

## Attachment A

### Project-Specific Design Criteria and Monitoring



## Design Criteria and Mitigation

Forest Plan Standards and Guidelines, Regional Watershed Conservation Practices (WCPs, Forest Service Handbook 2509.25, USFS 2006c), and other management requirements apply to these activities. These requirements are listed in Attachment B and repeated here only if clarification is required. Site-specific design criteria applicable to planned activities include the following and are described in detail in the Snyder Project Implementation Guide, located in the project file.

### *Revegetation of Disturbed Soil*

1. Native vegetation will be retained to the maximum extent possible during proposed activities. Disturbed soil will be revegetated in a manner that optimizes plant establishment on the site. Revegetation may include topsoil replacement, planting, seeding, fertilization, and placement of weed-free mulch as necessary. Revegetation will be initiated as soon as possible, generally not to exceed 6 months, after termination of ground-disturbing activities. All disturbed soils will be revegetated with native species when available using seed mixtures that are free of noxious weeds. On areas needing the immediate establishment of vegetation, non-native, non-aggressive annuals, non-aggressive perennials, or sterile perennials may be used until native perennials become established.
2. Timber sale roads will be seeded after construction but before timber harvest if any part of the gap between construction and harvest would occur between April and October. This may be accomplished under the road contract. If necessary, seeding will again occur after use of the road is complete. Seeding may be delayed until after completion of harvest if the gap between construction and harvest would be of short duration and hydrology, soils, engineering, and noxious weed specialists determine after field review that a delay would be acceptable.
3. Slash pile sites will be ripped and reseeded with an approved seed mix as soon as possible following pile disposal (burning, chipping, etc.).

### *Rare Species*

4. Road work in or adjacent to suitable sensitive plant habitat will be coordinated with a botanist. Road work that will occur in or adjacent to this habitat includes reconstruction of parts of NFSRs 834.1, 832.1V, and 859.1, and decommissioning of U580047, U580050, U590049, U590050, U590054, U590059, U590062, U590064, and U610004.
5. The steeper bottom parts of stand 0104010030 will be excluded from treatment due to birch/aspen habitat and damp soil.
6. The north-facing slope in the draw associated with Planting Spring (northwestern stand 0101060008) will be excluded from treatment due to birch/aspen habitat and damp soils.
7. The birch/aspen draws in stands 0103020023 and 0103020029 will be excluded from treatment.
8. No mechanical disturbance will take place in the southeastern edge of stand 0103030152 due to sensitive plant habitat and the Cub Creek water influence zone.
9. Activities are planned in within one-half mile of goshawk nests. Timing restrictions apply (Forest Plan standard 3111). Specific locations can be found in the Snyder Project Implementation Guide.
10. Any new goshawk nests found during project implementation will be protected in accordance with Forest Plan direction. Any other raptor nests found during project layout or

implementation will be evaluated by a wildlife biologist on a site-specific basis to determine if special requirements are warranted to protect site integrity.

### *Protection of Pine Regeneration*

11. In stands or portions of stands treated with overstory removal harvest, existing pine regeneration will be protected during all phases of harvest operations. Timber in these stands will be felled and skidded with mechanical equipment. In addition, contract provision C6.41 or CT6.41 (or equivalent felling and bucking measure) and C6.42# or CT6.42# (or equivalent whole-tree yarding measure) will be included in the timber sale contract. Skid trails in these stands will be at least 100 feet apart and their location approved by the sale administrator prior to commencement of logging. Log landings will, where feasible, be placed within the outer edge of stands (rather than in meadows – see item 28) in areas with no regeneration. Landings used for previous timber sales will be used where possible.

### *Heritage Resources*

12. Known heritage sites will be protected. No activities will take place within 100 feet of these sites. Heritage sites will be avoided during all proposed activities. Leaders of proposed projects will review heritage maps and implement mitigation measures for sites listed in the heritage resources file.
13. If previously unknown heritage resources are discovered during project activities, project staff will stop ground-disturbing actions and notify the district archeologist before activities are resumed.
14. Heritage resource inventory will be completed in proposed burn units prior to implementation per USFS Agreement No. 01-MU-11020000-015 (Programmatic Agreement Among the Advisory Council on Historic Preservation, the Colorado, Wyoming, South Dakota, Nebraska, and Kansas SHPOs, and the USDA Forest Service Rocky Mountain Region Regarding Implementation of the Prescribed Fire Program).

