

**Non-High Priority Site Identification Proposal**  
 Bland Days Commercial Thinning: Red Tree Voles  
 Roseburg District BLM  
 South River Field Office

**Introduction**

Bland Days is a proposed commercial thinning and density management project in the South River Resource Area. The project area is located in sections 03, 04, and 17, T30S-R03W, within the South Umpqua fifth field watershed. There are approximately 85 acres in three planned thinning units (A, L, and M [Table 1]). Land use allocations included in the Bland Days project is General Forest Management Area (GFMA; units L and M) and Connectivity (unit A). Harvest methods include a combination of cable and tractor yarding for each of the three proposed units. Current stocking rates in these stands are 198-227 trees per acre (Table 1). The project is designed to reduce competition and favor the largest trees by reducing stand density to 65-118 trees per acre to accelerate the development of late-successional, old-growth characteristics.

The Bland Days project was suspended from further development and implementation due to the number of active red tree vole (RTV) sites detected in the project area as a result of pre-disturbance surveys (IM-OR-2000-037). Eight active RTV sites and one inactive site were detected during pre-disturbance surveys in the project area (Table 1, Figure 1 & 2). The current requirement to manage all known active sites, until high priority sites (HPS) are designated, conflicts with the project objectives. Implementation of the current guidelines reduce the project area from 85 ac. to 28 ac. In order to proceed with the project, a proposal to delineate the 8 active RTV sites within the project area as non-high priority as outlined in the Identification of Non-High Priority Sites Process (IB-OR-2001-273) was initiated on October 30, 2001 by the South River Field Manager.

| <b>Unit</b> | <b>Acres</b> | <b>Stand Age (years)</b> | <b>Quadratic Mean Diameter<sup>1</sup> (inches)</b> | <b>Pre-Treatment (trees/acre)</b> | <b>Post-Treatment (trees/acre)</b> | <b># Active RTV Nests</b> | <b># RTV Nests</b> | <b># Active RTV Sites</b> | <b># Inactive RTV Sites</b> |
|-------------|--------------|--------------------------|---|-----------------------------------|------------------------------------|---------------------------|--------------------|---------------------------|-----------------------------|
| A           | 60           | 50                       | 11.3  | 202                               | 65                                 | 13                        | 22                 | 6                         | 1                           |
| L           | 14           | 50                       | 12.9  | 198                               | 118                                | 4                         | 15                 | 1                         | 0                           |
| M           | 11           | 50                       | 12.1  | 227                               | 116                                | 3                         | 9                  | 1                         | 0                           |

<sup>1</sup> Quadratic mean diameter and trees per acre data for each unit are summarized from information collected by the silviculture and forestry staff.

## Analysis

Analysis of Bland Days as a proposed non-high priority (NHP) site was done at the fifth field watershed scale (i.e. the South Umpqua watershed [Figure 3]). The 5<sup>th</sup> field watershed was selected as the analysis unit for this proposal because that corresponds well to analysis concurrently being done by the RTV high priority site (HPS) workgroup.

Based on criteria developed by the HPS workgroup, it appears unlikely that the active sites in Bland Days will be selected as HPS for the species. The HPS workgroup has designated primary RTV habitat as stands  $\geq 20$  inches DBH where Douglas-fir is prevalent. Primary habitat is of sufficient structure and size to sustain RTVs for the long-term. Information from the 2001 Step 2 Annual Species Review indicates that a majority (74.5%) of RTV sites occur in stands listed as "large" (21-31.9 inches DBH) or "giant" (>

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31.9 inches DBH) in the ISMS data. The primary habitat for RTVs is generally categorized as stands with conifers  $\geq 20$  inches DBH (FSEIS pg. 377). Stands in Bland Days are well below what is regarded as primary RTV habitat. The identification of the sites in Bland Days as non-high priority sites should not limit the options for designating high priority sites in the South Umpqua watershed, if identified, in the future.

