

## **APPENDIX A – DESIGN CRITERIA**

### **Design Criteria:**

Protect current improvements including fences, and spring developments. Range improvements would be protected and replaced, if damaged by treatment.

If chipping is used as a means of disposal, chips would be distributed so that the chip layer is a maximum of 2 inches in depth; otherwise the chips would be hauled off site.

Wood chips may be used on identified cultural sites to retard erosion and increase effective moisture, encouraging the growth of grasses and small forbs that act as stabilizing agents. The depth of the chips would be determined by the Zone Archeologist. The Zone Archeologist would supervise and monitor these activities.

A cultural resource survey would be completed prior to ground disturbing activities.

All eligible archeological sites, including a minimum of 30 – 50 foot buffer (depending on slope and fuel loading), would be avoided and protected from damage by equipment traveling in the area and pile burning activities. The Zone Archeologist would determine the buffer and mark the area.

The Zone Archeologist would identify areas where prescribed fire is not allowed, to avoid impacts to eligible sites. In areas with eligible sites, the Zone Archeologist would assist in identifying staging areas to avoid impacts to sites.

If heavy fuel loads exist on any of the archeological sites for which avoidance is stipulated, then those fuels may be removed with an archeologist present.

If artifacts, features, or other indications of previously unrecorded heritage resources are identified in the course of ground-disturbing activities, all work in the vicinity of those materials would cease and the Zone Archaeologist would be notified immediately.

Deferment of grazing in burned areas would occur for at least one growing season. Timing of prescribed fire treatments would be coordinated with the Rangeland Management Specialist to avoid conflicts with permittee's and stress on vegetation.

Seasonal restrictions would be implemented for the southern portion of the Project Area below Bull Gulch from December 1 through April 15 for big game winter and transitional range protection. Low frequency activities, such as prescribed burning and removing decks from open roadways would be coordinated with the Wildlife Biologist on an as-needed basis prior to implementation. Please refer to map.

Hauling restrictions would be implemented for the southern portion of the Project Area below Bull Gulch from December 1 through April 15 for big game winter and transitional range protection. County Road 187 would be used for hauling out of the project area during these months. Please refer to map.

Second year protocol surveys would be conducted for goshawks in 2007 prior to implementation of any treatment activities. Timber sale prep (painting and flagging) is permissible on the salvage units prior to survey work.

Nesting/Denning sites would be reported to the Wildlife Biologist and appropriate protection measures would be implemented.

If new site information regarding threatened, endangered, and sensitive species is located during the course of ground disturbing activities all work in the vicinity of those species would cease and the appropriate specialist would be notified.

An activity exclusion area would be marked by the Wildlife Biologist and avoided around known active raptor nests from March 1 through September 30.

If treatments are proposed within any raptor territory, the Wildlife Biologist would work with managers to determine treatment specifications for protection of that site.

A minimum 100-foot buffer would define the Water Influence Zone (WIZ). The WIZ includes the geomorphic floodplain, riparian ecosystem, and inner gorge. The WIZ would be maintained on either side of perennial and intermittent streams and ephemeral areas as specified in the Watershed Conservation Practices Handbook (FSH 2509.25, Chapter 10).

Mechanical thinning treatments would not occur inside the WIZ as delineated by a Fisheries Biologist or Hydrologist. If the area has not been delineated, then treatments would occur outside a 100-foot buffer from all perennial and intermittent streams. The 100-foot WIZ also applies to all lakes, ponds, kettles and other forms of standing water. Some activities such as prescribed burning and hand treatments may be allowed in the WIZ, but only after consultation and concurrence with the project Hydrologist or Fishery Biologist.

Prescribed burning would be allowed to migrate into the WIZ from adjacent slopes, but would not be encouraged to do so; ignition of prescribed fire would not occur in the WIZ.

Heavy equipment and vehicles would be kept out of the WIZ, streams, swales, and lakes, except to cross at designated points, building crossings, conduct restoration work, or if protected by at least 1 foot of packed snow or 2 inches of frozen soil. Before heavy equipment or vehicles would be allowed to cross streams, the project Fishery Biologist or Hydrologist would be consulted and determine where crossings would occur or be constructed, and to specify any stipulations necessary to minimize negative impacts on aquatic resources.

Avoid soil disturbing activities during periods of wet soils. Apply travel restrictions to protect soil and water.

Limit temporary roads, skid trails, and other soil disturbances to the minimum feasible number, width, and total length consistent with the purpose of specific operations. The combined area of roads, landings, decks, skid trails, and other soil disturbances will be less than 15 percent of any land unit or activity area.