### *Improvements*

15. All Forest Service-authorized improvements, such as maintained fences, property corners, and water developments, will be shown as protected improvements on timber sale area maps and protected during all management activities.

### *Noxious Weeds*

16. Noxious weed control activities will take place prior to ground-disturbing activities, when feasible, to reduce weed spread and establishment.
17. Review of the area for noxious weed infestations will continue during proposed activities. If new noxious weed infestations that could be spread by proposed activities are found during implementation, actions to minimize spread will be taken.
18. Prescribed burn plans will address control of known noxious weed infestations within burn blocks.
19. District staff responsible for the noxious weed program will, in coordination with the project engineer, inspect gravel pits for noxious weed infestation before transport and use of gravel and other material. Infestations will be treated to prevent spread.
20. District staff responsible for the noxious weed program will inspect stockpiled gravel annually for weed infestation in coordination with the project engineer.
21. Contracts and permits issued as part of this project will include measures to limit spread of noxious weeds. Heavy equipment used for timber harvest will be washed before entering the timber sale area if the area it previously operated in is unknown or documented to be infested

with noxious weeds. Where information is available, noxious weed infestations will be identified by district staff and designated on sale area maps for any timber sales associated with this project.

22. See also Noxious Weed Prevention Practices in Attachment B.

### ***Recreation and Public Safety***

23. Appropriate signing or other cautionary measures will be implemented in conjunction with all management activities to ensure public safety. Implementation of these measures is the responsibility of the person initiating the action (e.g., logging contractor, prescribed fire manager).
24. The Cliff Swallow trail is just across 838.4B from southern stand 0103050074. Landings will not be placed on or within 100 feet of the trail.

### ***Range***

25. Managers of vegetation treatment projects will consult with district range managers to ensure alteration of natural barriers does not allow livestock to circumvent fences.
26. All pasture gates will be identified on timber sale area maps and kept closed during the grazing season (generally June through October).
27. If log hauling or movement of heavy equipment related to the proposed timber harvest causes damage to cattleguards, the timber purchaser will be responsible for repair.
28. Landings and slash piles will be located outside grasslands, meadows, and riparian areas where possible to protect vegetation and reduce loss of available forage.

### ***Snags***

29. Snags will be cut only for safety reasons, including when necessary to provide safe passage on roads, skid trails, fire control lines, and at log landings.
30. Where possible, any snags cut as safety hazards will be left on site rather than salvaged or skidded to landings. Timber sale contract provisions will be used to protect snags.
31. To ensure provision of down woody material, existing down logs and cut cull trees will be left on site following all commercial treatments.

### ***Soil and Water***

32. Heavy equipment will not enter the water influence zone along perennial or intermittent streams (100 feet on either side of the stream) (Standard 1301 and WCPH management measure 3) except to conduct road work at designated locations. No commercial treatment is proposed in water influence zones. Prescribed fire may occur in water influence zones but direct ignition will not occur in these zones.
33. To reduce potential for erosion, skid trails will be waterbarred, seeded, and covered with logging slash on soil map units 93 (Lakoa-Butche, 10-60 percent slopes), 98 (Larkson-Lakoa, 10-60 percent slopes), 113 (McCaffery-Larkson, 10-60 percent slopes), and 155 (Rock outcrop-Vanocker). Stands to which this and other soil measures apply can be found in the Snyder Project Implementation Guide, located in the project file.
34. To reduce potential for compaction and/or rutting, the following measure applies on all soil map units: Heavy equipment will be operated for land treatments only when soil moisture is below the plastic limit<sup>1</sup>, soil is protected by at least one foot of packed snow, or the top two

---

<sup>1</sup> Soil moisture exceeds the plastic limit if the soil can be rolled into 3-mm threads without breaking or crumbling (USFS 2006).

inches of the soil are frozen. (WCPH management measure 13/design criteria (b))

