

## APPENDIX B

### - Project Design Features Common to the Proposed Action and Alternatives -

Project Design Features (PDFs) common to the proposed action (Alternative 3) and the alternatives are described below. These PDFs are integral and critical elements of the proposed action and alternatives described in Section 3.0 of the environmental assessment (EA). Their purpose is to reduce potential impacts and ensure that the proposed vegetation and fuel reduction treatments are consistent with the management objectives for a variety of resources (e.g., fisheries, wildlife, and botanical) in the river corridor. Their basis includes the management decisions / direction of the Northwest Forest Plan (NFP) and the Medford District Resource Management Plan (RMP) to which the EA is tiered (see page 1 of the EA), pertinent best management practices of the RMP, and the professional expertise of the BLM's interdisciplinary planning team. These PDFs will be key elements in designing neighborhood level plans.

#### B.1 Scenic Easements

- All vegetation / fuel hazard reduction work on lands where the BLM holds a scenic easement right would be designed and implemented to be consistent with these rights, with the objectives of the scenic easement, and with the historical management of the scenic easement.

#### B.2 Visual Resource Management / Scenery in Seen Areas (Map 4)

- Use multiple treatment entries over time to maintain the desired character of the landscape and to limit the level of change at each entry so that it does not attract the attention of the casual observer. In general, 2-3 years would elapse between treatments to provide for a reduction in contrasts of colors and textures.

- Use the BLM's Visual Contrast Rating Worksheet approach to evaluate the degree of contrast between the proposed activity and the existing landscape to ensure VRM Class 1 consistency (USDI 1986).

- Maintain vegetative screening of structures that are visible from the river and / or the backcountry byway.

- Incorporate "focal point sensitivity" into the site specific treatment prescriptions. Vegetation / fuel treatments in focal point areas (e.g., sites with a long approaching view) (see Map 4, Appendix A) would be modified or staged to appropriately limit the potential visual impact on river area users.

- To minimize potential adverse visual impacts within seen areas (Map 4), trees  $\geq 14$  DBH would be directionally felled to avoid hardwood crowns and to minimize breakage or damage of residual trees or screening vegetation. Atypically large crowned limby trees would not be cut. Large trees would be topped or limbed prior to felling if needed to preclude residual tree damage.

- In seen areas, vegetation / fuel treatments would be designed to have feathered unit edges and naturally appearing shapes, forms and textures on the landscape (i.e., no straight lines or sharp angles that would result from simply following property lines or the designated corridor boundary line).

#### B.3 Vegetation / Fuel Treatment Prescriptions

- All vegetation treatment / fuel reduction treatment prescriptions would be based on vegetation series specific prescriptions (Appendix C-1).

- Careful attention will be paid to areas where the ecological and vegetation conditions are such that, if treated with great intensity, the vegetative response may create problems (e.g., sprouting with resultant high fire conditions in the short, near and long terms). In these areas, treatments would be implemented that are less intensive than those suggested as “permissible” under the alternative descriptions noted above. Prescriptions requiring a series of incremental steps or treatments would be initiated in these conditions. This is to preclude the creation of ecological or fire hazard conditions that are similar to or worse than those currently existing or that would create intensive long term maintenance work.
- Neighborhood plans will include the refinement of treatment prescriptions to reflect the scale and mosaic of conditions in the neighborhood area.
- Vegetation treatment / fuel reduction prescriptions will be designed to minimize the need to re-treat a site beyond a 10-year period. The treatment prescriptions and the analysis will assume that maintenance treatments are unlikely to occur into the future. The prescriptions will, however, outline maintenance treatments that would be anticipated in the short-term. If during neighborhood planning there appears to be substantial commitment to a long-term maintenance program, prescriptions may be modified to reflect this.
- Neighborhood prescriptions and actions would be very attentive to post treatment fuel loading concerns, particularly as they relate to how the material can be disposed of without creating high levels of risk or of damaging the residual stands.

