

Cement Project Area Environmental Assessment

Appendix C Monitoring Plan

Item to be Monitored	Purpose	Frequency/Timing of Monitoring	Responsible Party**
Bald eagle winter roosts*	Assess bald eagle presence and habitat	Annual	Wildlife biologist
Big game species*	Determine presence and population trends of game species across the Black Hills	Determined by State agency	Wyoming Game and Fish Department, South Dakota Department of Game, Fish and Parks
Goshawk nests*	Determine if known nests are active in a given year	Annual	Wildlife biologist
Goshawk use of project area*	Locate new or unknown nests that may need protection during harvest operations	Annual	Wildlife biologist
Sensitive and management indicator bird species*	Determine presence and population trends of various bird species across the Black Hills	Annual	Forest wildlife biologist or monitoring coordinator
Snags in timber sale cutting units or across project area watersheds (see EA p9. 33-34)	Verify project effects of timber harvest on existing snags; verify compliance with forest plan direction; determine need for snag creation	Before and within one year after completion of timber harvest	Wildlife biologist and/or silviculturist
Reptile and amphibian habitat	Verify effectiveness of mitigation and design criteria in protecting habitat (springs, riparian areas, and water developments)	Before and within one year after completion of activities proposed within 100 meters of these water features	Wildlife biologist
Known snail colonies	Verify effectiveness of mitigation and design criteria in protecting snail colonies	Before and within one year after completion of activities proposed within 100 meters of known snail colonies	Wildlife biologist
Sensitive plant site 0121050xxx (full RIS site number in project file)	Determine successional changes over time in this community type in the absence of management	Annual	Botanist
Aspen enhancement prescription in RIS sites 0122050037 and 0121010127	Determine effects of treatment on vegetation community type and habitat potential for sensitive plants	One, three and five years following treatment	Botanist
Mechanical fuel treatment in fuel site 5	Determine effects of treatment on mixed hardwoods in midstory and understory	One, three and five years following treatment	Botanist
Mechanical fuel treatment and prescribed fire in fuel site 10	Assess effects of treatment on aspen	One, three and five years following treatment	Botanist

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Foxtail sedge site	Assess effects of nearby activities and effectiveness of mitigation	Following nearby activities	Botanist
Fuel loading	Determine effectiveness of fuel reduction treatments	Before and after completion of fuel reduction activities	Fuels forester
Prescribed burns	Assess effectiveness of burn methods, document effects	Establish photo points before burn and monitor one, three and five years after burn	Fuels forester
Forage growth after prescribed burns	Determine need for temporary grazing system modification	Prior to livestock turn-on date following burn	Fuels forester and range conservationist
Closed roads (gated, stored, or decommissioned)*	Determine effectiveness of closure methods and status of resource damage	Annually during summer and/or hunting seasons for five years following closure or decommissioning	Engineer, planner, hydrologist, recreation forester
Road U725 and wet meadow near Guidinger Spring	Determine effectiveness of closure and success of revegetation	Revegetation success: One year after activities are completed. Effectiveness of road closure: Annual	Hydrologist, recreation forester
Motorized vehicle use off roads	Determine soil and water disturbance associated with this activity	Annual	Hydrologist, recreation forester
Log landing design and layout	Avoid soil erosion and sediment transport	Prior to development of landings	Timber sale contract administrator, hydrologist
Revegetation of disturbed soil (landings, fire control lines, road construction, etc.)	Verify seeding, determine success of revegetation and need for any further revegetation measures	Monitor seeding within six months of completion of activities. Monitor revegetation the first growing season after seeding	Hydrologist, road contract administrator, timber sale contract administrator, fuels forester
Erosion control measures (seeding, slash, waterbars, etc.) located on disturbed sites	Evaluate effectiveness and need for any replacement or improvement	One and three years following installation	Hydrologist, road contract administrator, timber sale contract administrator, fuels forester
Timely erosion control on incomplete roads	Assess effectiveness of mitigation and determine need for additional erosion control	During road construction	Road contract administrator
Best Management Practices	Assess effectiveness in preventing sedimentation	During and after completion of ground-disturbing activities	Contract administrators, planning team
Status of road construction excavation and sidecast material	Assess effectiveness of mitigation and determine need for additional erosion control	During and after road construction	Road contract administrator
Skid trail spacing	Determine whether planning team's skid trail spacing recommendation of 80 foot is being implemented	Before and during harvest operations	Hydrologist, timber sale contract administrator, silviculturist
Noxious weeds in disturbed areas (roads, skid trails, landings, etc.)	Reduce new weed infestations, determine treatment needs, and determine effectiveness of mitigation	One through five years following harvest	Timber sale contract administrator, weed specialist, and/or botanist

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Noxious weed prevention on burned landings	Assess effectiveness of mitigation and determine need for treatment	One and three years following burn/seeding	Fire specialist, botanist, and/or weed specialist
Rehabilitation of fire control lines	Assess effectiveness of rehabilitation and determine need for further treatment	One and three years following fire line rehabilitation	Prescribed burn specialist, botanist, weed specialist
Timber volume calculations	Monitor accuracy of silvicultural calculations and Forest Plan assumptions	Following sale layout and cruise	Presale forester and silviculturist
Conifer regeneration in shelterwood seedcuts, seedtree cuts, and patch clearcuts	Assess stocking and need for site preparation or planting	One, three and five years following harvest	Silviculturist
Protection of pine regeneration during timber sale	Prevent loss of existing regeneration	During harvest of overstory removal prescriptions	Timber sale contract administrator
Visual quality	Ensure visual quality objectives are met and assess effectiveness of mitigation	During and after timber harvest	Forest landscape architect
Timber sale layout	Evaluate sale implementation and assumptions used in planning	Following layout, prior to bid offering	Planning team, presale forester
Timber sale implementation	Evaluate sale implementation and assumptions used in planning and effectiveness of mitigation	Following timber sale closure	Planning team, administrators of timber sale and road contracts

*Continuation of ongoing monitoring

**Black Hills National Forest North Zone or Bearlodge Ranger District specialists unless otherwise noted