APPENDIX D:

Land and Resource Management Plan Direction By Alternative

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APPENDIX D

Land and Resource Management Plan Direction By Alternative

Appendix D is a series of tables displaying the goals, objectives, standards, and guidelines in the 1997 Land and Resource Management Plan (LRMP), the 2001 Phase I Amendment, and the three alternatives generated for the Phase II Amendment.

Objectives, standards, and guidelines that do not change from Alternative 1 -the 1997 Forest Plan- are not included in this section.

There are some changes between Alternative 1 (the 1997 LRMP) and Alternative 2. These differences reflect changes to the 1997 LRMP that were responses to the 1999 Appeals Decision. The wording 'No change from current Forest Plan" refers to Alternative 2, which is the current Forest Plan.

Monitoring Items (1997 Amended Plan - Phase I) Table and Monitoring Items (Alternatives 3, 4, and 6) Table would be placed in the Forest Plan Chapter Four. These list the items that are monitored to check the sufficiency of the Forest Plan.

APPENDIX D

Land and Resource Management Plan Direction By Alternative

Forest-wide Goals and Objectives

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
N/A			No-Action, 1997 Revised Plan	No-Action, Phase I Amendment	Diversity Across the Landscape	Phase I with Additional Mature Forests	Reduced Fire and Insect Hazard/Species Viability
N/A	0	General Description	(Alternative G, the preferred alternative, for the 1997 Forest Plan Revision as stated in the Record of Decision [referred to from this point on as simply 1997 Revised Plan]).	(1997 Revised Plan as amended by the Phase I Amendment; it is the No Action Alternative.)	(1997 Revised Plan modified to focus on additional species viability and RNAs across the Forest. Reduced fire hazard is emphasized adjacent to ARC and the WUI.)	(This is the 1997 Revised Plan modified to provide viability through additional late-successional forest, RNAs, and limited fire-hazard reduction.)	(This is the 1997 Revised Plan as amended by Phase I and modified to reduce fire hazard and mountain-pine-beetle (MPB) risk across the forest while providing for species viability.)

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
N/A	0	General Philosophy	This alternative provided a high level of economic net value. The acres managed for hardwoods or meadows would increase. Diversity in tree stand density is emphasized. Several BAs would be created. Late-successional landscapes and sites would be managed. Raising the water table would restore some riparian areas. Where possible, prescribed burning would be increased. Timber harvest would remain as an important tool to manage the Forest ecosystem. [source: 1997 Record of Decision; page ROD-14].	Implemented the Interim Direction from the Appeals process on the 1997 Plan. Included increased species/ habitat protection to promote continued viability in the planning area until a more thorough analysis could be completed through the Phase II Forest Plan Amendment.	This alternative primarily approaches viability by targeting greater vegetation cover-type diversity by restoring areas ponderosa pine has overtaken over the last century. Riparian areas are restored to benefit emphasis species. In addition, vertical diversity in the ponderosa-pine type is altered by providing more acres in the early and late structural stages as many emphasis species require. Candidate RNAs are identified to provide the representation of the major communities identified for the Forest. Fire, insect, and disease hazard is reduced within the WUI and to conserve species occurrences that have been identified to be at-risk to stand-replacing fire. At the landscape scale, fire, insect, and disease reduction occurs as diversity is conserved and as fuel reduction is used to help protect isolated late-successional emphasis species habitats.	This alternative incorporates a system of mature Forest areas where timber harvest does not occur to provide for late-successional conditions. It approaches viability through natural processes (fire, insect, disease) over time while fostering an increase in mature Forest communities in the present. All 9 candidate RNAs are part of this alternative. Fire, insect, and disease hazard is reduced in the WUI except within mature Forest areas. At the landscape scale natural stand-replacing events occur and the landscape may eventually approach a condition similar to that of 100 -150 years ago.	This alternative approaches fire, insect, and disease intensively in the WUI and across the landscape. Treatments restore hardwoods and riparian areas and reduce conifer fire-hazard ratings. At the landscape scale fire, insects, and diseases are addressed by altering denser concentrations of conifer cover types and by emphasizing hardwoods, and riparian areas to foster wetter sites. This alternative provides for viability by targeting greater vegetation cover-type diversity by restoring areas ponderosa pine has overtaken over the last century. Riparian areas are restored to benefit emphasis species. Candidate RNAs represent major plant communities.