#### **B.4 Home Ignition Zone Treatment / Driveways / Ingress and Egress**

Vegetation and fuel reduction treatments proposed in this zone would follow those recommended by the Oregon Department of Forestry (Appendix C-2) or the federal Northwest Wildfire Coordinating Group ([www.or.blm.gov/nwfire/docs/Livingwithfire.pdf](http://www.or.blm.gov/nwfire/docs/Livingwithfire.pdf)). These defensible space recommendations would be implemented around all structures on BLM lands. On lands where the BLM has a scenic easement, the BLM would work collaboratively with the landowner to implement the recommendations if the landowner is supportive. Working within the flexibility of the recommendations, treatments would be adjusted as needed to ensure that structure screening standards are met in accordance with BLM’s scenic easement and the Oregon State Scenic Waterways Act requirements and objectives.

#### **B.5 Riparian Reserves**

- Within riparian reserves, trees to be removed from the site would be directionally felled to pre-approved skid trails.
- To maintain stream shade: a) a no treatment area of 50' would be maintained along all streams (possible exceptions include home ignition zones), b) all trees >12"DBH within 150' of any stream would be retained, c) all trees >8"DBH within 75' of a perennial stream would be retained, and d) canopy closure within a riparian reserve would be maintained at 60+%. Where the existing closure is <60%, vegetation / fuel treatments would be limited to the understory.
- Fuel reduction prescribed burning could occur in riparian reserves with the following caveats: a) hand piles within 50' of a stream would not be burned, b) no direct ignition would be done within the 50' no treatment zone, and c) underburns initiated outside of the 50' buffer would be allowed to back into this buffer as long as the underburn is of low intensity and the mid-level and upper canopies are not at risk. These limitations are directed particularly at protecting the aquatic ecosystems from runoff and shade reduction.

## **B.6 Wildlife and Botanical**

- In treatment areas adjacent to major roads, a 50' buffer of untreated vegetation would be retained to provide screening for wildlife, protect the cut and fill slopes and to discourage off-highway vehicle use.
- Approximately 15 to 20% of each treatment unit would be left untreated to retain dense stands in each unit to benefit terrestrial bird nesting and foraging. Areas left untreated due to VRM, slope stability, riparian reserves or other concerns would contribute to the 15 – 20%.
- Hardwoods, especially California black oak, would be retained and encouraged where appropriate.
- Trees that have indications of nest sites or cavities >6" diameter would have a priority for retention and a 50' buffer would be implemented around them to reduce impacts to wildlife.
- Unless they pose a safety hazard, snags would be retained at, or greater than, the RMP (p. 45) prescribed level for non-matrix land. Patches of snags would be retained if doing so would not increase fire hazard. To prevent snag loss during prescribed fires, fuels would be pulled back =6' from the base of the snag.
- Survey and Manage (S&M) and special status species wildlife sites on BLM land would be buffered according to the management recommendations for that species in effect at the time of the final neighborhood plan decision. Buffer size and strategy will be dependent on site-specific conditions, proposed treatments, and species involved. Fuels treatment could take place within these buffers if the species or specific habitat characteristics are not adversely impacted. No handpiling burning would occur within these buffers.
- Ground disturbing heavy equipment would not be permitted around areas of western pond turtle nesting habitat. Buffer size would be determined by biologists based on microsite conditions. Manual fuel treatment methods could be employed within these buffers, although no slash piling would be permitted.
- Natural meadows and grasslands greater than one acre would have a no treatment buffer around the perimeter equal to one site potential tree height (see Glossary). This is primarily to maintain thermal and hiding cover for big game species. (Note: meadows may be treated to reduce encroachment of conifers and other vegetation.)
- No fuel treatment activities would be permitted within 250' of mine adits occupied by bats.
- Within northern spotted owl designated critical habitat: a) no actions would be implemented that would result in adverse modification of this critical habitat, and b) all suitable habitat characteristics within 0.7 miles of known spotted owl nest sites would be retained.
- To conserve existing northern spotted owl suitable nesting habitat, retain 60% canopy closure in T34S, R8W, Sec14 (Unit 001); T34S, R8W, Sec. 24 (Unit 001); and T35S, R8W, Sec. 1 (Unit 001).
- Maintain habitat integrity and the historical continuity of the data collected at the Monitoring Avian Productivity and Survivorship (MAPS) site by scheduling vegetation / fuel treatments in the 40-acre core area toward the end of the neighborhood project schedule. Treat =10% of the core area per year.
- Seasonal operating restrictions and wildlife species specific PDFs would be implemented per Table B-1.