For a site to be considered NHP, it must comply with most of the criteria indicating little to no concern for persistence of the species at the scale of the analysis unit (i.e. the fifth field watershed). The four criteria that must be addressed to determine whether there is little or no concern for persistence according to the steps outlined in the NHP site process (IB-OR-2001-273) are:

- 1) Moderate-to-High number of likely extant sites/records.
- 2) High proportion of sites and habitat in reserve land allocations; or limited number of sites within reserves but the proportion or amount of potential habitat within reserves is high and there is a high probability that the habitat is occupied.
- 3) Sites are relatively well distributed within the species range.
- 4) Matrix Standards and Guidelines or other elements of the Northwest Forest Plan provide a reasonable assurance of species persistence.

### ***1) Moderate-to-High number of likely extant sites/records.***

The HPS workgroup developed several criteria for assisting in determining red tree vole population condition within a 5<sup>th</sup> field watershed. Data from pre-project and strategic survey data, red tree vole occurrence in northern spotted owl pellets and spatial analysis for distribution within the watershed. Using range-wide pre-project survey data, the HPS workgroup has identified the following categories of RTV abundance:

|          |                                   |
|----------|-----------------------------------|
| Low      | 0.001 - 0.054 active nests / acre |
| Moderate | 0.054 - 0.126 active nests / acre |
| High     | > 0.126 active nests / acre       |

Using this criteria only, the South Umpqua 5<sup>th</sup> field pre-project survey data indicate that the watershed has a moderate number of RTVs when compared to values throughout the species range. The density of active RTVs based on strategic surveys within the watershed is lower than the density based on pre-disturbance surveys. However, the stand selection criteria and survey methods differ substantially between strategic surveys and pre-disturbance surveys so the densities are not directly comparable.

Within the South River Resource Area, there are 83 extant RTV sites and 29 inactive sites that have been detected over 2,083 ac. of pre-disturbance surveys (Figure 4). There are 23 extant RTV sites and 8 inactive RTV sites within the South Umpqua watershed discovered during pre-disturbance and strategic surveys (ISMS, 3-19-2002). There have been a total of 904 ac. of surveys for RTVs within the watershed (372 ac. of pre-disturbance and 532 ac. of strategic surveys [ISMS, 3-19-2002]). Red tree voles were detected in a majority of the stands surveyed (Table 2). On average, one RTV nest (either active or inactive) was detected every 8.3 ac. of survey and an active RTV nest was detected every 16.9 ac. based on pre-project survey data within the 5<sup>th</sup> field watershed (Table 2). Red tree vole nest trees (either active or inactive) were detected once every 4.6 ac. (0.218 active RTVs/ac.) and active RTV nest trees were detected once every 13.1 ac. (0.076 active RTVs/ac.) within the South River Resource Area. Designation of the 8 active sites in Bland Days would potentially remove 35% (8/23) of the known, extant RTV sites from the South Umpqua 5<sup>th</sup> field watershed.

In the South Umpqua 5<sup>th</sup> field watershed, stands that are approximately 80 years old typically have dominant and co-dominant trees with an average DBH  $\geq$  20 inches based on stand exam data analyzed through Organon. There are 4,615 stands  $\geq$  80 years old within the South Umpqua 5<sup>th</sup> field watershed. Stands were delineated by the union of FOI units with reserved land allocations. Designating stands in this manner is appropriate since pre-disturbance surveys are designed to detect RTVs at the survey area scale (FSEIS pg. 376). In addition, this manner of delineating stands to analyze RTV abundance

is consistent with techniques used during Step 2 of the Annual Species Review process. Thirty-three percent (from strategic surveys) to 66% (from pre-disturbance surveys) of stands  $\geq$  80 years old were occupied by at least one extant RTV site (Table 2). Therefore, since there are 4,615 stands in the watershed and past survey efforts detected extant sites 33-66% of the time, additional RTV sites are expected to occur in the South Umpqua 5<sup>th</sup> field watershed.