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201	201	Objective	During the planning period conserve existing hardwood communities and restore historic hardwood communities by 10 percent over 1995 conditions on sites capable of supporting these communities.	Same as Alternative 1	Restore a minimum of 46,000 acres of aspen (double current aspen acres), and 4,000 acres of bur oak (approximately 33 percent increase) during the life of the Plan. The highest priority for hardwood restoration is where conifers (e.g., spruce and pine) have out-competed aspen adjacent to riparian systems that once supported beaver.	During the planning period conserve existing hardwood communities and restore historic hardwood communities by 20 percent over 1995 conditions on sites capable of supporting these communities.	Manage for a minimum of 92,000 acres of aspen (double current aspen acres), and 16,000 acres of bur oak (approximately 33 percent increase) in current bur oak during the life of the Plan. The highest priority for hardwood restoration is where conifers (e.g., spruce and pine) have out-competed aspen adjacent to riparian systems that once supported beaver. Increases in bur oak will be focused away from the Bear Lodge Mountains.
Rationale: Pine and spruce are encroaching upon aspen, an important habitat component for many emphasis species: ruffed grouse, red-belly snakes, smooth green snakes, several snail species, and several bat species, purple martin, Swainson's thrush, beaver, deer, and other big game. Aspen is more resistant to crown-fire initiation and spread than is ponderosa pine or white spruce. Bur oak restoration will have the long-term objective of producing mast (acorns for deer). Forest-wide emphasis better arrays treatments and diversity across the Forest and to disperse big game away from the ARC/WUI areas. In turn, in areas where aspen is restored or is a component near streams, more opportunities exist for beaver and improved riparian conditions and hydrological function which could be expected to benefit a number of the emphasis plant species, such as autumn willow, shining willow, sage willow and foxtail sedge. The Bear lodge mountains currently have adequate bur oak habitat, but it is being encroached by pine on the rest of the forest.							
202.c	202.c	Objective	c. Maintain ponderosa pine in mountain mahogany stands for vegetative diversity.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale for deletion: Pine is encroaching into mountain mahogany sites. Maintaining pine increases the seed source in these types and promotes encroachment. Mountain mahogany provides a habitat component for deer and loggerhead shrike. Mountain mahogany stands are being reduced in quality and quantity on the forest due to pine encroachment. This habitat type is critical for wintering big game, and enhancement is very important.							
204	204	Objective	Conserve and manage white spruce, lodgepole pine, limber pine, and Douglas fir.	Same as Alternative 1	Conserve and manage birch/ hazelnut, lodgepole pine, limber pine, and Douglas fir.	Same as Alternative 1	Same as Alternative 3
Rationale for change: White spruce is covered under Objective 200-01 NEW. Added the birch/hazelnut community because it is a limited type important to several emphasis species. Did not remove Douglas fir as this issue is outside the scope of species viability and is a very small component of the Forest. (From Alternative 3)							

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205	205	Objective	Restore grassland (meadow and prairie) communities across the Forest by 10 percent over 1995 conditions. Determine the restoration potential on a site-specific basis based on landform and soils.	Same as Alternative 1	Restore 12,000 acres of prairie grasslands to remove pine encroachment and 2,400 acres of meadow to approximately triple the current meadow acres during the life of the Plan. Restored meadows will not be considered suitable for timber production.	Same as Alternative 1	Manage for 122,000 acres of prairie grassland and 3,600 acres of meadow during the life of the Plan. Restored acres will not be considered suitable for timber production.
Rationale for change: Pine is encroaching into grasslands and meadows in the absence of fire. The meadow treatments are approximately triple the current meadow acreage. Grassland and meadows are important habitat components for some emphasis species including: butterflies, red-belly snake, smooth green snake, big game, leopard frog, tiger salamander, northern harrier, grasshopper sparrow, meadow jumping mouse, and others. The original acres were set at 1,200, but based on district input the number was increased to 2,400 acres. Forest-wide emphasis better arrays treatments and diversity across the Forest and to disperse big game away from the ARC/WUI areas.							
206	206	Objective	Maintain or establish a minimum of 20 percent of the forested area of a planning unit (diversity unit, watershed, and/or land-type association) to provide vertical diversity.	Same as Alternative 1	Deleted. See MA objectives for MAs 4.1, 5.1, 5.6, 5.4, and 5.43.	Same as Alternative 1	Deleted. See MA objectives for MAs 4.1, 5.1, 5.6, 5.4, and 5.43.
Rationale for deletion: This objective is replaced by ponderosa pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							
207	207	Objective	Manage at least 5 percent of the forested land base for late succession.	Same as Alternative 1	Deleted	Manage at least 5 percent of the forested land base for late succession. Maintain conditions of all existing late-successional and dense mature stands (structural stages 4C and 5).	Deleted
Rationale for deletion: This objective is replaced by ponderosa pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							