35. Ridgetop soils in stands 0103030073, 102, 103, 112, 158, and 164 are made up of gravelly shale. The soil is stable when a pine overstory exists but erodes readily when disturbed and seems to need the pine overstory for establishment of understory vegetation. Sufficient pine crown cover will be retained to provide shade for understory establishment, especially where there is existing ground disturbance.
36. Areas of steep, thin soils in stands 0103020029 and 0103020071 will be excluded from treatment.
37. The primary access to stand 0104020089 is via 832.1N. The northwestern part of the stand is closer to 832.1E, but there is a possible water influence zone between the stand and the road. Heavy equipment should generally not enter the water influence zone, but may in this case if a) it would cause less disturbance than skidding to 832.1N, and b) the site is reviewed in the field with a hydrologist prior to activity.
38. Cable logging systems that lift one end of the log will be used on sustained slopes steeper than 40 percent consistent with WCPH management measure 9/design criteria (g).
39. Roads, landings, skid trails, and other concentrated use sites will be restricted to designated sites consistent with WCPH management measure 12/design criteria (a).
40. On soil map units 92/93 (Lakoa-Butche) and 97/98 (Larkson-Lakoa), which have limited organic material, shelterwood seedcut, group selection, and patch cut treatments will be conducted in accordance with the following measures: a) Conventional harvest systems that retain the slash will be used; or b) If whole tree harvesting is used, fine slash (less than 3 inches in diameter) will be returned to the site in quantities identified in Forest Plan Standard 1102/Guideline(a).
41. Prescribed burns will be conducted to minimize the residence time on the soil while meeting burn objectives in accordance with WCPH management measure 13/design criteria (c).

### *Travel Management*

42. While proposed projects are taking place, all gates that would normally be closed during big game hunting seasons will be kept closed during these seasons and one week before the seasons except to allow administrative traffic. Gates will be closed again immediately after the administrative traffic passes. Where feasible considering other limitations, projects will not take place during big game hunting seasons in the Wood Canyon Walk-in Hunting Area.
43. Timber sale units will be laid out to facilitate existing road restrictions (for example, trees around gates and other barriers will be left uncut to maintain obstructions and discourage driving around the gate or barrier).
44. All newly constructed roads will be closed following construction until needed for timber sale or related activities and stored on completion of use.

### *Scenery*

45. Layout and marking of timber sale units will comply with forest-wide marking guides in effect at the time of implementation.
46. The north edge of stand 0104010125 is located about a third of a mile from Wyoming Highway 24 and is visible from the road. The northern part the stand is visible from the highway. Treatments will be laid out with irregular (not straight-line) boundaries to look natural from the road.

*Dust Control*

47. Dust control, if necessary, may be done with water, magnesium chloride, calcium chloride, or equivalent.

*Timber Harvest*

48. Whole-tree yarding will be prohibited in stands 0103060074 and 0103060099 due to lack of landing space.
49. Whole-tree yarding will generally not be used in stands where seedcut, group selection, or patch cuts are proposed due to potentially limited soil organic material and the need to retain slash on site. Specific sites are listed in the project file.

## Monitoring

The Forest Service will monitor implementation of this project. Timber sale administrators and other contract administrators will complete some of the project implementation monitoring as part of standard contract administration duties. Other resource specialists will be involved in monitoring of specific measures relating to their particular resource area. Monitoring items are listed below.

- The district archeologist will monitor known heritage sites eligible or potentially eligible to the National Register of Historic Places before and after project implementation.
- Prescribed fire managers will establish photo points in prescribed burn units to compare pre- and post-treatment conditions and document fire behavior during implementation.
- Fuels staff will evaluate effectiveness of fuel treatments in reducing fuel loading.
- Project managers will monitor revegetation of disturbed and burned areas to determine need for additional measures and noxious weed control.
- Wildlife staff will monitor known and suspected goshawk nests for nesting activity annually or as funding allows.
- Engineering and hydrology/soils specialists will monitor effectiveness of erosion control measures (seeding, water bars, etc.) one and three years following installation as funding allows.
- Hydrology/soils staff will monitor soil compaction at a sample of timber sale landings and harvest units as funding allows.
- Timber sale administrators and hydrology/soils specialists will monitor application and effectiveness of Best Management Practices.
- The district planning team will monitor project implementation following completion of activities.
- Wildlife staff will monitor effectiveness of oak enhancement.