix is a snail that occurs in moist conifer/hardwood forests within the Cascade Range foothills of Oregon. A big-leaf maple (*Acer macrophyllum*) component and an abundance of sword-fern on forested slopes and terraces seem characteristic of this snail's microhabitat (BLM 1999). Based on direction contained in the Record of Decision, Oregon Megomphix (*Megomphix hemphilli*) sites prior to September 30, 1999 require management. There are three known Oregon Megomphix sites within the watershed, however, all three were found after September 30, 1999 and require no special management.

#### **Crater Lake tightcoil**

The Crater Lake Tightcoil (*Pristoloma articum crateris*) is a snail found in moist conifer forests, among mosses and other vegetation near wetlands, springs, seeps and riparian areas above 2000 feet elevation east of Interstate 5. Based on direction contained in the Record of Decision, equivalent- effort pre-disturbance surveys are required for the Tightcoil in proposed project areas above 2000 feet elevation.

#### **Red tree vole**

The red tree vole (*Phenacomys longicaudus*) is an arboreal rodent, which depends on conifer tree canopies for nesting, foraging, travel routes, escape cover, and moisture (Carey 1991). Douglas-fir (*Pseudotsuga menziesii*) needles provide the primary food and building materials for nests (Biswell et al. 2000). Red tree voles (Huff et al. 1992) also eat Sitka spruce, western hemlock, and grand fir needles. Old-growth Douglas-fir forests

are considered to be optimal habitat for the red tree vole (Carey 1991). Red tree vole nests have been documented on the Roseburg District in stands ranging from 30 – 510 years of age, with average stand age being 88 years of age. Because this species may have limited dispersal ability across the landscape, red tree voles are rated as highly vulnerable to geographic isolation or local extirpation of populations due to habitat fragmentation or loss (Huff et al. 1992).

Based on direction contained in the Record of Decision and the 2001 Annual Species Review (IM-OR-2002-064), pre-disturbance surveys are not required. Until high priority sites can be determined, all known active sites on BLM lands will be managed with a minimum ten-acre no-harvest buffer.

### ***A3.3. Forest and wildlife habitat recommendations***

#### **A3.3.1. Commercial harvest objectives**

The young managed stands in all Land Use Allocations including the Riparian Reserves are a high priority for sustained density management treatments. Within Matrix lands a general prescription to meet the timber objectives for thinning stands less than 80 years of age would include the following: Pre-commercially thin to select between 150 and 300 of the largest, best-formed trees per acre. Ideally trees would be selected for retention based on species and size with little or no emphasis given to spacing. In practice a spacing guide is used because it is the most efficient way to administer a contract and keep track of the number of trees per acre. Commercial thinning would always retain the desired trees regardless of spacing. Maintain dominant and co-dominant tree species at free to grow densities until age 80 or more. Protect the residual old growth trees, large snags, and coarse woody debris from logging damage. Sometimes the placement of retention trees can help protect these structures. Clumps of 3 to 5 retained trees may be more wind firm, and can be used to surround and protect snags, coarse woody debris, special status plants, and advance regeneration. Approximately 50 and 100 dominant and co-dominant trees per acre would be retained. The arrangement of retained trees would be more uniform in Matrix stands than in reserves. Within the Matrix, few or no trees would be cut and left as CWD at the time of thinning because of the effect this material would have on the timing, spread, and severity of disturbances such as fire and insect outbreaks (Furniss and Carolin 1977, Agee and Huff 1987), and the fact that trees usually die and fall down a few years after thinning. Within the reserves up to 12 trees per acre may be cut, girdled, topped or inoculated with a decay causing fungus to create CWD at the time of treatment. The process for creating future down logs and snags is described on pages 130 to 135 of the LSRA. Stands where thinning is planned would be surveyed to determine existing stand conditions and levels of CWD. This information would be used to prescribe thinning treatments to meet the objectives of the various land use allocations

The alternative to active management is to allow stands to self-thin. In managed young stands this process can result in trees with small live crowns, weak stems, and poorly developed root systems. More time is required for trees to recover from this condition. Stands are at a greater risk for damage from insects, fire and strong winds. The return on

the investment to produce these stands at commercial thinning densities is lost. The opportunity to harvest wood volume that would otherwise be lost to mortality is lost.

Because the RMP (pg. 34) requires maintaining at least 15% of the late seral forests in each watershed, based on the federal forest acres in Lower North Umpqua, any regeneration harvesting over the next decade would be limited to approximately 330 acres. Based on the amount and age of mid seral (31-80 years) forest stands and the constraint of 15% in this watershed, it will probably be another 30 to 50 years before other regeneration harvesting could occur.

### **A3.3.2. Wildlife objectives for riparian reserve treatments**

Density management in Riparian Reserve stands less than 80-years old to maintain or accelerate stand development toward achievement of late-seral characteristics is needed. Chapter five of the South Cascades Late Successional Reserve Assessment (LSRA, 1998), pages 125 to 137, describe the purpose and need and a prescription for managing forest stand densities in young stands for the reserve system. This can be a guide for managing the approximate 1218 acres of early and mid seral forest stands within the Lower North Umpqua riparian reserves. Desired future conditions of the riparian reserves can be achieved by applying various management treatments to restore and maintain important stand attributes. These attributes include: canopy complexity, variability in tree size and spacing, vegetative species diversity and structural characteristics, and CWD and snags. Stand management to achieve these attributes needs to focus on early and mid-seral forest stands. Silviculture treatments of plantations and pre-commercially thinned stands, most of which are categorized as Habitat 3, can accelerate the development of young stands into multi-layered stands with large trees, structural diversity, and diverse plant species. Management treatments within riparian reserves would focus on recruitment of snags and CWD, promoting vegetative diversity, creation of openings, and increasing structural diversity within the reserve system.

Generally for density management of mid seral stands within riparian reserves, prescriptions would retain more large hardwoods, and more openings and dense patches as compared to the harvesting on matrix lands. Stand management within the reserve system, whether needing artificial reforestation and/or subsequent maintenance or release treatments to more rapidly reach late-successional conditions, or to protect site quality, would benefit terrestrial wildlife that are dependent on late-successional or old growth ecosystems.

To improve or maintain the functionality of riparian reserve habitat to meet specific wildlife objectives, management treatments need to focus on (1) shaping the overstory by maintaining or speeding up diameter growth rates, (2) controlling crown depth and crown closure, (3) creating gaps and providing opportunity for understory regeneration, and (4) recruitment of snags and CWD. Treatments would be site specific, based on the components that are lacking on the site under consideration and what wildlife objectives need to be met. Consider timing and placement of treatments in order to minimize the disturbances to special status species and critical habitat.

The presence of a variety of overstory and understory vegetative layers and downed wood and snags provide habitat for a large number of terrestrial wildlife species. In riparian reserves where levels of snag and downed wood components are below those of unmanaged stands, projects to increase the levels may be appropriate. Assess current and potential future condition of coarse wood and snags in order to determine the appropriate amount of management needed within the treatment site.

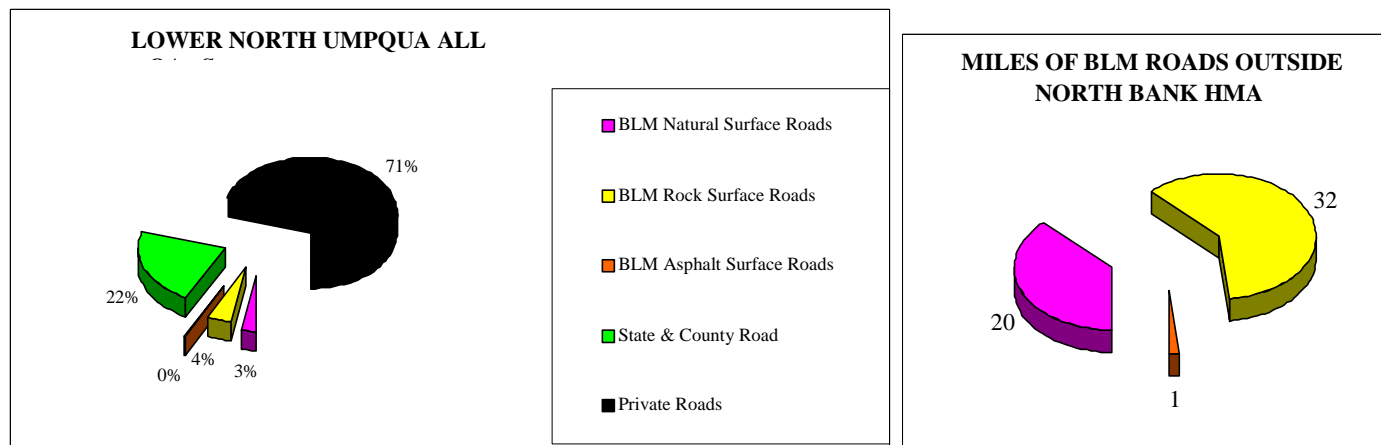
#### A4. Roads Within the Lower North Umpqua<sup>3</sup>

The following table and chart summarizes the roads within Lower North Umpqua by subwatershed. The BLM roads are also broken out into road surface types. A majority of the BLM roads in the Round Timber subwatershed are within the North Bank Habitat Management Area (NBHMA) and fixes for the roads were already identified in the Habitat Management Plan. BLM roads outside NBHMA will be reviewed during project proposals to identify problem sedimentation areas.