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207.a	207.a	Objective	a. The late succession acreage should include acres in MA 3.7, the smaller scale stands identified in the Resource Information System (RIS) database, and other MAs that provide late succession conditions, such as Wilderness. Conserve the integrity of these late-successional stands.	Same as Alternative 1	Deleted	a. The late succession acreage should include acres in MA 3.7, the smaller scale stands identified in the Resource Information System (RIS) database, and other MAs that provide late-successional conditions, such as wilderness and mature forested areas to conserve the integrity of these late-successional stands.	Deleted
Rationale for deletion: This objective is replaced by ponderosa pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							
207.b	207.b	Objective	b. Small-scale late-succession stands other than MA 3.7 identified in the Forest Plan may, through project analysis and environmental documentation, be exchanged for other existing late succession. The stand to be considered for late succession management should be at least equal in quality and size. This exchange process should be limited to situations where there will be an improvement in Forest late-succession conditions.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale for deletion: This objective is replaced by ponderosa-pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							

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208	208	Objective	In addition to late succession described under Objective 207, provide smaller late-successional patches to meet specific resource elements (e.g., goshawk nesting areas, snag replacement clumps).	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale for deletion: This objective is replaced by ponderosa-pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							
209	209	Objective	Manage at least 5 percent of a timber-harvest-project area for the grass/forb structural stage. Grass/forb openings should be 1 acre in size or larger. In accounting for openings, include those created by wildfire or other natural disturbance events. Also include grass/forb openings greater than 1 acre within low-density stands.	Same as Alternative 1	Deleted. See MA objectives for MAs 5.1, 5.6, 5.4, and 5.43.	Same as Alternative 1	Deleted. See MA objectives for MAs 5.1, 5.6, 5.4, and 5.43.
Rationale: This objective is replaced by ponderosa-pine structural stage objectives in MAs 4.1, 5.1, 5.6, 5.4, and 5.43. The structural stage objectives are designed as a broad scale, landscape approach to providing a diversity of habitat components in ponderosa pine, from early to late succession, from open to closed canopy, from small to large diameter trees.							

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210	210	Objective	Implement at least 1 adaptive management project (fire simulation cut) in the next 10 years to simulate Forest structural conditions following a stand-replacing fire (using primarily mechanical methods). Follow this treatment with low-intensity prescribed fire when ground fuels permit. Treatment size should be large enough to adequately monitor effects. Consult with the Rocky Mountain Station in project design and monitoring.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale for deletion: Numerous wildfires and fuel treatment projects have met this need. See 200-01 New.							
211	211	Objective	In conifer forested portions of a planning unit (diversity unit, watershed, or land-type association), maintain an average of 1.08 hard snags per acre, well-dispersed across the conifer forested portion of the planning area through the rotation. Calculate as a per acre average for the planning unit; some acres may have no snags while others may exceed the average.	In ponderosa-pine forested portions of a watershed, maintain an average of two hard snags per acre on south facing slopes and four hard snags per acre on north facing slopes, well-dispersed across the watershed through the rotation. Calculate as a per acre average for the watershed; some acres may have no snags while others may exceed the average. In other forest types maintain an average of six hard snags per acre, well-dispersed across the watershed.	In conifer forested portions of the forest, provide an average of 3 hard snags greater than 9-inch dbh and 25 ft high per acre, well-dispersed across the forest, 25 percent of which are greater than 14-inch dbh.	Same as Alternative 2	Within a management area in conifer forested portions of the forest, provide an average of 3 hard snags greater than 9-inch dbh and 25 feet high per acre, well-dispersed across the forest, 25 percent of which are greater than 14-inch dbh.

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Rationale for change: Alternatives 2 and 4 retain the language from the 1999 Appeal Decision and Phase I Amendment. Alternatives 3 and 6 (3 snags/acre) are based on Alternative 2 and 4, but simplify the snag objective to limit the need to evaluate and monitor snags by aspect. FIA data on snags is not available by aspect, making analysis and monitoring difficult. In Alternatives 3 and 6, north and east-facing slopes generally have higher tree densities and therefore higher snag densities, than south and west-facing slopes. Literature for some species suggests 8 snags per acre while other species should need less than 1 snag per acre. If 3 snags (Raphael and White 1983) are provided on average, some areas will have none or few; other areas will likely have 6, 8, or more snags per acre (from fire, insects, disease, etc.). The 9-inch dbh limit corresponds to sawtimber designation. A height of 25 feet is based on height recommendations in the Regional Planning Desk Guide. The 25 percent over 14-inch dbh is to provide for species that need larger snags. Generally snags are retained but can be removed for safety reasons. Snags can be removed for firewood, or other purposes, but only after demonstrating that the snag objective can be met within the management area. With the extensive fires and mountain pine beetle and Ips beetle mortality, the Forest will more than meet this standard for the next ten years. The management area was selected to use a scale smaller than Forest-wide to be consistent with other landscape scale direction found elsewhere in Alternative 6, and to consistently define Forest Plan monitoring and evaluation at a scale meaningful to projects.							
214	214	Objective	Restore riparian shrub communities across the Forest by 500 acres during the Plan period on sites capable of supporting this community.	Same as Alternative 1	Restore riparian shrub communities across the Forest by 1,000 acres during the Plan period on sites capable of supporting this community.	Same as Alternative 1	Same as Alternative 1
Rationale for no change: Riparian habitat is an important component for several emphasis species and other species, such as big game. Riparian restoration (500 acres or roughly 135 miles of stream) would be expected to contribute to the conservation of species that may occur within the areas where the riparian restoration activities occur.							