**Table B-1: Seasonal Operating Restrictions for Occupied Sites**

Species	No Operations Period		Additional Restrictions and Considerations
	Start	End	
Peregrine Falcon	February 1	August 15	- 1 mile noise restriction, ½ mile for all activities.
Bald Eagle	February 1	August 15	- ½ mile noise restriction and large snag retention; 1/3 mile for all activities. - 50% canopy retention within ½ mile.
	Nov. 1	March 1	Winter roosting season – No operations in vicinity of eagle activities centers.
Spotted Owl	March 1	July 31	- ¼ mile out from core, all activities including chainsaws, heavy equipment and burning.
Osprey	March 1	August 15	- ¼ mile seasonal for all activities. - Retain snags and large broken-top trees.
Great Blue Heron	March 1	August 1	- ¼ mile seasonal restriction; retain potential nest trees within ¼ mile.
Other Raptors	March 1	August 1	- ¼ mile seasonal restriction.
Western Pond Turtle	June 1	July 31	- No activity in designated nesting habitat.

- Where heavy equipment is used, known populations of Gentner’s Fritillary (*Fritillaria gentneri*) would be buffered with a no-ground disturbance buffer. Buffer size would be dependent on microsite conditions and habitat requirements, but will be a minimum of 25' from the occurrence boundary. Fuels treatments (mechanical or prescribed fire) could take place within these buffers as long as heavy equipment stays outside the buffer boundaries and a backing fire started outside of the buffer boundaries is used. Within these buffers, a canopy cover of at least 40% should be retained. If the canopy is less than 40%, no treatment in the buffers is needed.

- Within Gentner’s Fritillary habitat, maintain openings in oak woodlands and along ecotones.

- Where Gentner’s Fritillary populations may be found or in high quality habitat, conduct prescribed burns in late fall or winter when the species is dormant (roughly October through February).

- In areas where heavy equipment is used, “no ground-disturbance” buffers would be implemented around special status vascular plant species (also around S&M sites on BLM land). Buffer size and locations would be determined by botanists based on microsite conditions and species habitat requirements and applicable management recommendations in effect at the time of the decision. Manual fuel reduction treatment would be permitted within these buffers, but there would be no handpiling within them. Depending upon the plant species and what is known about potential fire effects on it, a prescribed cool backing fire may be permitted within the buffer.

- Special status (and S&M on BLM land) non-vascular species found in the tree or shrub canopy would be protected by appropriate buffering or individual source tree identification. No piling or slash burning would occur within these buffers or within the drip line.

- In areas containing special status plant species, prescribed burns would be done under “cool burn” prescriptions to minimize potential soil damage around plant populations. Burns would be conducted in the fall only. If fall burning is not feasible, special status species sites would be buffered and avoided during spring burning in order to preclude damage to germinating plants.

- Prescribed fire operations would be conducted to preclude or reduce the potential for intense smoldering in plant sites.

- Noxious weed sites would be treated in conjunction with fuels and in accordance with the Medford District Integrated Weed Management Plan (USDI 1985).

- To prevent the spread of noxious weeds, all heavy equipment would be cleaned prior to moving onto BLM lands in the project area and when moving from known noxious weed areas into weed-free areas. Native grass seed (when available) would be distributed after weed treatment in oak woodlands or primarily grassy areas to keep weed species from re-occurring. All noxious weed treatments would be monitored annually for at least five years.

## **B.7 Cultural Resources**

Site-specific protection measures (e.g., buffering, modified treatment methods) would be implemented to preserve the integrity of all cultural sites and National Historic sites and would be done in consultation with State of Oregon Historic Preservation Officer and BLM cultural specialists.

## **B.8 Soil Productivity**

- On very steep sites susceptible to ravel (See Map 6, Appendix A), fuel reduction treatments would be done manually to ensure duff retention. No more than 30 burn piles per acre would be created.

- When a >16" DBH tree is thinned from a stand, the top (>8" diameter) and limbs would be removed and disposed of. The bole would be left on site for coarse wood debris (CWD) if: a) it is in a relatively inaccessible location and its lasting into the future is highly likely, and b) 20 tons / acre would remain following treatment where 80% of the tonnage is within 1000+ hr fuel class.