Conduct prescribed fires so that no more than a little or no portion of the burned area is severely burned and the cumulative detrimental soil disturbance is 15 percent or less.

Skid trails shall be designed to ensure sediment from them does not enter stream courses. Non-classified roads, skid trails and landings used in timber sales would be obliterated with a combination of water bars, scarifications, seeding and blocking after the treatments are complete.

If a unit has previously been mechanically thinned / treated, no salvage treatment would take place after prescribed fire treatments occur.

Protect or provide for one Abert's squirrel nest tree clump (0.1 acre of 9 to 22 inch dbh ponderosa pine with a basal area of 180 to 220, if available, and interlocking canopy) per six acres on ponderosa pine (Forest Plan, pg. III – 29). In addition, all ponderosa pine trees showing sign of Abert's squirrel feeding activity would be retained as wildlife trees. This direction would be written into timber prescriptions and the prescribed fire plan. For the prescribed fire, protection measures include avoiding to the extent possible torching of ponderosa pine clumps and Abert's squirrel feed trees.

A Wildlife Biologist would work with managers to determine treatment specifications for protection of cone monitoring trees within the established Abert's squirrel monitoring plot in the southern portion of the project area.

Within mixed conifer, allow no harvest of trees >22.4 cm (9 inches dbh) on any slopes >40% or bottoms of steep canyons where timber harvest has not occurred in the past 20 years (Mexican Spotted Owl Recovery Plan).

Implementation and effectiveness monitoring would be conducted by an interdisciplinary team. Snag, down woody material, and other stand conditions would be monitored pre and post treatment to ensure desired conditions are achieved. The following snags/down wood guidelines would be followed.

#### **Snags and CWD**

In forested areas, maintain greater than or equal to 40 snags/recruitment trees per 5 acre average; retain the largest sizes and numbers available (all stages of development). These should consist of at least 30 snags and/or down logs per 5 acres and 10 recruitment snags (green trees) per 5 acres. Guidelines for snags include:

- Retain all soft snags (class 3, 4, and 5) except for safety hazards (Forest Plan, pg. III – 12) to the greatest extent reasonable and practical.
- Retain hard snags (when they are present) greater than or equal to 12 inches diameter at breast height (dbh) or as large as available.

If above existing snag levels are not available, provide for green recruitment snag trees sufficient to bring snag/recruitment snag levels up to the above mentioned levels in a well distributed manner of both clumps and individual trees, favoring largest available trees. Trees with defects (e.g. “wolfy” appearance, dead tops, forked tops, cankers, heartrot, knarls, diseases, broken tops and large limbs) would be selected when possible as follows:

- Provide for the above number of recruitment snags (live trees)
- Create new snags by burn plan design or other means, as necessary.
- Protect reserved snags/down logs from fuelwood cutting, mechanical treatment and prescribed fire treatment to the greatest extent reasonable and practical.

In treatment units designated as fuel break, the above snag requirements would not be implemented. Adjacent units or portions of units untreated for fuel break prescriptions would retain an increased number of snags/cwd/green recruitment trees to make up for the acres designated as fuelbreak. These areas would be monitored by the wildlife biologist and fuels specialist to assure that the dead and down component is within acceptable levels for hazardous fuels reduction.

Gates and/or barricades would be installed on temporary roads to restrict use by the public during operations and/or until final road closures occur.

In forested areas, a 200-foot buffer would be maintained along 75% or more of each side of County Roads 187 and 186 and FDR 174, 174A, 174B, and 174C to discourage and minimize off-road vehicles (OHV) use and to maintain visual screening for wildlife. Mechanical treatment would not take place in the buffer, but prescribed fire may be allowed; hazard trees may be mechanically removed (Forest Plan, pg. III – 32).

Access routes would be designated within public firewood areas.

Only administrative and permitted access would be allowed on new temporary roads and previously closed roads.

Temporary roads used during the project activities would be closed by ripping and seeding with native species, then signed to inform the public that vegetative restoration is in progress. Road closures would occur within six months after completion of the treatment(s) in that unit.

To reduce risk of spreading noxious weeds, coordinate with the Noxious Weed program manager prior to implementation. Heavy equipment would be cleaned and inspected prior to entering the project area. Treatment areas would be monitored pre and post treatment for noxious weeds. If present, avoid or remove sources of weed seed and propagules to prevent establishment of new weed infestations and spread of existing weeds. Weed locations would be sent to the Noxious Weeds Coordinator and scheduled for treatment.