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215	215	Objective	Implement riparian rehabilitation projects for at least 3 stream reaches during the Plan period. Select reaches where the water table has receded and plant species composition has changed as a result of human activities. Coordinate planning and implementation with state game and fish agencies and downstream private landowners. Use the following in designing the projects: a. Raise the water table to saturate historically inundated soils; b. Convert drier-site vegetation to native wet-meadow species; c. Reintroduce beaver into the drainage once suitable habitat is developed; and d. Design management to maintain wet-meadow conditions.	Same as Alternative 1	Implement riparian rehabilitation projects for at least 5 stream reaches during the Plan period. Select reaches where the water table has receded and plant species composition has changed as a result of human activities. Coordinate planning and implementation with state game and fish agencies and downstream private landowners. Use Objective 215 a through d in designing the projects: a. Raise the water table to saturate historically inundated soils; b. Convert drier-site vegetation to native wet-meadow species; c. Reintroduce beaver into the drainage once suitable habitat is developed; and d. Design management to maintain wet-meadow conditions.	Same as Alternative 1	Manage for at least 5 stream reaches in a rehabilitated condition during the Plan period. Select reaches where the water table has receded and plant species composition has changed as a result of human activities. Coordinate planning and implementation with state game and fish agencies and downstream private landowners. Use Objective 215 a through d in designing the projects: a. Raise the water table to saturate historically inundated soils; b. Convert drier-site vegetation to native wet-meadow species; c. Reintroduce beaver into the drainage once suitable habitat is developed; and d. Design management to maintain wet-meadow conditions.
Rationale for change: Riparian habitat is an important component for several emphasis species. The stream reach objective supplements objective 214 in providing habitat for MIS (beaver) and other emphasis species. Retained coordination with state game and fish and downstream land owners as the states and other land owners are important partners in emphasis species management.							
221	221	Objective	Conserve or enhance habitat for sensitive species and species of special interest (management indicator species) listed in Chapter Two.	Same as Alternative 1	Conserve or enhance habitat for R2 sensitive species, species of local concern, and management indicator species (MIS). Project-level effects will be evaluated in relation to Forest-wide MIS objectives.	Same as Alternative 3	Conserve or enhance habitat for R2 sensitive species and species of local concern. Monitoring will be conducted at a forest-wide level, not at the project level, and will be done for habitats or populations.

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Rationale for change: Add species of local concern (SOLC) to be consistent with the emphasis species used in this amendment. Did not include MIS in Alternative 6 because it is included in the new MIS Objective 200-11.							
222	222	Objective	Complete the following habitat projects each year during the Plan period:	Same as Alternative 1	Complete the following habitat projects each year during the Plan period as funding allows:	Same as Alternative 3	Same as Alternative 3
Rationale for change: Change needed to make units consistent with current reporting.							
222	222	Objective	Wildlife 1,000 acres 100 structures.	Same as Alternative 1	Wildlife/plant 1,000 acres 100 structures	Same as Alternative 3	Same as Alternative 3
Rationale for change: "Plants" were added to address emphasis plant species.							
222	222	Objective	Fish 50 acres 50 structures.	Same as Alternative 1	Fish 50 acres and 1 mile	Same as Alternative 3	Same as Alternative 3
Rationale for change: Change needed to make units consistent with current reporting.							
223	223 (10-04)	Objective	Use management-ignited fires and prescribed natural fires to achieve desirable vegetative diversity and fuel profiles on 8,000 acres per year for the next decade. Use natural fire on a limited basis under specifically prescribed conditions.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Deleted
10-04	224 (10-05)	Objective	Reduce or otherwise treat fuels commensurate with risks (fire occurrence), hazard (fuel flammability), and land and resource values common to the area, using the criteria in Forest-wide Standard 4110.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Same as Alternative 3