**Table 2. Red Tree Vole Abundance in the South Umpqua 5<sup>th</sup> Field Watershed. Data are presented for both strategic survey (SS) and pre-disturbance survey (PD) efforts.**

| Stand Age (yrs) | Survey Area (acres) | n | Proportion of Stands Occupied with Extant Sites | Active RTV Nests | Active RTV Density (nests/acre) | All RTV Nests | Overall RTV Density (nests/acre) |
|-----------------|---------------------|---|---|------------------|---------------------------------|---------------|----------------------------------|
|-----------------|---------------------|---|---|------------------|---------------------------------|---------------|----------------------------------|

|       | SS  | PD  | SS | PD | SS  | PD   | SS | PD | SS    | PD    | SS | PD | SS    | PD    |
|-------|-----|-----|----|----|-----|------|----|----|-------|-------|----|----|-------|-------|
| 0-19  | 0   | 0   | 0  | 0  | -   | -    | -  | -  | -     | -     | -  | -  | -     | -     |
| 20-39 | 127 | 0   | 3  | 0  | 33% | -    | 1  | -  | 0.008 | -     | 1  | -  | 0.008 | -     |
| 40-79 | 257 | 330 | 4  | 9  | 50% | 89%  | 3  | 39 | 0.012 | 0.118 | 4  | 88 | 0.156 | 0.267 |
| ≥80   | 148 | 42  | 3  | 2  | 33% | 100% | 7  | 3  | 0.047 | 0.071 | 11 | 5  | 0.074 | 0.119 |
| Total | 532 | 372 | 10 | 11 | 40% | 91%  | 11 | 42 | 0.021 | 0.113 | 16 | 93 | 0.030 | 0.250 |

**2) High proportion of sites and habitat in reserve land allocations; or limited number of sites within reserves but the proportion or amount of potential habitat within reserves is high and there is a high probability that the habitat is occupied.**

Thirty-eight percent (9/24) of the extant RTV sites and 67% (6/9) of the inactive RTV sites are within the LSRs within the South Umpqua watershed. Overall, 45% (15/33) of all known RTV sites are within the LSRs in the South Umpqua watershed. Sixty-four percent of the pre-project survey effort (239 ac. / 372 ac.) and 37% ( 198 ac. / 532 ac.) of the strategic survey effort has been in the LSRs in the watershed (ISMS, 3-19-2002).

There is currently 36,037 ac. (33,806 ac. BLM-administered and 2,231 ac. USFS-administered) of potential RTV habitat (i.e. late-successional old-growth [LSOG] stands ≥ 80 yrs. old) available in the South Umpqua watershed. Of that potential habitat, 24,839 ac. (69%) are withdrawn from the harvest land-base (e.g. LSRs or riparian reserves [Figure 3]). Based on past surveys within the South Umpqua watershed, 1,291 stands within reserves could be occupied.

The density of RTVs in stands ≥ 80 years ranges from 0.047 active nests/acre (from strategic surveys) to 0.071 active nests/acre (from pre-disturbance surveys). Currently, there is 36,037 ac. of habitat ≥ 80 years old within the South Umpqua 5<sup>th</sup> field watershed. Therefore, more active RTV nests are expected to occur within the South Umpqua 5<sup>th</sup> field watershed.

**3) Sites are relatively well distributed within the species range.**

The scale of this NHP site proposal is not at the species range but at the scale of Bland Days project area within the South Umpqua 5<sup>th</sup> field watershed, South River Resource Area. Active RTVs were detected in 40% (4/10) of the strategic survey areas and in 91% (10/11) of pre-disturbance survey areas within the South Umpqua 5<sup>th</sup> field watershed (ISMS 3-19-2002). Within the South River resource area, 16% (5/31) of strategic survey areas and 54% (43/79) of pre-disturbance surveys detected active RTV nests (ISMS 3-19-2002). There are 23 extant RTV sites within the South Umpqua watershed and 83 extant sites in the South River resource area (ISMS 3-19-2002).