**Table A-4: Miles of road categories within the Lower North Umpqua Watershed.**

Subwatersheds	BLM Road Surfacing				BLM	State & County	Private	TOTAL ROAD
	Natural within North Bank HMA	Natural	Rocked	Asphalt	Roads	Roads	Roads	Miles
Bradley Creek		5.6	16.4	0.9	23	14	105	141
Oak Creek		0.0	0.3	0.0	0	3	44	47
Plat I		5.3	10.5	0.0	16	69	72	157
Round Timber	35.0	8.7	4.6	0.0	48	6	88	142
Winchester		0.2	0.0	0.0	0	66	192	258
<b>TOTAL</b>	35.0	19.8	31.8	0.9	88	158	500	745

**Figure A-3: Lower North Umpqua road categories.**



<sup>3</sup> Randy Lopez and Steve Bell contributed this section.

Factors affecting erosion levels are soil depth, texture, road gradient, spacing of cross drains and traffic levels. The road segments with the highest erosion are generally those that cut through deep soils (bedrock not reached), have high silt content, are natural-surfaced, are on moderate to steep grades (above 10 percent) and get more than occasional vehicle traffic. Ruts eroding down to greater than two feet do occur under these conditions.

Slope position of roads (lower, middle upper/ridge top) is another important factor on effect to streams. Lower slope position roads in riparian areas of higher order streams generally have the highest effects to water quality. Existing BLM roads are currently contributing low levels of chronic sediment to streams relative to the condition of roads in the 1950's through the mid 1980's. This has been demonstrated in other watersheds and is a result of the best management practices implemented over the last couple decades.

## A5. Special Status Plants and Noxious Weeds<sup>4</sup>

### A5.1. Special status plants

Special Status Species designation for plants affects lands managed by the BLM and projects authorized or funded by the BLM. These plants receive no legal protection on private lands.

Special Status Species (SSS) plants include vascular plants, bryophytes (liverworts and mosses), fungi and lichens in the following categories: Federal Listed, Federal Proposed, Federal Candidate, State Listed, Bureau Sensitive, Assessment and Tracking Species. On Roseburg District lands, there are two Federal Listed species, no Federal Proposed or Federal Candidate species, five State Listed species, 18 Bureau Sensitive species, 24 Assessment species and 34 Tracking species.

Within the Lower North Umpqua watershed 12 of these SSS have been recorded by BLM, with 26 sites known on BLM managed lands and 15 sites on non-BLM land, (Roseburg District Special Status Plant database). Sites on BLM lands were identified primarily through pre-project surveys. There has been no attempt to conduct comprehensive botanical surveys throughout the watershed.

#### A5.1.1. Federally listed species

Two federally listed species are included in pre-project clearance surveys and addressed in NEPA documents. The BLM consults with the US Fish and Wildlife Service (USFWS) whenever a proposed action may effect these species or it's critical habitat. Protection for these species is in compliance with terms and conditions stated in the biological opinion issued by USFWS.

**Rough allocarya** or hairy popcornflower (*Plagiobothrys hirtus*) is federally listed as Endangered. It is also listed as Endangered by the state. It is restricted to wet swales and meadows in Douglas County. At the time this species was listed, 17 populations were known (ONHP 1996). In this watershed, native habitat occurs from Sutherlin to Wilbur. All native populations in this watershed, are on privately owned land. In an effort to recover the species, the BLM planted three populations on North Bank Habitat Management Area (NBHMA). For all Special Status Species plants occurring on NBHMA see North Bank Habitat Management Area/ACEC Final EIS (2000), ROD and Habitat Management Plan (2001) for management direction on these populations.

**Kincaid's lupine** (*Lupinus sulphureus* var *kincaidii*) is federally listed as Threatened. The plant itself has not been identified in Lower North Umpqua watershed, but there is potential habitat because the watershed is within the range of the species. Potential habitat was assigned by USFWS, based on the soil type of known sites throughout the range of this species. The soils list was updated March 1, 2002. Based on that list, there are 15,776 acres of potential habitat in the watershed, of which 152 acres are on BLM

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<sup>4</sup> Jeanne Standley contributed this section.

managed lands. Potential habitat must be surveyed, prior to any actions that could affect this species on BLM lands or on projects funded or authorized by the BLM.

#### **A5.1.2. State of Oregon listed**

Two state listed species are included in pre-project clearance surveys and addressed in NEPA documents. These species are managed for survival and recovery.

**Rough allocarya** (*Plagiobothrys hirtus*) discussed above under Federally Listed Species.

**Wayside aster** (*Aster vialis*), a State Threatened, Bureau Sensitive and Survey and Manage species, is known to occur at one site on BLM managed lands within the watershed. Wayside aster inhabits coniferous forests at elevations below 3200 feet. It typically occurs on dry upland sites dominated by Douglas-fir and is usually accompanied by Pacific madrone, golden chinkapin and Oregon White Oak (USDA/USDI 1998). The species also occurs along the edge of forests in partial sun (Special Status Plants of the Roseburg District, 1991). Populations of Wayside Aster occur on sites in all stages of succession, from recent clear-cuts to mature forest. Preferred habitat for this species is believed to be open coniferous forest, sustained by frequent fire (USDA/USDI 1998). Wayside Aster may occur elsewhere in the watershed. On BLM lands, suitable habitat will be inventoried prior to activities that may have effects on the species.

#### **A5.1.3. Bureau sensitive species**

Three Bureau sensitive species are included in pre-project clearance surveys and addressed in NEPA documents. Conservation measures are developed to avoid future jeopardy to these species.

**Shrubby rock cress** (*Arabis koeleri* var. *koeleri*) occurs on basalt bluffs and cliffs below 1200 feet elevation. Potential habitat occurs along the North Umpqua River between Whistlers Bend and Hestness Landing (Special Status Plants of the Roseburg District, 1991). Three sites are known on NBHMA<sup>1</sup> and two additional sites are known along the North Umpqua River on non-BLM land.

**False caraway or red-root yampah** (*Perideridia erythrorhiza*) occurs in meadows or along the edge of coniferous forests at elevations between 500-5000 feet. (Special Status Plants of the Roseburg District, 1991). One site occurs on NBHMA<sup>1</sup> and six sites were reported on non-BLM lands in the watershed.

**Hitchcock's blue-eyed grass** (*Sisyrinchium hitchcockii*) occurs in valley grasslands and oak savannahs (Special Status Plants of the Roseburg District, 1991). Two sites are known on NBHMA<sup>1</sup>.



#### **A5.1.4. Assessment species**

Four assessment species are included in pre-project clearance surveys and addressed in NEPA documents. Protection and mitigation for these species is balanced with the other resources at the site.

**Hairy sedge** (*Carex gynodynamis*) occurs in wet meadows. It was reported at four sites on NBHMA.<sup>1</sup>

**Saw-tooth sedge** (*Carex serratodens*) occurs in wet meadows. It was reported at one site on NBHMA.<sup>1</sup>

**Timwort** (*Cicendia quadrangularis*) occurs in meadows and openings. One site was reported from private land in the watershed.

**Coffee-fern** (*Pellaea andromedaefolia*) occurs on dry rock outcrops mostly in open sun, but occasionally along shaded stream banks below 4000 feet (Special Status Plants of the Roseburg District, 1991). Three sites are recorded on BLM lands and two sites on private.

#### **A5.1.5. Tracking species**

Consideration and management of three tracking species is optional.

**Firecracker plant** (*Dichelostemma ida-maia*) has been found in clearcuts, along roads and in previously burned areas. Four sites were recorded on BLM lands, and 2 sites are known on private land.

**Howell's false caraway** (*Perideridia howellii*) has been identified in moist meadows, slopes and stream banks associated with mixed evergreen forests from 1000-6000 feet elevation. One site is known on NBHMA<sup>1</sup>.

**Umpqua phacelia** (*Phacelia verna*) occurs on sparsely vegetated rock outcrops and balds between 500-6600 feet. Three populations were recorded on NBHMA<sup>1</sup> and one on private land.

#### **A5.1.6. Survey and manage bryophyte, lichen, fungi and plant species**

The original Survey and Manage (S&M) list from the Northwest Forest Plan and Roseburg District ROD/RMP was amended in 2001. The list from the Record of Decision and Standards and Guidelines for Amendments to the S&M, Protection Buffer, and other Mitigation Measures Standards and Guidelines (U.S. Departments of Agriculture and Interior, 2001) and the results of the first annual species review (BLM-IM OR-2002-064) were used to analyze the species present. Data collected on categories that no longer exist will not be discussed here.

In the Lower North Umpqua watershed, only two botanical species from the Survey and Manage list are recorded in the Roseburg District database. One population of **wayside aster** was reported. It is discussed under SSS plants. Two populations of the **apricot**

**jelly mushroom** (*Tremiscus helvelloides*) were identified on NBHMA. The BLM is currently required to manage priority sites of this species.

## A5.2. Noxious weeds

### A5.2.1. Noxious and invasive weeds in the Lower North Umpqua Watershed

Noxious weeds are plants designated by law as being especially undesirable, troublesome, and difficult to control. Noxious weeds compete with native plants and reduce the size of native plant communities, decreasing biological diversity, wildlife habitat, recreational opportunities, and land values. Invasive weeds are other non-native plants that invade and dominate areas. Noxious and invasive weeds have been introduced and become established on public and private land throughout the watershed.