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10-05	225 (10-06)	Objective	Manage wildfires using the appropriate suppression response (confine, contain or control) based on MA emphasis, existing values, risk of ignition and fuel hazards within a given area.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Same as Alternative 3
10-06	226 (10-07)	Objective	Develop fuel management and protection strategies for intermixed land ownerships in partnership with private, state and other federal agencies.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Same as Alternative 3
227	227 (10-08)	Objective	Manage 28,900 acres of activity fuels and 4,000 acres of natural fuels each year during the next decade, consistent with the need to protect life, property and natural resources from the threat of wildfire. This acreage includes acres specified in Objective 223.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Deleted
10-07	228 (10-09)	Objective	Within planning units (diversity unit, watershed and/or landscape association) where outbreaks of mountain pine beetle could threaten management objectives for ponderosa pine (especially where timber production is desired), maintain or reduce acreage of ponderosa pine stands that are in medium or high risk condition for infestation.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Same as Alternative 3

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10-08	229 (10-10)	Objective	Using analyses of insect-and-disease populations, determine where suppression strategies are needed to meet management objectives and minimize value loss of tree vegetation affected by outbreaks of insect-and-disease pests.	Same as Alternative 1	Moved to Goal 10	Same as Alternative 3	Same as Alternative 3
231	231	Objective	Prevent new infestations and manage to reduce established noxious-weed infestations. Treat 3,600 acres per year during the next ten years to limit noxious-weed infestations.	Same as Alternative 1	Prevent new infestations and manage to reduce established noxious-weed infestations. Treat at least 6,000 acres per year during the next ten years to limit noxious-weed infestations.	Same as Alternative 3	Prevent new infestations and manage to reduce established noxious weed infestations. Treat at least 8,000 acres per year during the next ten years to limit noxious-weed infestations.
Rationale for change: This objective is consistent with the Weed Environmental Assessment (EA). Noxious weeds are a risk to sensitive plants. Alternative 6 has a broad objective for prevention and treatment of weeds on a minimum of 8,000 acres annually. Program level is determined by available funding. With the aid of KV funding the Forest is currently treating between 12,000 and 13,000 acres a year.							
232	232	Objective	Inform the public about noxious-weed prevention, in coordination with local weed districts where they exist.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale for deletion: Not needed. This is required under pertinent policy and regulation.							

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233	200-04 New	Objective	N/A	N/A	Collect seeds, spores, or other plant material from R2 sensitive and species of local concern plants. Retain and/or increase material at a local and willing long-term repository to provide local genetic material for potential propagation and reintroduction efforts in the event existing occurrences are lost. As material is available, reintroduce R2 sensitive or species of local concern plants where population occurrences are known to have been lost or in areas where it is determined that specific micro site conditions for successful introduction efforts likely exist.	Collect seeds, spores, or other plant material from R2 sensitive and species of local concern plants. Retain and/or increase material at a local and willing long-term repository to provide local genetic material for potential propagation and reintroduction efforts in the event existing occurrences are lost. As material is available, reintroduce R2 sensitive or species of local concern plants where population occurrences are known to have been lost or in areas where it is determined that specific micro site conditions for successful introduction efforts likely exist. Initiate the project within five years or as seed collection opportunities allow.	Same as Alternative 4
Rationale: A stand-replacing event such as noxious-weed invasion, etc. can pose a large potential risk to the long-term persistence of species with low numbers of occurrences on the Forest. Collection of material for reintroduction efforts is a tool to provide for long-term persistence or viability of species in the planning area. Collection and storage of spores, seed, etc. is a well established practice and provides added assurance of species viability.							