Without the Bland Days sites, RTVs would still have connectivity to large blocks of LSRs. A likely north-south pathway between LSRs could run along the eastern boundary of the South Umpqua 5<sup>th</sup> field watershed, approximately 5-7 miles from the Bland Days project (Figure 5). North-south connectivity would probably not pass through Bland Days since there is a strip of unsuitable RTV habitat (e.g. agricultural lands and private residences) along Highway 1 (Tiller Highway) that may act as barrier to RTV

movement. Potential east-west connectivity pathways would likely be at least 3-4 miles south of the Bland Days project area (Figure 5). Within the potential north-south and east-west connectivity pathways, there are additional extant RTV sites documented in ISMS (12 and 6 extant sites respectively) and there is also additional primary RTV habitat present in both pathways. Therefore, movement of the species through these potential pathways and connectivity amongst large LSR blocks is expected to be maintained without the Bland Days RTV sites.

***4) Matrix Standards and Guidelines or other elements of the Northwest Forest Plan provide a reasonable assurance of species persistence.***

In addition to the 22,759 ac. of RTV habitat that is withdrawn (see item 2 above), guidance in the Roseburg District ROD/RMP (pgs. 150-153, 1995), direct that Connectivity Blocks will be managed on a 150 yr. rotation in contrast to General Forest Management Areas (GFMA) that are on an 80 yr. rotation. Regeneration harvests may occur on as much as 1/15<sup>th</sup> of the Connectivity Block's area (i.e. 1/15<sup>th</sup> of 13,526 ac. = 902 ac.) in a decade on average and are directed at stands  $\geq$  120 yrs. Density management and commercial thinning prescriptions are directed for stands under the age of 120 yrs. on Connectivity Blocks and under the age of 80 yrs. on GFMA lands.

The longer rotation interval on Connectivity Blocks should allow RTVs to take advantage of better habitat availability than on GFMA lands. A stand on GFMA becomes available for regeneration harvest at 80 yrs. of age, at the same time it is developing into better RTV habitat. However, on Connectivity Blocks such a stand is not available for regeneration harvest for another 40 yrs. The increased length of time that a late-successional stand is available for occupation by RTVs on Connectivity Blocks should benefit the species within the watershed.

When stands in Connectivity Blocks are regeneration harvested, 12-18 large conifers per acre are retained within harvest units (Roseburg District ROD/RMP, 1995, pg. 152) rather than 6-8 trees/ac. as on GFMA lands, [Roseburg District ROD/RMP, 1995, pg. 150]). The greater number of retention trees may enable more rapid re-colonization of the stand by RTVs as the understory regenerates since more potential nesting platforms/structures are retained.

In addition, 4,874 ac. of stands currently < 80 yrs. old are programmed for density management and/or thinning prescriptions that may benefit RTVs through the accelerated development of LSOG characteristics (Table 3). Therefore, the reserve network (i.e. LSRs and Riparian Reserves) along with Connectivity Blocks should provide for the species.

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**Table 3. Stand Age Classes of BLM Connectivity Blocks within**

**the South Umpqua 5<sup>th</sup> Field Watershed.**

| <b>Stand Age (years)</b> | <b>Within Riparian Reserves (acres)</b> | <b>Outside Riparian Reserves (acres)</b> | <b>Total (acres)</b> |
|--------------------------|---|--|----------------------|
| 0-19                     | 615                                     | 1,018                                    | 1,633                |
| 20-39                    | 673                                     | 709                                      | 1,382                |
| 40-79                    | 966                                     | 893                                      | 1,859                |
| ≥80                      | 3,871                                   | 4,589                                    | 8,460                |
| Total                    | 6,313                                   | 7,213                                    | 13,526               |

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**References:**

U.S. Department of Agriculture, Forest Service; U.S. Department of the Interior, Bureau of Land Management. 2000. Final Supplemental Environmental Impact Statement for Ammendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines. Vol I, Chap. 1-4. USDA Forest Service, USDI Bureau of Land Management. 516pp.

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