BLM and Oregon Department of Agriculture (ODA) data were reviewed for this analysis. In 2002 BLM conducted a noxious weed inventory on BLM controlled roads in the watershed. BLM parcels without access and the North Bank Habitat Management Area were excluded from this inventory. Additionally, four noxious weed species, that are common and considered controlled by biological control agents, were not reported on this inventory. They are Bull thistle, Tansy ragwort, St. Johnswort and Poison hemlock. ODA records for this watershed included only three high priority species - Woolly distaff thistle, Gorse and Yellow starthistle. In all 524 infestations were reported.

Twenty-four noxious weed species have been documented in the Lower North Umpqua Watershed (BLM and ODA database records). Three of these species, Gorse, Portuguese broom and Woolly distaff thistle occur in small enough infestations that eradication or containment is possible. Both ODA and Douglas County recommend intensive control of these species. The other 21 noxious weed species are well established in the county and eradication at the county level is not likely. ODA and Douglas County recommend containment of existing infestations and preventing new infestations of these species from becoming established. Intensive control is recommended on small isolated infestations. Control of all weeds is encouraged, especially along travel routes. See Table A-6 for the common and scientific names of the weeds documented in this watershed.

The three high priority species listed above have been identified in the following sections:

Gorse	T25S R4W Sec 30 T25S R5W Sec 15, 16,17	Woolly distaff thistle	T25S R4W Sec 36 T26S R4W Sec 12,13 T26S R5W Sec 13 T26S R6W Sec 13, 36 T27S R4W Sec 6 T27S R5W Sec 1,2	Portuguese broom	T25S R4W Sec 25
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One invasive species of concern, spurge laurel (*Daphne laureola*) has been found in the watershed on both private and BLM land in T27S R4W Section 13 and on private land in T25S R6W Section 35. This is treated as a new invader in the county.

### **A5.2.2. Weed control in the Lower North Umpqua Watershed**

The Roseburg District uses an integrated weed management (IWM) approach to prevent and control noxious and invasive weeds. IWM includes all potential control techniques—biological, chemical, cultural, manual and mechanical practices to control noxious weed infestations. Often more than one of these techniques is used on an infestation.

Biological control consists of introducing agents (insects, pathogens, grazing animals) to feed on weeds and reduce their ability to spread. Biological control agents rarely eliminate an infestation. Their effectiveness varies from species to species and site to site. Records of their effectiveness and dispersal are not available. Biological control agents have been released on private and BLM lands on the following species in the watershed: Bull thistle, Canada thistle, Meadow knapweed, Milk thistle, Rush skeletonweed, Scotch broom, Tansy ragwort, St. Johnswort, Scotch broom and Yellow starthistle.

Chemical treatments employ herbicides to control undesirable plants. On BLM lands in the watershed, herbicides have been used on:

- Himalayan blackberry, 2 acres in 2002 on NBHMA;
- Scotch broom, 1.5 acres in 1999, 4 acres in 2000, 24 acres in 2002, on roadsides; and
- Yellow starthistle, 1 acre in 2000, 4 acres in 2001, 4 acres in 2002 on NBHMA.

Cultural treatments include plowing and seeding to establish plants that will compete with weeds and prevent or reduce their establishment. Cultural treatments are planned on NBHMA.

Manual treatments use hands or non-motorized hand held equipment to control weeds. On BLM lands in the watershed, these have been used on most of the weeds present. BLM records from 1998-2002 show manual treatments for the following:

- Scotch broom (42 acres on roadsides, 14 acres on NBHMA);
- Bull thistle, Canada thistle, milk thistle (12 acres on NBHMA);
- English hawthorn (10 acres on NBHMA);
- Himalayan blackberry (2 acres on NBHMA);
- Rush skeletonweed, (5 acres on NBHMA);
- Yellow starthistle, (4 acres on NBHMA);
- Spiny cocklebur (1 acre on NBHMA); and
- Spurge laurel (1 acre on BLM).

Mechanical treatments use motorized equipment to control weeds. These include mowing, brushing and the use of chain saws. On BLM lands within Lower North Umpqua, these treatments have been used on Scotch broom, English hawthorn and thistles on NBHMA.

The BLM cooperates with ODA in controlling high priority weeds. All known Woolly distaff thistle sites are intensively controlled by ODA using herbicides. Gorse sites in the watershed have been treated chemically, mechanically or biologically. Portuguese broom sites were identified in 2002 and will be treated chemically or mechanically.

**Table A-5: Documented noxious weeds in the Lower North Umpqua.**

Common Name	Scientific Name
Bull thistle	<i>Cirsium vulgare</i>
Burnweed	<i>Erectites minima</i>
Canada thistle	<i>Cirsium arvense</i> var. <i>horridum</i>
English ivy	<i>Hedera helix</i>
English hawthorn	<i>Crataegus monogyna</i>
Field bindweed	<i>Convolvulus arvensis</i>
Giant horsetail	<i>Equisetum telmateia</i>
Gorse	<i>Ulex europaeus</i>
Himalayan blackberry	<i>Rubus discolor</i>
Italian thistle	<b>Carduus pycnocephalus</b>
Meadow knapweed	<i>Centaurea pratensis</i>
Medusahead rye	<i>Taeniatherum caput-medusae</i>
Milk thistle	<i>Silbum marianum</i>
Pennyroyal	<i>Mentha pulegium</i>
Poison hemlock	<i>Conium maculatum</i>
Portuguese broom	<i>Cytisus striatus</i>
Rush skeletonweed	<i>Chondrilla juncea</i>
Scotch broom	<i>Cytisus scoparius</i>
Spanish broom	<i>Spartium junceum</i>
Spiny cocklebur	<i>Xanthium spinosum</i>
St. Johnswort	<i>Hypericum perforatum</i>
Tansy ragwort	<i>Senecio jacobaea</i>
Wooly distaff thistle	<i>Carthamus lanatus</i>
Yellow starthistle	<i>Centaurea solstitialis</i>

### **A5.2.3. Noxious weed recommendations for the Lower North Umpqua Watershed**

For BLM managed lands: Prevent, reduce or contain noxious weed infestations on BLM administered lands in the Lower North Umpqua watershed using an Integrated Weed Management approach in accordance with the BLM's Northwest Area Noxious Weed Control Program Environmental Impact Statement Record of Decision (ROD) (USDI BLM 1986), the Supplement (USDI BLM 1987), Roseburg District Resource Management Plan (RMP) (USDI BLM 1995a), Roseburg District Integrated Weed Control Plan Environmental Assessment ROD (USDI BLM 1995b), and Partners Against Weeds (USDI BLM 1996).

#### **General recommendations: Priority weeds**

To contain or reduce noxious weed infestations, control efforts are divided into three priorities (USDI BLM 1995b Section 2): prevention of new invaders, eradication of new invaders, and control of established infestations.

#### Priority 1 - Prevent new invaders

See Appendix - Noxious Weeds for a list of Potential New Invaders. Implement the Best Known Practices and Project Design Features detailed in Appendix - Noxious Weeds to prevent the spread or establishment of noxious weeds in the Lower North Umpqua watershed.

#### Priority 2 - Eradicate new invaders

See Appendix - Noxious Weeds for potential and known new invaders (gorse, wooly distaff thistle, and Portuguese broom for the Lower North Umpqua watershed). Eradicate new invaders before they become established. These species should be given the highest priority in funding. Isolate and eradicate new invaders as soon as they are identified. Survey adjacent lands to ensure all new infestations have been located. All available Integrated Weed Management techniques (manual, mechanical, biological, chemical) should be used to eradicate new invaders. The causes of noxious weed infestations should be identified and treated to reduce the possibility of reestablishment. These recommendations are for all "A" list weeds and "B" list weeds new to the Roseburg District or in small enough infestations where eradication is possible. "A" and "B" lists are identified in Appendix - Noxious Weeds, the Douglas County Noxious Weed Policy and Weed List.

#### Priority 3 - Control of established infestations

Noxious weeds in this category have become established to the extent that eradication is not likely. Prevent further spread of these species using all available types of control measures although biological control measures should be emphasized on extensive infestations. These recommendations are directed at most "B" list noxious weeds (see Appendix - Noxious Weeds).

### **General recommendations: Priority Sites**

BLM lands within the Lower North Umpqua watershed are prioritized for control of established noxious weed infestations based upon the resources they impact. The highest priorities for control of noxious weeds in the Lower North Umpqua watershed are: North Bank Habitat Management Area ACEC, Special Status Species habitat, developed recreation sites, active gravel pits, all road and utility rights-of-way (BLM and private), and all remaining affected public lands.<sup>5</sup>

### **Specific recommendations for BLM**

- **Initiate intensive control for Portuguese broom on BLM lands (only new invader on BLM).** Prevent Portuguese broom from going to seed on all sites. Continue to cooperate with ODA to control gorse, woolly distaff thistle, Portuguese broom and any new priority species that are identified. Initiate control all new invaders within one year of identification.
- Conduct pre-project surveys and risk assessment for noxious and/or invasive weeds on all ground disturbing projects authorized or funded by the BLM. Initiate weed control when there is a risk of spreading weeds.
- This watershed was inventoried for weeds in 2002 and will not need to be systematically re-surveyed for at least another 5 years. However, BLM employees should continue to watch for new invader noxious weeds and report those when found.
- Continue control of Spurge laurel. Initiate cooperative control with adjacent landowner in T27S R4W Section 13.
- Develop partnerships with adjacent landowners for more effective control of infestations that cross ownerships.
- Continue control roadside of Scotch broom infestations.