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234	200-05 New	Objective	N/A	N/A	Create or maintain a low-crown-fire hazard adjacent to occurrences of R2 sensitive and species of local concern plants as well as botanical areas bordered by continuous, dense conifer stands where long-term persistence is at risk from a single high-intensity fire.	N/A	Create or maintain a moderate to low-crown-fire hazard adjacent to occurrences of R2 sensitive and species of local concern plants and botanical areas bordered by continuous, dense conifer stands where long-term persistence is at risk from a single high-intensity fire.
Rationale: A large high-intensity wildfire resulting in high-severity conditions could extirpate occurrences of species with a low number of occurrences and/or occurrences in close proximity. Fuel reduction (e.g., creating fuel breaks, thinning, etc.) to reduce the risk of crown fires or designed to increase the chances of dropping crown fires to the ground before reaching sensitive plant occurrences is considered to increase the likelihood of these plant species' persistence (See Assessments). Botanical areas protected as many emphasis species plants are found in botanical areas. Fire hazard objective is low to moderate (See appendix B for definition) to provide vegetation treatment flexibility							
235	200-07 New	Objective	N/A	N/A	Provide for the long-term persistence and expansion of the autumn willow (*Salix serissima*: two known occurrences with the largest occurrence at McIntosh Fen) and sage willow (*Salix candida)* at McIntosh Fen using the following actions:	N/A	Same as Alternative 3
Rationale: A need specifically identified for *Salix serissima* and *Salix candida* is conservation or restoration of hydrologic function and ground water tables. Identify priorities for species conservation through land acquisition priorities.							
235.a	200-07.a	Objective	N/A	N/A	a. Restore conditions that favor beaver along the stream reaches above and adjacent to where these targeted plants occur.	N/A	Same as Alternative 3
235.b	200-07.b	Objective	N/A	N/A	b. Protect upstream hydrology through land acquisition or other measures.	N/A	Same as Alternative 3.

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235.c	200-07.c	Objective	N/A	N/A	For recently (2002) relocated *Salix serissima* occurrence at Middle Boxelder Creek, identify within the next two years whether and which site specific conservation measures could be successfully implemented to provide for the long-term persistence and/or expansion of this occurrence.	N/A	Same as Alternative 3
236	200-08 New	Objective	N/A	N/A	Plant and animal species with insufficient information will be prioritized for data collection and evaluation.	N/A	Same as Alternative 3
Rationale: Data may be lacking on some species. This objective emphasizes collection of necessary data. NFMA regulations do not require population data, see 36 CFR 219.19f							
237	200-09 New	Objective	N/A	N/A	Manage for low grassland structure in the vicinity of prairie dog towns.	N/A	Manage for 200 to 300 acres of prairie dog towns across the Forest, in at least 3 separate towns.
Rationale: Currently there are about 275 acres of prairie dogs on the Forest. About 250 of these acres are within 3 towns. Managing for 200-300 acres allows for natural fluctuations due to drought or wet cycles. Also, prairie dogs can be a problem to adjacent land owners. The objective allows for management, including control, to meet the needs of adjacent landowners, while maintaining the major towns on the Forest.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
238	200-11 New	Objective	N/A	N/A	The following are objectives for management indicator species (MIS). MIS will be monitored using trends in habitat; however, when available, population trends may be used as a strong indicator of management response. Monitoring will be conducted at a Forest scale and not at the project level. Population monitoring will be discretionary as provided by 36 CFR 219.14.f.	Same as Alternative 3	Same as Alternative 3
Rationale: Provides a separate objective for MIS to highlight the difference in status of these species.							
238.a	200-11a New	Objective	N/A	N/A	a. Maintain or enhance habitat for ruffed grouse, beaver, song sparrow, grasshopper sparrow, white-tailed deer and brown creeper; as outlined in specific direction pertaining to aspen, other hardwoods, riparian areas, grasslands, spruce and ponderosa pine (e.g., Objectives 201, 205, 211, 200-01, 5.1-204).	Same as Alternative 3	Same as Alternative 3
Rationale: Alternatives 3, 4, and 6 are designed to maintain or enhance ruffed grouse habitat through aspen restoration, to maintain or enhance beaver and song sparrow habitat through aspen and bur oak restoration, and riparian restoration, and to maintain or enhance grasshopper sparrow habitat through grassland restoration and management and through rangeland standards and guidelines. Alternatives 3, 4, and 6 are designed to maintain brown creeper habitat and maintain or enhance deer habitat through the structural stage objectives for MA 4.1, 5.1, 5.4, 5.43, and 5.6, and through snag management. Structural stage objectives are designed to maintain or enhance abundance and distribution of late successional coniferous habitat for brown creepers and provide a diversity of structural stages for deer and promote understory shrubs for deer through open structural stages. The spruce objective is also designed to provide habitat for brown creeper							