## **B.9 Vegetation / Fuel Treatment: Methods / Systems**

### **1) Slashbuster Use**

- In all areas where a slashbuster is used, 15% to 20% of the area would be left untreated to provide habitat diversity for wildlife and plant species. No-treatment special status species buffers and untreated riparian reserves will contribute to meeting this goal.

- Untreated areas of at least 0.25 acre would be maintained and distributed across the landscape. Priority areas are moister micro-sites (e.g., northerly aspects or concavities) that have had a slightly different fire disturbance regime from the areas around them and would have the best potential for brush / shrub species to attain a larger size with normal fire disturbance.

- Slashbuster use would be restricted to slopes <40% (occasional short pitches >40% would be permissible).

- Only low ground pressure (<4 psi) machinery equipped with semi-grouser tracks would be permitted. The shredding head would be mounted on an articulated boom of no less than 30' in length. Operations would only be permitted when soil moisture is less than 20% at the 6" depth on non-serpentine soils, or less than 20% at the 8-12" depth on serpentine derived soils.

- Pre-existing coarse wood material greater than 10" diameter would be protected from shredding or damage. All snags would be protected. If a snag is felled for safety reasons, it would be retained on site.

- No slashbuster operations would be conducted within or through special status plant or cultural site buffers. Deposition of chipped / shredded material within these buffers would be precluded to the extent possible.

- Slashbusters would be directed to run over shredded vegetation. If shredded vegetation distribution is low, such that 80% of the tracked area is not on shredded vegetation, the machine would not be permitted.
- In order to reduce the potential for soil damage and soil seed bank loss due to high fire intensities, if slashing / chipping results in a chip depth 6+" over a one acre area, the chips will be raked and piled to reduce overall depth to less than 6".
- In areas restricted from slashbuster use (e.g., special status species buffers, areas of excessive slopes, no treatment zone of riparian reserves), manual fuel treatments would be used. Those portions of treatment areas where the slash buster is precluded from operating (e.g., special status species buffers, areas of excessive slopes, no treatment zone of riparian reserves, etc.), slash / fuel treatments would be accomplished by hand in the manner indicated in the EA.
- Slashbusters would stay at least 20' from historic mining ditches. Fuels could be treated along ditch edges. Ditch crossing would be limited to BLM specialist-designated sites and techniques that would avoid damaging or breaching the ditch.
- Slashbusters would not cross or operate on rock outcrops, cobble areas, mine tailings, or talus. The deposition of shredded material in these areas would be avoided to the extent possible.
- Slashbuster operations would be restricted to single access points from main roads. Following treatment, access points would be camouflaged with brush, logs, or boulders to discourage use of off-highway vehicles.
- There will be no slashbuster treatments within 50' of perennial or intermittent streams. The machine's tracks / treads would be kept at least 75' from of these streams. Post slashbuster treatment burning would comply with burning within riparian reserve design criteria described above.
- Slashbuster operations would be conducted in a manner that minimizes soil disturbance and compaction. Multiple passes over an area would be discouraged, including at refueling sites. Service / fuel vehicles would be restricted to existing roads or spurs.
- In *Ceanothus cuneatus* dominated areas, broadcast burning would be done at the earliest opportunity within five years of treatment to promote germination (seed scarification) of dormant seed in the soil. Broadcast burning would not be conducted during the height of the songbird spring reproductive period (approximately April 15 to July 15).

## **2) Forest Product Removal and Onsite Treatment of Thinning Residues**

- Systems that require repeated passes over the same area or that create a radial or "spoke" pattern would not be permitted. "Drive-to-each tree" shearing equipment would not be permitted. Equipment that employs a skid/steer drive system that necessitates side-to-side movement to position the cutting head and creates excessive amounts of soil displacement would not be permitted.

### **a) Removal for Offsite Disposal - Yarding**

- To reduce soil disturbance and damage to residual trees, trees =12?DBH would be limbed and cut into lengths =20' prior to yarding.
- To reduce disturbance, landing locations would be pre-approved and limited in size to <1 acre.