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<sup>5</sup> See NBHMA EIS and HMP for direction on activities on NBHMA. Outside the NBHMA, road rights-of-ways and gravel pits are the primary sites for weed control activities.

## **Addendum Appendices**

Addendum appendix 1: Wildlife - Additional special status species and special attention species .....	233
Addendum appendix 2: Noxious weeds – Douglas County policy, control ratings, weed lists, and management. ....	243
Addendum appendix 3: Noxious Weeds - Comprehensive list of Douglas County noxious weeds .....	247

## **Addendum appendix 1: Wildlife - Additional special status species and special attention species**

### **Federally threatened and endangered species**

#### Canada lynx

The Canada lynx (*Lynx canadensis*) was listed as a Federal Threatened species on March 24, 2000 (FR 65:16051-16086). In the Pacific Northwest, Canada lynx are associated with high elevation localities primarily east of the Cascade crest (Survey Protocol for Lynx, USDI and USDA, 1998). A self-sustaining resident lynx population does not exist in Oregon but individual animals are present (Verts and Carraway 1998). The Lower North Umpqua watershed is located outside of the range of the Canada lynx.

#### Fender's blue butterfly

The Fender's Blue butterfly (*Icaricia icarioides fenderi*) was listed as a Federal Endangered species on January 25, 2000 (FR 65(16):3875-38901). This butterfly is currently restricted to the Willamette Valley (ONHP 1998). The caterpillar of the Fender's Blue butterfly is dependent on a few species of lupine, especially Kincaid's lupine (*Lupinus sulphureus* ssp. *kincaidii*), as a source of food.

Kincaid's lupine is primarily restricted to native upland prairie habitats in the Willamette Valley (FR 65(16):3875-38901). There is potential for Kincaid's lupine to occur in the watershed where conditions are similar to those in the Willamette Valley. Kincaid's lupine has been located, within the Umpqua Valley and South River Resource Area, in modified or relic prairie habitat. The suspected presence of Kincaid's lupine means Fender's blue butterfly could also occur in the watershed. However, it is unknown if the Fender's Blue butterfly is present in the Lower North Umpqua watershed. Kincaid's lupine populations discovered should be monitored to detect the presence of Fender's blue butterfly caterpillars.

#### Vernal pool fairy shrimp

The vernal pool fairy shrimp (*Branchinecta lynchi*) inhabits temporary pools of water in grass or mud bottomed swales (USDI 1994). The known distribution range is restricted to the Central Valley in California. The vernal pool fairy shrimp has been documented occurring on the Medford BLM District. It is unknown if the vernal pool fairy shrimp is present on the Roseburg BLM District. Private lands in the valleys of the watershed may provide habitat in the form of temporary water pools, which could be used by this shrimp species. The vernal pool fairy shrimp is not expected to occur on BLM-administered lands in the watershed.

### **Bureau sensitive species**

#### Western pond turtle

The Western pond turtle (*Clemmys marmorata*) is an aquatic freshwater species, living in a variety of habitats including ponds, streams and rivers. Western pond turtles originally ranged from northern Baja California, Mexico, north to the Puget Sound region in Washington. Their current distribution includes the Columbia River Gorge and the inland valleys between the Coast Range and Cascade Mountains. Threats to native turtles



include habitat alteration, predation on young turtles by exotic bullfrogs and fishes, drought, local disease outbreaks and fragmentation of remaining populations. Western pond turtles require water to live and eat, and favor habitat with large amounts of emergent logs or boulders for basking. Habitat surrounding the aquatic habitat is also important for nesting (Brown et al. 1995). The Western pond turtle has been documented during surveys (USFS) and incidental finds (ODFW 1999) in the watershed, primarily on private land along the North Umpqua River and private ponds.

#### Peregrine falcon

Peregrine falcons (*Falco peregrinus*) utilize cliff systems and rock outcrops for nesting. No known historic peregrine falcon sites occur within the watershed. Individual peregrine falcons have been observed throughout the watershed. The closest known nest site occurs in the

Middle North Umpqua watershed directly east of the Lower North Umpqua watershed. There is limited cliff or rocky outcrop habitat scattered throughout the watershed, which may provide nesting opportunities.

The peregrine falcon has been delisted and is no longer considered a Federal Endangered species under the Endangered Species Act of 1973, as amended (FR 64(164): 46542-46558). The peregrine falcon is now considered to be a Bureau Sensitive species. Its status will be reevaluated after five years of monitoring, in 2004. Management guides include managing known and potential nesting cliffs to maintain site integrity. Sites occupied in the future will have seasonal disturbance restrictions of one-quarter mile or greater. Projects that may cause disturbance, such as blasting, within one mile of any high potential habitat discovered in the future, should be surveyed before project initiation. Pesticides that have a negative effect on prey species or their habitat will not be applied within two miles of an active site (RMP 1994).

#### Northern goshawk

Historical literature and current geographic distribution suggests the northern goshawk (*Accipiter gentiles*) would not be expected to occur in most of the Roseburg BLM District. However, the northern goshawk has been documented throughout the District and is suspected to occur within the Lower North Umpqua watershed. No protocol surveys have been completed within the watershed and there are no known nest sites at this time.

Consider follow-up surveys on northern goshawk sightings by evaluating habitat and conducting surveys to determine if goshawks are nesting within the watershed. Protect known and future nesting territories with 30-acre buffers around active and alternative nest sites (RMP 1994). Restrict human activity and disturbance within 0.25 miles of active sites from March 1 to August 31, or until the young have dispersed. A resource area biologist would determine if seasonal restrictions could be waived.

#### Purple martin

The purple martin (*Progne subis*) is an uncommon migrant and local breeding summer resident in Oregon. The western population of the purple martin was once fairly common

in western Oregon (USFWS 1985). Purple martins nest in cavities and under natural conditions, nest in woodpecker holes in dead trees. Purple martins will also use nest boxes or gourds for nesting. Forest management practices, such as suppression of fire and clear-cutting without snag retention, significantly reduced natural nesting habitat. The Guidelines for Management of the Purple Martin in the Umpqua Valley (ODFW 1998) was developed to increase the purple martin population in the Umpqua River basin by establishing new colonies with a nest box program centered on local creeks, ponds, and reservoirs. The purple martin is known to occur within the watershed and there are two known active colonies utilizing natural and man-made cavities and nest boxes. Management practices creating and maintaining snags in open areas would benefit this species.

#### Fisher

The fisher (*Martes pennanti*) is very rare in Oregon. Most of the sightings are in the Coast and Cascade mountains. Fishers primarily use mature closed-canopy coniferous forests with some deciduous component, frequently along riparian corridors (Csuti et al. 1998). Habitat loss and trapping have nearly extirpated this species from Oregon. The status of fisher is unknown within the watershed.

#### Townsend's big-eared bat

Townsend's big-eared bat (*Corynorhinus townsendii*) is a relatively rare species with declining populations in Oregon. The species are known to occur in forested habitats west of the Cascade Mountains. The presence of suitable roost sites is more important than the vegetation type in determining the distribution of this bat (Csuti et al 1998). These bats are strongly associated with caves and mines and are extremely sensitive to disturbance. When Townsend's big-eared bats are found occupying caves or mines on federal land, the appropriate state agency should be notified and management prescriptions for that site should include special consideration for potential impacts on this species (ROD/ Standards and Guidelines, pp. 37-38). There are currently no known roost sites within the watershed. The status of Townsend's big-eared bat is unknown within the watershed.

#### **Bureau assessment species**

Three terrestrial animal species on the Roseburg BLM District are considered to be Bureau Assessment (BA) species. Bureau Assessment species are not included as federal or state listed species but are of concern in Oregon or/and Washington. The three species include the Brazilian free-tailed bat (*Tadarida brasiliensis mexicana*), harlequin duck (*Histrionicus histrionicus*, breeding population), and western least bittern (*Ixobrychus exilis hesperis*). These three species are not known to occur within the Lower North Umpqua watershed.

#### **Survey and manage species**

##### Oregon shoulderband snail

Oregon shoulderband (*Helminthoglypta hertleini*) is known to occur in southern Oregon and is known to occur as far north as Douglas County, Oregon. Habitat for this species is generally associated with, though not restricted to, talus and other rocky substrates. Other habitat components may include rock fissures or large woody debris sites. The

Roseburg District is required to conduct equivalent effort surveys for the Oregon Shoulderband within the South River Resource Area (USDA and USDI 2001). This snail species is suspected to occur within the Lower North Umpqua watershed due to undocumented observations.