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238.b	200-11b New	Objective	N/A	N/A	b. Maintain habitat opportunities for black-backed woodpeckers across the forest, as outlined in specific direction pertaining to conifer habitat, snags and recently burned habitat (e.g., Objectives 211, 11-03, 5.1-204, Standard 2301).	Same as Alternative 3	Same as Alternative 3
Rationale: Black-backed woodpecker habitat and populations are currently high due to the occurrence of fires over the last five years. It is not practical to expect the current fire activity to continue over the long term. As a result, habitat and populations are likely to decline as these burned areas recover. Habitat and population trend will likely be eruptive, depending on fire occurrence. Black-backed woodpeckers also occur at lower densities in unburned habitat across the Forest. Maintaining snags across the forest as well as in recently burned areas is designed to maintain this sporadic, eruptive nature of the bird and its habitat, while structural stage objectives provide conditions to provide habitat between fires.							
238.c	200-11c New	Objective	N/A	N/A	c. Maintain habitat for golden-crowned kinglets, as outlined in specific direction pertaining to spruce habitat (e.g., Objective 200-01)	Same as Alternative 3	Same as Alternative 3
Rationale: Alternatives 3, 4, and 6 maintain golden-crowned kinglet habitat through spruce management.							
238.d	200-11d New	Objective	N/A	N/A	d. Maintain or enhance habitat quality and connectivity for mountain suckers, as outlined in specific direction pertaining to aquatic resources (e.g., Objectives 103, 104, 215, Standards 1201, 1203, 1205, Guideline 1115).	Same as Alternative 3	Same as Alternative 3
Rationale: Habitat quality and connectivity (culverts, dams, etc.) are limiting habitat components for fish. Mountain sucker habitat is maintained or enhanced though objectives, standards and guidelines that maintain stream health and water quality.							

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239-LVD	200-01 New	Objective	N/A	N/A	Maintain or restore mature and late-successional (structural stage 4 and 5) spruce acres, except within 300 feet of buildings and where spruce has encroached into hardwoods, or in areas where beaver reoccupation is desired for conservation of other emphasis species. Favor spruce where it is encroaching into pine stands, especially where it improves connectivity between spruce stands. Spruce may be removed for fire hazard reduction within 300 feet of structures, for hardwood restoration and emphasis species conservation.	N/A	Manage for 20,000 acres of spruce across the Forest using active management to achieve multiple use objectives. Treat spruce within 200 feet buildings, where spruce has encroached into hardwoods, and for emphasis species management.
Rationale: Historically 15,000 acres were estimated on the Forest (1996 FEIS). Current acreage (25,000) is believed to be higher than historic conditions due to fire suppression (Parrish et al. 1996). The objective is set 5,000 acres higher than historic estimates because of the uncertainty in the accuracy of historic estimates, and to provide for marten and other spruce dependent species on the Black Hills NF. This level of spruce management is consistent with the objectives of hardwood restoration and fire hazard reduction in WUI and ARCs. Mature structural stages in spruce are needed to provide habitat components for marten. Existing spruce stands tend to be uneven-aged but usually prevail over hardwoods. Key emphasis species for white spruce include the following: Swainson's thrush, three-toed woodpecker, several snails, bats, American marten, northern flying squirrel, and others.							
N/A	200-02 New	Objective	N/A	N/A	Provide for a diverse gradient of structure in prairie grasslands; maintain 20 percent with high grass/forb cover based on potential.	N/A	N/A
Rationale: Alternative 3 provides additional diversity in structure and composition in prairie grasslands for some emphasis species. Grasshopper sparrows need some areas of moderate or tall vegetation during the breeding season. Alternative 6 has instead added a grassland MIS and set an objective to maintain or improve habitat for the MIS.							

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240_HAB	200-03 New	Objective	N/A	N/A	Implement management and install structures to provide water for livestock and to protect the aquatic and shoreline vegetation around 50 ponds or water catchments over the life of the Plan.	Same as Alternative 3	Manage and/or install structures to provide water for livestock and to protect the aquatic, shoreline and upland vegetation around ponds or water catchments containing leopard frogs.
Rationale: Ponds and water catchments have become important habitat for leopard frogs and other amphibians with the introduction of predatory fish in many of the lakes and streams. Possible treatments could include fencing and piping to a tank or some other technique.							
N/A	200-10 New	Objective	NA	NA	Implement additional measures to assure avoidance of livestock use on *Carex alopecoidea*. Restrict livestock use of all or portions of five of the largest geographically spaced occurrences. Occurrence location numbers are as follows: CAAL 8-19, CAAL 8-20, CAAL 8-22, CAAL 8-30, CAAL 8-31.	Same as Alternative 3	N/A
Rationale: Monitoring data indicates that all or a portion of the majority of *Carex alopecoidea* occurrences receive authorized livestock use. Avoid livestock use of all or portions of five sites, the core monitoring sites, geographically spaced headwater occurrences or a combination. Additional measures were needed to provide species viability for *Carex alopecoidea*. Alternatives 3 and 4 treat as objective.							