- All trees would be directionally felled to minimize residual crown damage and to keep them out of buffers and riparian reserves. (See also VRM PDFs.)
- Helicopter operations would be restricted to the hours of 7 AM to 5 PM, Monday through Saturday. Work on Sundays, federal holidays, Mother's Day, and Father's Day would be prohibited.
- Helispots and helicopter landings would be out of view of the river, designated trails, or recreation sites.
- Ground based yarding tractors would be restricted to slopes <35%. Yarding would be limited to all terrain vehicles, D4 size or smaller tractors, or horses.
- One end suspension would be required with all yarding systems except horse.
- Cable yarding equipment would be limited to the smallest size capable of doing the work safely. Yarding corridors would be predesignated and located to preclude their visibility from the river and to minimize corridor clearing. Yarding corridors would be water barred as needed based on slope and soil type.
- No new skid trails or stream crossings would be constructed in riparian reserves. Existing skid trails could be used if they are stable and unrecovered. These trails would be decompacted and planted according to prescription and covered with mulch or small diameter slash (less than 6" thick).
- Yarding tractors (D-4 size) used outside of riparian reserves would be confined to designated skid trails and would be restricted to soil moisture <25%. Main skid trails would be decommissioned (ripped and water barred) after use. Skid trails would be covered with slash, chipped material or debris to protect the mineral soil surface. Low ground pressure (<4 psi) equipment would be permitted without designated skid trails if soil moisture is <20% and it is able to operate on areas with at least 80% slash cover.
- When heavy equipment is used or refueled, an approved spill prevention control and countermeasure (SPCC) plan or comparable contingency plan will in place. Operators will have spill containment kits at all times. Refueling would be in compliance with DEQ-OAR 340-108-0002 and FPA-OAR 629-605-0130.

#### **b) Onsite Disposal of Large Material**

- Where removal of material from a site is not an option (e.g., poor accessibility), slash would be piled and tree boles would be limbed and could be stacked in small decks at approximately 40'x40' spacing. Decks would lay parallel to the contour. Boles and debris would be cut to =12' lengths. Each deck would contain at least 10 pieces. Decks would be located in a manner that prevents slippage or down hill movement (e.g., placed against a stump or root wad). Decks would not be located under the drip line of any leave trees.

#### **c) Onsite Burning**

- Prior to prescribed burning, a prescribed fire plan would be prepared outlining vegetation, resource and fire objectives; acceptable fuel moisture and weather parameters; required fire control resources; and prescribed burn tactics to meet these objectives and to minimize fire escape potential.
- To prevent fire escape and to control and minimize damage to residual vegetation / trees, burning would occur when weather and fuel conditions allow for lower fire intensities (typically fall through spring).

- Fire control lines, if needed, would be manually constructed (e.g., chainsaws, pulaskis, shovels). Lines would be located to take advantage of natural barriers whenever possible. Waterbars would be installed based on soil type and slope. Post-burn patrol and mop-up would occur to insure there is no reburning or fire escape.

- Prescribed burning would comply with Oregon Department of Forestry's Smoke Management Plan and the DEQ's Air Quality and Visibility Protection Program. Smoke emissions control could also include: a) mop-up as soon as practical after the fire, b) burning with lower fuel moisture in the lighter fuels to facilitate quick and complete combustion while burning larger fuels under higher moisture levels to minimize consumption, and c) covering hand piles to permit burning during the rainy season.

## **B.10 Roads and Infrastructure**

- Waterlines, septic systems, and underground utilities would be identified and protected from project impacts.

- Existing roads and temporary spurs would be utilized whenever possible to minimize road construction. Temporary spur roads would be located, designed and constructed to meet VRM guidelines. They would be obliterated after use by restoring natural drainage patterns and placing a combination of brush, logs, boulders, and / or stumps across the disturbed area. BLM roads would be maintained to applicable BLM Transportation Management Objective determined standards. Maintenance needs would be identified as a part of neighborhood planning. Road maintenance and decommissioning work would comply with Best Management Practices (Medford District RMP, Appendix D-VII). If follow up vegetation treatment is scheduled a year or more after initial treatment, roads would be waterbarred, seeded, mulched, or blocked as needed to prevent wet season vehicle use.