#### Del Norte salamander

The Del Norte salamander (*Plethodon elongates*) is known to occur on the Roseburg BLM District. The Del Norte salamander uses forested talus habitat, rocky substrates in hardwood forests, and riparian areas. Other habitat features include cool, moist conditions with moss and fern ground cover, lichen downfall, deep litter, and cobble dominated rocky substrates (IB-OR-96-161 Protocols for Survey and Manage Amphibians and BLM-IM-OR-2000-004, Survey and Manage Survey Protocols-Amphibians v. 3.0). Protocol states that habitat within 25 miles of a known Del Norte salamander site must be surveyed. The Lower North Umpqua watershed falls more than 25 miles from the farthest north extent of the Del Norte salamander range.

#### Great gray owl

Within the range of the northern spotted owl, the great gray owl (*Strix nebulosa*) is most common in Lodgepole Pine forests adjacent to meadows. However, it is also found in other coniferous forest types (USDA and USDI 2001). Specific mitigation measures for the great gray owl are provided in the ROD, Attachment 1- Standards and Guidelines for Former Protection Buffer Species (USDA and USDI 2001). The great gray owl has been documented as occurring on the Roseburg BLM District and could occur in the Lower North Umpqua watershed.

#### **Special interest species**

These species are of special interest to the general public or another agency, such as the Oregon Department of Fish and Wildlife.

#### Roosevelt elk

Historically, the range of Roosevelt elk (*Cervus elaphus*) extended from the summit of the Cascade Mountains to the Oregon coast. In 1938, the elk population in Oregon was estimated to be 7,000 animals (Graf 1943). Elk numbers and distribution changed as people settled in the region. Over time, elk habitat areas shifted from the historical distribution to “concentrated population centers which occur as islands across forested lands of varying seral stages.” Information about the historical distribution of elk within the Lower North Umpqua watershed is not available. Due to the increased number of people, road and home construction, and timber harvesting, it is suspected the elk population has declined in the area, as reported in other parts of the region (Brown 1985).

The number of Roosevelt elk in the Lower North Umpqua watershed is not available (Personal communication from ODFW). Elk forage for food in open areas where the vegetation includes grass-forb, shrub, and open sapling communities. Elk use a range of vegetation age classes for hiding and thermal cover, including large shrub, open sapling, closed sapling, and mature or old-growth forest habitat (Brown 1985).

The watershed falls outside of the three elk management areas identified in the Roseburg District Proposed Resource Management Plan (USDI 1994). Management direction for these elk management areas is discussed in the Roseburg District ROD/RMP (USDI 1995).

#### Bat species

Presence and abundance of bats within this watershed is unknown due to few known site locations and lack of survey information for these species. Seven bat species of concern (Appendix – Wildlife), such as Yuma myotis (*Myotis yumanensis*), long-legged myotis (*Myotis volans*), and fringed myotis (*Myotis thysanodes*), are all likely to occur in late-seral forest within the watershed. Structural features of older forest stands, including large snags, tree deformities, prominent flaking bark, and thick foliage are known to provide suitable roosting sites for some of these species. These bats may forage over a variety of habitat types, particularly in riparian areas with adjacent late-seral habitat. In riparian habitats, insects associated with nearby water sources can provide good foraging habitat in close proximity to roosting sites. Considering the association of these species with late-seral forests, snags, and riparian areas, it is likely that these species are very sensitive to forest management practices. Management recommendations are provided in the ROD - Appendix 1 (USDA and USDI 2001) to provide additional protection for roost sites for bats including the fringed myotis, silver-haired bat (*Lasionycteris noctivagans*), long-eared myotis (*Myotis evotis*), long-legged myotis, and pallid bat (*Antrozous pallidus*).

#### Wild turkey

The historic distribution range of the wild turkey (*Meleagris gallopavo*) extended from Arizona north and east to New England and southern Canada. Their range also extended to Veracruz, Mexico. The wild turkey has disappeared from much of its historic range. It has been re-introduced into California, Nevada, Oregon, Utah, Washington, and Wyoming (Csuti et al. 1997).

Wild turkeys inhabit oak savannahs and woodlands, young forest stands less than 10 years old, meadows, and riparian areas (Csuti et al. 1997 and Crawford and Keegan 1990). The oak savannahs present in the lower elevations of the watershed on private land and the North Bank Habitat Management Area support populations of wild turkeys. Some turkeys may use BLM-administered lands that are adjacent to the agricultural and hardwood areas on private land. The remaining Bureau of Land Management administered land in the watershed would not play a major role in maintaining the turkey population in the area.

#### Osprey

The Osprey (*Pandion haliaetus*) is a migratory species that breeds in Oregon. Osprey is a bird of prey whose diet consists primarily of fish. As a result, it nests in areas within easy reach of lakes and rivers. It requires suitable nest sites such as large, dead trees or artificial nesting platforms.

Osprey nesting habitat is present along the North Umpqua River, which flows through the watershed. Surveys during the breeding season show osprey using both natural and artificial nest platforms within the watershed. Currently, there are 10 known osprey nest sites in the watershed.

#### Raptors

Raptors are birds of prey, which includes eagles, hawks, kites, falcons, and owls. Eighteen raptor species, three falcon species, and six owl species occur or could potentially occur within the watershed in various habitat types. Known and future raptor nest sites, not protected by other management recommendations, will be protected under the RMP by providing suitable habitat buffers and seasonal disturbance restrictions (RMP 1994).

#### Neotropical bird species

Bird species that migrate and spend the winter south of the North American continent are considered to be neotropical bird species. Bird species that live on the North American continent year round are called resident birds. Widespread concern for neotropical bird species, related habitat alterations, impacts from pesticide use, and other threats began in the 1970s and 1980s (Peterjohn et al. 1995).

Oregon has over 169 bird species considered to be Neotropical migrants. Population trends of Neotropical migrants in Oregon show declines and increases. Over 25 species have been documented to be declining in numbers (Sharp 1990). Oregon populations of 19 bird species show statistically significant declining trends while nine species show significant increasing trends (Sharp 1990). Including all species showing declines, increases, or almost statistically significant trends, there are 33 species decreasing and 12 species increasing in number in Oregon (Sharp 1990).

The Lower North Umpqua watershed supports populations of Neotropical bird species. The watershed provides suitable habitat for Neotropical species known to nest in the Roseburg BLM District. The hardwoods, shrubs, and conifers function as breeding, feeding, and resting habitat for many Neotropical birds. Partner's In Flight, a coalition of state and federal agencies, private agencies and organizations, and academia, has developed conservation plans to ensure long-term maintenance of healthy populations of native landbirds. *The Conservation Strategy for Landbirds in Coniferous Forests of Oregon and Washington* and *The Conservation Strategy for Landbirds in Lowlands and Valleys of Western Oregon and Washington* provide recommendations intended to guide planning efforts and actions of land managers. In addition, the *Guide for Assessing the Occurrence of Breeding Birds in Western Riparian Systems* (BLM, 1999) provides a tool to help construct a standard for western riparian bird communities, and to determine what breeding birds could be, or should be, on a given site.

**Table A-6: Terrestrial Wildlife Special Status Species, Presence or Expected Presence in Lower North Umpqua Watershed**

Species	Status	Historic Occurrence in Watershed	Current Occurrence in Watershed	Habitat Requirements	Micro Habitat
<b>AMPHIBIANS</b>					
Cascade Torrent (Seep) Salamander ( <i>Rhyacotriton cascadae</i> )	BT, XC, V	No	No	Rocky streams, lakes, and seeps in Conifer or Alder forests	Flowing water over rocks, splash zone of streams, spray zone of waterfalls
Cascades Frog ( <i>Rana cascadae</i> )	BT, XC, V	Yes	Yes	Lakes, ponds, streams in meadows above elevations of 2600 feet	Muddy or silty substrate of shallow waters
Clouded Salamander ( <i>Aneides Ferreus</i> )	BTO, U	Yes	Yes	Forested Habitats	Coarse wood debris/talus
Del Norte Salamander ( <i>Plethodon elongatus</i> )	BTO, XC, V	No	No	Late-successional conifer forests	Rock rubble and talus slopes
Foothill Yellow-legged Frog ( <i>Rana boylei</i> )	BTO, XC, V	Yes	Yes	Low gradient streams/ponds	Gravel/cobbles, riparian
Northern Red-legged Frog ( <i>Rana aurora aurora</i> )	BTO, XC, U	Yes	Yes	Low gradient streams/ponds	Aquatic vegetation
Oregon Slender Salamander ( <i>Batrachoseps wrighti</i> )	BTO, U	No	No	Late-successional conifer forests	Bark, moss, rocks, logs
Southern Torrent (Seep) Salamander ( <i>Rhyacotriton variegatus</i> )	BTO, XC, V	Yes	Yes	Springs and streams	Riparian/wetland, CWD
Tailed Frog ( <i>Ascaphus truei</i> )	BT, XC, V	Yes	Yes	High gradient, perennial streams	Cobbles/boulders, riparian
<b>REPTILES</b>					
California Mountain Kingsnake ( <i>Lampropeltis zonata</i> )	BT, V	No	No	Pine forests, oak woodlands, chaparral	Rotting logs, loose soil
Common Kingsnake ( <i>Lampropeltis getulus</i> )	BTO, V	Yes	Yes	Grassland, mixed oak woodlands	Riparian
Sharp-tailed Snake ( <i>Contia tenuis</i> )	BT, V	Yes	Yes	Forested Habitats	CWD, talus, riparian

Species	Status	Historic Occurrence in Watershed	Current Occurrence in Watershed	Habitat Requirements	Micro Habitat
Western Pond Turtle ( <i>Clemmys marmorata</i> )	BSO, XC, CR	Yes	Yes	Ponds, low gradient rivers	CWD, rocks, riparian
<b>BIRDS</b>					
Acorn Woodpecker ( <i>Melanerpes formicivorus</i> )	BT	Yes	Yes	Mixed oak woodlands	
Allen's Hummingbird ( <i>Selasphorus sasin</i> )	BTO	No	No	Coastal scrub, riparian near coniferous forests	
American Peregrine Falcon ( <i>Falco peregrinus anatum</i> )	BS, SE	Yes	Yes	Cliffs, rock outcrops	
Arctic Peregrine Falcon ( <i>Falco peregrinus tundrius</i> )	BS, SE	No	No	Cliffs, rock outcrops	
Bald Eagle ( <i>Haliaeetus leucocephalus</i> )	FT, ST	Yes	Yes	Late-successional conifer forests	Large diameter trees/snags
Bank Swallow ( <i>Riparia riparia</i> )	BTO	No	No	Open habitats	Dirt embankments
Great Gray Owl ( <i>Strix nebulosa</i> )	BT, V	No	No	Coniferous forests	
Harlequin Duck ( <i>Histrionicus histrionicus</i> ) (breeding population)	BAO, XC, U	No	No	Streams associated with forests within the Cascade Mountains	
Marbled Murrelet ( <i>Brachyramphus marmoratus</i> )	FT, ST	No	No	Late-successional conifer forests	Large diameter trees/limbs, platforms
Mountain Plover ( <i>Charadrius montanus</i> )	FPT	No	No	Upland habitats	Open plains
Northern Goshawk ( <i>Accipiter gentilis</i> )	BSO, XC, CR	Yes	Yes	Mature and older conifer forests	
Northern Spotted Owl ( <i>Strix occidentalis caurina</i> )	FT, ST	Yes	Yes	Mature and older conifer forests	Large diameter trees/snags, cavities
Olive-sided Flycatcher ( <i>Contopus cooperi</i> )	BTO, XC, V	Yes	Yes	Coniferous forests	Uneven canopy with snags and tall trees
Oregon Vesper Sparrow ( <i>Pooecetes gramineus affinis</i> )	BSO, CR	Yes	Yes	Open habitats	

Species	Status	Historic Occurrence in Watershed	Current Occurrence in Watershed	Habitat Requirements	Micro Habitat
Pileated Woodpecker ( <i>Dryocopus pileatus</i> )	BT, V	Yes	Yes	Forests 40 years and older	Snags, CWD
Purple Martin ( <i>Progne subis</i> )	BSO, CR	Yes	Yes	Grasslands, brushlands, open woodlands	Snag cavities
Streaked Horned Lark ( <i>Eremophila alpestris strigata</i> )	BSO, CR	No	No	Open habitats	Sparse vegetation
Western Bluebird ( <i>Sialia mexicana</i> )	BT, V	Yes	Yes	Open habitats	Tree cavities
Western Least Bittern ( <i>Ixobrychus exilis hesperis</i> )	BAO, XC, P	No	No	Freshwater marshes	Aquatic vegetation
White-tailed Kite ( <i>Elanus leucurus</i> )	BTO	Yes	Yes	Open habitats, riparian	Trees or tall shrubs
Willow Flycatcher ( <i>Empidonax traillii brewsteri</i> )	BT, XC, V	Yes	Yes	Riparian, edges of forest clearings	Willows, brushy vegetation
<b>MAMMALS</b>					
American Marten ( <i>Martes americana</i> )	BTO, V	Yes	Unknown	Late-successional forest	
Brazilian Free-tailed Bat ( <i>Tadarida brasiliensis</i> )	BAO	No	No	At low elevations where climatic conditions are warm	Caves/mines, snags, buildings
Columbian White-tailed Deer ( <i>Odocoileus virginianus leucurus</i> )	FE, V	Yes	Yes	Bottomlands, oak/hardwood forests	
Fisher ( <i>Martes pennanti</i> )	BSO, XC, CR	Yes	Unknown	Late-successional conifer forests	
Fringed Myotis ( <i>Myotis thysanodes</i> )	BT, XC, V	Yes	Yes	Late-successional conifer forests, associated with water	Caves/mines, bridges, rock crevices
Long-eared Myotis ( <i>Myotis evotis</i> )	BT, XC, U	Yes	Yes	Late-successional conifer forests, associated with water	Caves/mines, bridges, snags
Long-legged Myotis ( <i>Myotis volans</i> )	BT, XC, U	Yes	Yes	Late-successional conifer forests, associated with water	Caves/mines, bridges, loose bark, rock crevices
Pallid Bat ( <i>Antrozous pallidus</i> )	BT, V	Yes	Yes	Ponderosa pine, oak woodlands	Buildings, bridges, snags



Species	Status	Historic Occurrence in Watershed	Current Occurrence in Watershed	Habitat Requirements	Micro Habitat
Ringtail ( <i>Bassariscus astutus</i> )	BTO, U	Yes	Yes	Coniferous forests, mixed woodlands	Vertical structure to habitat, streams and rivers
Silver-haired Bat ( <i>Lasionycteris noctivagans</i> )	BTO, U	Yes	Yes	Late-successional conifer forests, associated with water	Caves/mines, bridges, loose bark, rock crevices, snags
Townsend's Big-eared Bat ( <i>Corynorhinus townsendii</i> )	BSO, XC, CR	Yes	Unknown Probable	Late-successional conifer forests	Caves/mines, buildings, bridges
Western Gray Squirrel ( <i>Sciurus griseus</i> )	BTO, U	Yes	Yes	Oak/hardwood forests, conifer forests, riparian	Broad-leafed component in habitat
White-footed Vole ( <i>Phenacomys albipes</i> )	BTO, XC	No	No	Riparian habitats within conifer forests	Small clearings supporting growth of forbs
Yuma Myotis ( <i>Myotis yumanensis</i> )	BTO, XC	Yes	Yes	Late-successional conifer forests, associated with water	Caves/mines, bridges, buildings, snags

Status abbreviations: FE--Federal Endangered, FT--Federal Threatened, SE--State Endangered, ST--State Threatened, XC--Former Federal Candidate, CR--ODFW Critical, V--ODFW Vulnerable, P--ODFW Peripheral/Naturally Rare, U--ODFW Undetermined, BS-- Bureau Sensitive in Oregon and Washington, BSO-- Bureau Sensitive in Oregon, BA-- Bureau Assessment Species in Oregon and Washington, BAO--Bureau Assessment Species in Oregon, BT--Bureau Tracking in Oregon and Washington, BTO--Bureau Tracking in Oregon

October 2, 2002

## **Addendum appendix 2: Noxious weeds – Douglas County policy, control ratings, weed lists, and management.**

### **Douglas County noxious weed policy**

“Noxious weed” is a legal definition for non-native plants that are particularly aggressive, invasive and difficult to control. One or more of the following can describe them:

- They cause economic losses to agricultural and horticultural industries.
- They endanger native flora and fauna by encroaching in wild lands.
- They hamper the enjoyment and full use of recreation sites.
- They are poisonous, injurious or otherwise harmful to humans and animals.

Because these plants cause economic, ecological and other damage, an integrated control program that includes biological, chemical, cultural, manual and mechanical control techniques are recommended for all noxious weeds.

### **Weed control ratings and weed lists<sup>6</sup>**

The following lists are designated T, A, or B based on the classification system developed by the Oregon Department of Agriculture. These lists are followed by a comprehensive list that includes the state weed designation. All the lists are arranged alphabetically by common name.

#### T List

These are priority weeds targeted for control at the county level. All T list weeds are found on the A or B lists. *Intensive control of these infestations is highly recommended.* Please report known or suspected infestations to Douglas County OSU Extension Service.

<u>Common Name</u>	<u>Scientific Name</u>
Blueweed	<i>Echium vulgare</i>
Buffaloburr	<i>Solanum rostratum</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Gorse	<i>Ulex europaeus</i>
Leafy spurge	<i>Euphorbia esula</i>
Portugese or striated broom	<i>Cytisus striatus</i>
Spotted knapweed	<i>Centaurea maculosa</i>
Whitetop or Hoary cress	<i>Cardaria draba</i>
Woolly distaff thistle	<i>Carthamus lanatus</i>
Yellow starthistle	<i>Centaurea solstitialis</i>

#### A List

These noxious weeds occur in small enough infestations that eradication or containment is possible in the county. Some of these weeds are not yet known in Douglas County but their presence in adjacent counties makes future occurrence likely. *Intensive control of these infestations is recommended.* Species with a (\*) are currently unknown in Douglas County.

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<sup>6</sup> To report noxious weeds - contact the Douglas County Extension Service in the Courthouse Annex, 1134 SE Douglas Ave., Roseburg, 672-4461 or 1-800-883-7568

<u>Common Name</u>	<u>Scientific Name</u>
Biddy-biddy	<i>Acaena novae-zelandiae</i> *
Blueweed	<i>Echium vulgare</i>
Buffaloburr	<i>Solanum rostratum</i>
Diffuse knapweed	<i>Centaurea diffusa</i>
Dyers woad	<i>Isatis tinctoria</i> *
Gorse	<i>Ulex europaeus</i>
Iberian starthistle	<i>Centaurea iberica</i> *
Leafy spurge	<i>Euphorbia esula</i>
Musk thistle	<i>Carduus nutans</i> *
Perennial pepperweed	<i>Lepidium latifolium</i> *
Portugese or striated broom	<i>Cytisus striatus</i>
Purple starthistle	<i>Centaurea calcitrapa</i> *
Russian knapweed	<i>Centaurea repens</i> *
Scotch thistle	<i>Onopordum acanthium</i>
Spotted knapweed	<i>Centaurea maculosa</i>
Squarrose knapweed	<i>Centaurea virgata</i> *
Velvetleaf	<i>Abutilon theophrasti</i>
Whitetop or hoary cress	<i>Cardaria draba</i>
Woolly distaff thistle	<i>Carthamus lanatus</i>
Yellow or common toadflax	<i>Linaria vulgaris</i>

#### B List

These noxious weeds are common and well established in Douglas County. Eradication at the county level is not likely. Containment is possible in some cases and is encouraged. Where eradication and containment are not feasible, biological control agents (usually insects) may be introduced to slow the spread of the invaders. *Intensive control is recommended on small isolated infestations.* Eradication is not likely or feasible on widespread infestations, but control, especially along travel routes is encouraged. In other areas, biological control agents may be introduced to reduce the spread of the infestation. Species with a (&) have had biocontrols released in Oregon.

<u>Common Name</u>	<u>Scientific Name</u>
Bull thistle	<i>Cirsium vulgare</i> &
Burnweed or coast fireweed	<i>Erechtites minima</i>
Canada thistle	<i>Cirsium arvense</i> &
Dodder	<i>Cuscuta ssp.</i>
English or One seeded hawthorn	<i>Crataegus monogyna</i>
English Ivy	<i>Hedera helix</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>
European beach grass	<i>Ammophila arenaria</i>
Field bindweed	<i>Convolvulus arvensis</i> &
French broom	<i>Genista monspessulana</i>
Giant horsetail	<i>Equisetum telmateia</i>
Himalayan blackberry	<i>Rubus discolor</i>
Italian thistle	<i>Carduus pycnocephalus</i> &
Japanese knotweed	<i>Polygonum cuspidatum</i>

Common Name

Johnsongrass  
 Malta starthistle, tocalote  
 Marestalk, Horseweed  
 Meadow knapweed  
 Medusahead rye  
 Milk thistle  
 Pennyroyal  
 Poison hemlock  
 Puncturevine  
 Purple loosestrife  
 Rush skeleton weed  
 Scotch broom  
 Slender-flowered thistle  
 Spanish broom  
 Spiny cocklebur  
 St. Johns wort  
 Sulfur cinquefoil  
 Tansy ragwort  
 Yellow nutsedge  
 Yellow starthistle

Scientific Name

*Sorghum halepense*  
*Centaurea melitensis*  
*Conyza canadensis*  
*Centaurea pratensis*&  
*Taeniatherum caput-medusae*  
*Silybum marianum*&  
*Mentha pulegium*  
*Conium maculatum*&  
*Tribulus terrestris*&  
*Lythrum salicaria*&  
*Chondrilla juncea*&  
*Cytisus scoparius*&  
*Carduus tenuiflorus*&  
*Spartium junceum*  
*Xanthium spinosum*  
*Hypericum perforatum*&  
*Potentilla recta*  
*Senecio jacobaea*&  
*Cyperus esculentus*  
*Centaurea solstitialis*&

**Potential new invaders as of 2002**Common Name

Buffalo burr  
 Diffuse knapweed  
 English ivy  
 False brome  
 French broom  
 Giant hogweed  
 Japanese knotweed  
 Musk thistle  
 Kudzu  
 Puncture vine  
 Scotch thistle  
 Spotted knapweed  
 Yellow toadflax

Scientific Name

*Solanum rostratum*  
*Centaurea diffusa*  
*Hedera helix*  
*Brachypodium sylvaticum*  
*Genista monspessulana*  
*Heracleum mantegazzianum*  
*Polygonum cuspidatum*  
*Carduus nutans*  
*Pueraria lobata*  
*Tribulus terrestris*  
*Onopordum acanthium*  
*Centaurea maculosa*  
*Linaria vulgaris*

Classification

T, A  
 T, A  
 B  
 B  
 B  
 T, A  
 B  
 A  
 T, A  
 B  
 A  
 T, A  
 B

**Known new invaders as of 2002**Common Name

Gorse  
 Portuguese broom  
 Woolly distaff thistle  
 Yellow starthistle  
 Spiny cocklebur

Scientific Name

*Ulex europaeus*  
*Cytisus striatus*  
*Carthamus lanatus*  
*Centaurea solstitialis*  
*Xanthium spinosum*

Classification

T, A  
 T, A  
 T, A  
 T, B  
 B

**Project design features and best known practices**

Project Design Features (USDI BLM 1986, pg 183) and Best Known Practices (USDI BLM 1996, pps 36-40) were designed to avoid introducing or spreading noxious weed infestations in any area (USDI BLM 1995A, pg 74).

- Conduct pre-project surveys, risk assessment(s), and weed treatment(s) prior to ground disturbing activities. Follow up monitoring and treatment may be needed.
- Clean all ground disturbing construction or timber harvesting equipment to remove noxious weed seed or other plant material before moving onto BLM lands.
- Maximize shade retention in project designs for road maintenance and construction projects to suppress noxious weeds. Minimize the removal of trees and other roadside vegetation during road construction, reconstruction, and maintenance.
- Re-establish vegetation on all bare ground to minimize noxious weed spread. Seed all disturbed soil resulting from road construction, reconstruction, and maintenance activities as soon as practical. Use native plant seed when possible.
- Conduct post-project monitoring of weed treatments, and weed management recommendations to determine the efficacy of recommendations and treatments and if ongoing weed treatments are needed to prevent new infestations from becoming established.

### **Addendum appendix 3: Noxious Weeds - Comprehensive list of Douglas County noxious weeds**

Species with a (✓) are new invaders. Species with a (&) have had biocontrols released in Douglas County. Species with a (\*) are not known to occur in Douglas County.

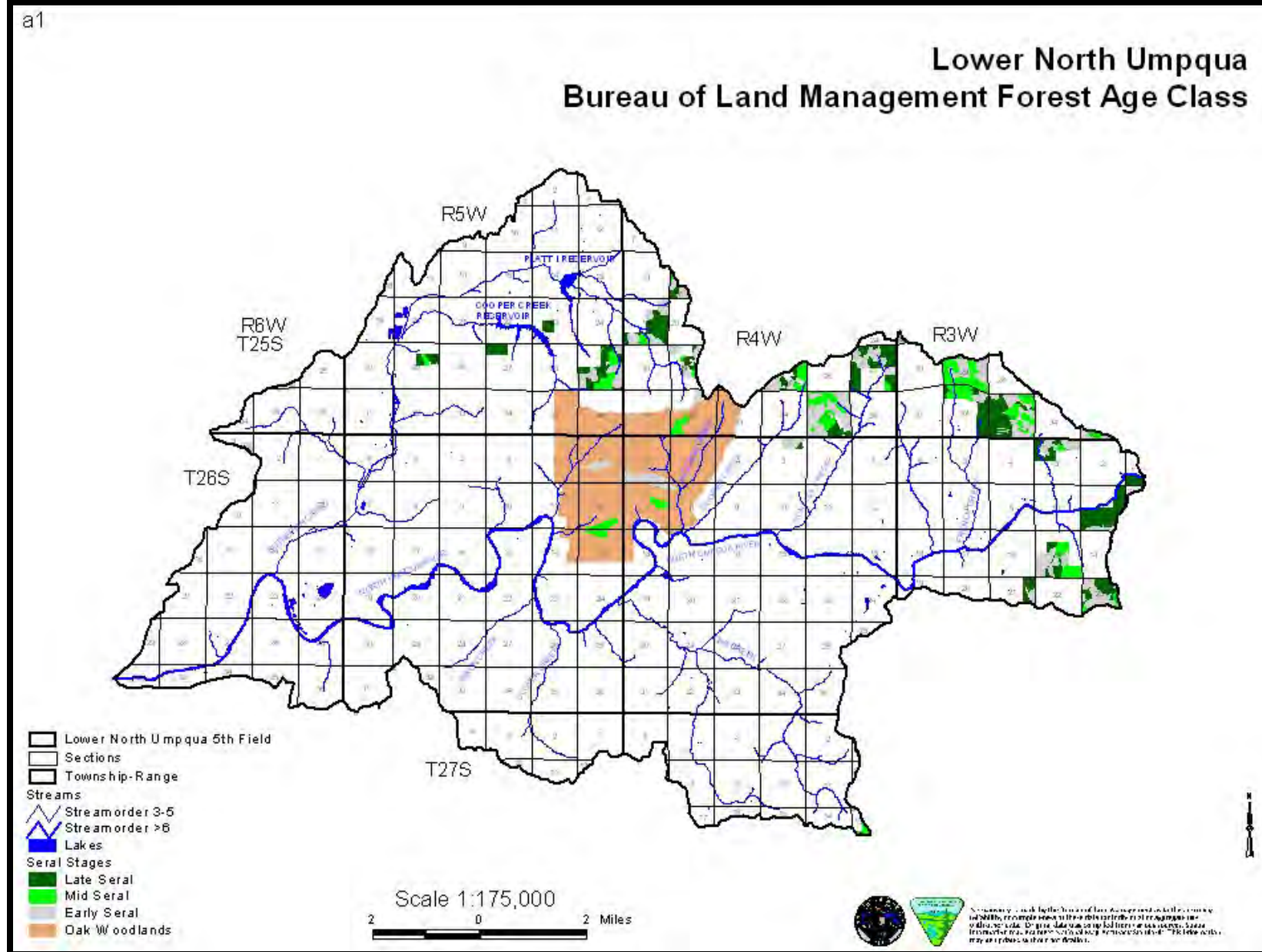
<u>Common Name</u>	<u>Scientific Name</u>	<u>Oregon</u> <u>Status</u>	<u>County</u> <u>Status</u>
Biddy-biddy	<i>Acaena novae-zelandiae</i> *	B	A
Blueweed	<i>Echium vulgare</i>	none	A, T
Buffaloburr	<i>Solanum rostratum</i>	B	A, T
Bull thistle	<i>Cirsium vulgare</i> &	B	B
Burnweed or Coast fireweed	<i>Erechtites minima</i>	none	B
Canada thistle	<i>Cirsium arvense</i> &	B	B
Diffuse knapweed	<i>Centaurea diffusa</i> &	B	A, T
Dodder	<i>Cuscuta ssp.</i>	B	B
Dyers woad	<i>Isatis tinctoria</i> *	B	A
English Ivy	<i>Hedera helix</i>	none	B
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>	B	B
European beach grass	<i>Ammophila arenaria</i>	none	B
Field bindweed	<i>Convolvulus arvensis</i> &	B	B
French broom	<i>Genista monspessulana</i>	B	B
Giant horsetail	<i>Equisetum telmateia</i>	B	B
Gorse	<i>Ulex europaeus</i> &	B, T	A, T
Himalayan blackberry	<i>Rubus discolor</i>	none	B
Iberian starthistle	<i>Centaurea iberica</i> *	A, T	A
Italian thistle	<i>Carduus pycnocephalus</i> &	B	B
Japanese knotweed	<i>Polygonum cuspidatum</i>	B	B
Johnsongrass	<i>Sorghum halepense</i>	B	B
Leafy spurge	<i>Euphorbia esula</i> &	B, T	A, T
Malta starthistle, tocalote	<i>Centaurea melitensis</i>	none	B
Marestail, Horseweed	<i>Conyza canadensis</i>	none	B
Meadow knapweed	<i>Centaurea pratensis</i> &	B	B
Medusahead rye	<i>Taeniatherum caput-medusae</i>	B	B
Milk thistle	<i>Silybum marianum</i> &	B	B
Musk thistle	<i>Carduus nutans</i> *	B	A
English or One seeded hawthorn	<i>Crataegus monogyna</i>	none	B
Pennyroyal	<i>Mentha pulegium</i>	none	B
Perennial pepperweed	<i>Lepidium latifolium</i> *	B	A
Poison hemlock	<i>Conium maculatum</i> &	B	B
Portugese or striated broom	<i>Cytisus striatus</i> ✓	B	A, T
Puncturevine	<i>Tribulus terrestris</i> &	B	B
Purple loosestrife	<i>Lythrum salicaria</i> &	B	B
Purple starthistle	<i>Centaurea calcitrapa</i> *	A, T	A
Rush skeletonweed	<i>Chondrilla juncea</i> &	B, T	B
Russian knapweed	<i>Centaurea repens</i>	B	A

<u>Common Name</u>	<u>Scientific Name</u>	<u>Oregon</u> <u>Status</u>	<u>County</u> <u>Status</u>
Scotch broom	<i>Cytisus scoparius</i> <sup>&amp;</sup>	B	B
Scotch thistle	<i>Onopordum acanthium</i> ✓	B	A
Slender-flowered thistle	<i>Carduus tenuiflorus</i> <sup>&amp;</sup>	B	B
Spanish broom	<i>Spartium junceum</i>	B	B
Spiny cocklebur	<i>Xanthium spinosum</i>	B	B
Spotted knapweed	<i>Centaurea maculosa</i> <sup>&amp;</sup>	B	A, T
Squarrose knapweed	<i>Centaurea virgata</i> *	A	A
St. Johnswort	<i>Hypericum perforatum</i> <sup>&amp;</sup>	B	B
Sulfur cinquefoil	<i>Potentilla recta</i>	B	B
Tansy Ragwort	<i>Senecio jacobaea</i> <sup>&amp;</sup>	B, T	B
Velvetleaf	<i>Abutilon theophrasti</i>	B	A
Whitetop or Hoary cress	<i>Cardaria draba</i>	B	A, T
Woolly distaff thistle	<i>Carthamus lanatus</i>	A, T	A, T
Yellow nutsedge	<i>Cyperus esculentus</i>	B	B
Yellow or common toadflax	<i>Linaria vulgaris</i> <sup>&amp;</sup>	B	A
Yellow starthistle	<i>Centaurea solstitialis</i> <sup>&amp;</sup>	B, T	B, T

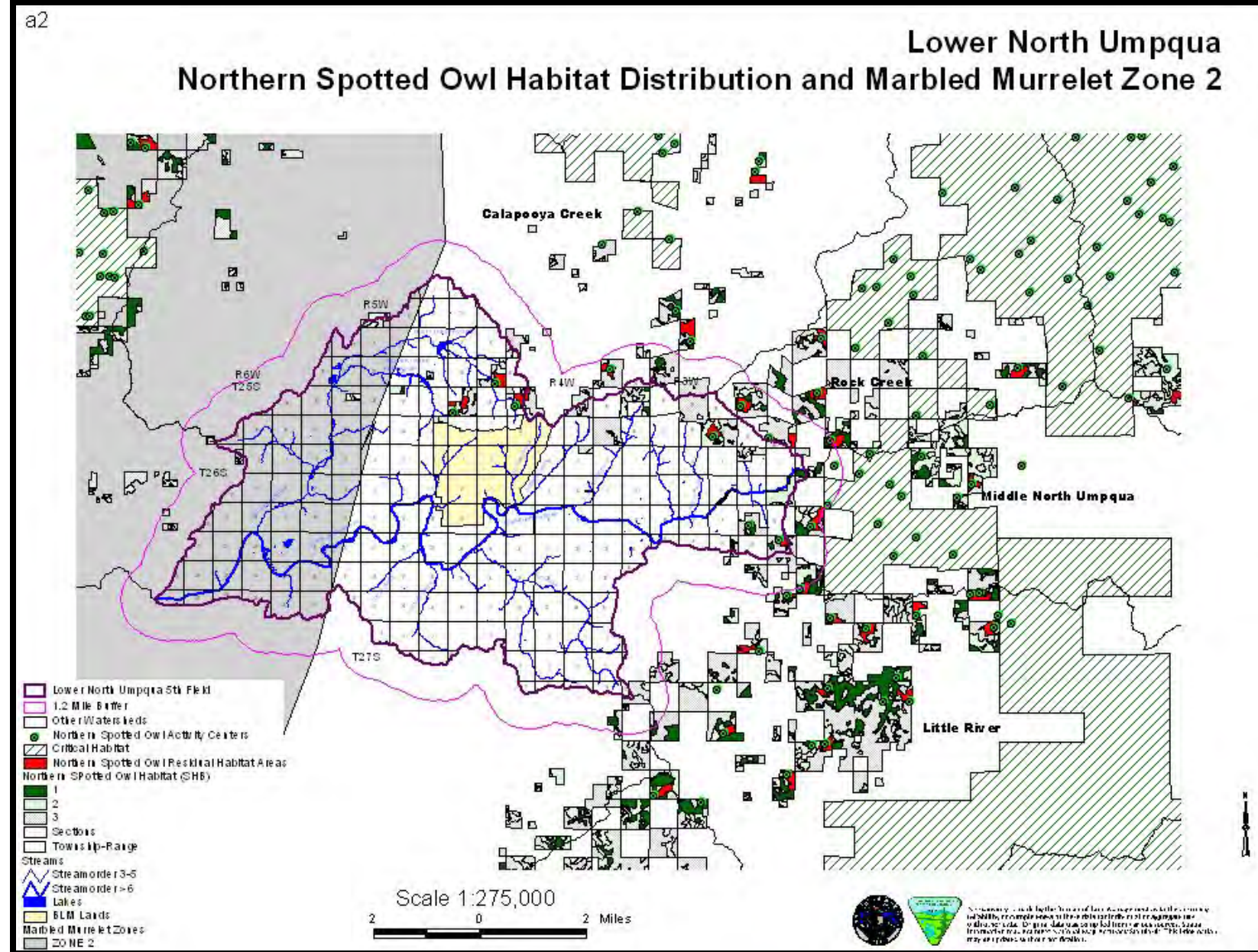
## **Addendum Maps**



Map A-1: Lower North Umpqua BLM Forest Age Classes



Map A-2: Northern Spotted Owl Habitat Distribution and Marbled Murrelet Zone 2





Map A-3: Columbian White-tailed Deer Distribution