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302	302	Objective	Maintain rangelands in satisfactory range condition.	Same as Alternative 1	Rangelands will be managed to maintain or achieve satisfactory rangeland condition. Satisfactory rangeland condition occurs when existing soil and vegetation resources are meeting or progressing in an acceptable timeframe toward desired condition, as established in the Forest Plan and through the site-specific planning process.	Same as Alternative 3	Same as Alternative 1
Rationale: Phase I Decision upheld. See Appendix E - Glossary for definition of range condition.							
N/A	302.a New	Objective	NA	NA	a. Management of rangelands determined to be neither meeting nor moving toward satisfactory rangeland condition in an acceptable timeframe, shall cause actions designed to move toward satisfactory rangeland condition within a stated timeframe to be implemented.	Same as Alternative 3	Same as Alternative 3

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N/A	302.b New	Objective	NA	NA	b. In the absence of a site-specific planning process and an Allotment Management Plan, management direction needed to address rangeland conditions and trends and species viability for ongoing rangeland management activities on active allotments will be incorporated into the grazing permits through the AOI.	b. In the absence of a site-specific planning process and an Allotment Management Plan, management direction for ongoing rangeland management activities on active allotments needed to address rangeland conditions and trends and species viability will be incorporated into the grazing permits through the AOI.	Same as Alternative 4
10	10 New	Goal	N/A	N/A	Establish and maintain a mosaic of vegetation conditions to reduce occurrences of stand-replacing fire, insect-and-disease events and facilitate insect-and-disease management and firefighting capability adjacent to ARC and sensitive at-risk resources.	Establish and maintain a mosaic of vegetation conditions to reduce occurrences of stand-replacing fire, insect-and-disease events and facilitate insect-and-disease management and firefighting capability adjacent to ARC.	Establish and maintain a mosaic of vegetative conditions to reduce the occurrences of stand-replacing fire and insect-and-disease events, and to facilitate insect-and-disease management and firefighting capability adjacent to ARC, sensitive resources, and non-federal land and generally across the Forest.

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10-01	10-01 New	Objective	N/A	N/A	Manage for 50 percent moderate-to-low fire hazard in the Wildland Urban Interface (WUI) and throughout the forest for emphasis species conservation and to reduce fire hazard within proximity of structures to current NFPA standards except in Management Area (MA) 1.1 Black Elk Wilderness, MA 2.2 Research Natural Areas, MA 3.1 Botanical Areas, MA 3.7 Late-successional Forest Landscapes, MA 4.2B Peter Norbeck Scenic Byway, and MA 5.4A Norbeck Wildlife Preserve.	Manage for 50 percent moderate-to-low fire hazard in the Wildland Urban Interface (WUI) and reduce fire hazard within proximity of structures to current NFPA standards, except in Management Area (MA) 1.1 Black Elk Wilderness, MA 2.2 Research Natural Areas, MA 3.1 Botanical Areas, MA 3.7 Late-successional Forest Landscapes, MA 4.2B Peter Norbeck Scenic Byway, and MA 5.4A Norbeck Wildlife Preserve.	Manage for 50 to 75 percent moderate-to-low fire hazard in the WUI and reduce fire hazard within proximity of structures to current NFPA standards except in Management Area (MA) 1.1 Black Elk Wilderness, MA 2.2 Research Natural Areas, MA 3.1 Botanical Areas, MA 4.2B Peter Norbeck Scenic Byway, and MA 5.4A Norbeck Wildlife Preserve. Manage the remainder of the Forest for 50% moderate-to-low fire hazard except in Management Area (MA) 1.1 Black Elk Wilderness, MA 2.2 Research Natural Areas, MA 3.1 Botanical Areas, MA 3.7 Late-successional Forest Landscapes, MA 4.2B Peter Norbeck Scenic Byway, and MA 5.4A Norbeck Wildlife Preserve.
Rationale: A treatment acreage level is not included in Alternatives 3, 4, and 6. A fire hazard objective is described, which may vary with budget and weather. Increases the likelihood of protecting structures, communities, watersheds, habitats, and other resources from high intensity crown-fire across the landscape, (from HFRA Preamble). Structures will be protected by site-level treatments. A fire hazard objective of 50 to 75 percent in the WUI is established in Alternative 6 to provide the land manager direction to reduce fire hazard with some leeway to take into account local factors such as reducing increases to big game forage next to communities. Reduced fire hazard will also reduce susceptibility to bark beetle infestation.							
10-02	10-02 New	Objective	N/A	N/A	The scenic integrity objectives (SIO) within the WUI will be moderate to low 2-to-4 years after management activities have been completed.	Same as Alternative 3	Same as Alternative 3

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Rationale: The word "moderate" was selected after discussion with regional office and Deschutes NF, where this is already implemented, and in conjunction with Forest fire specialists. This was added to better accommodate fuel management activities. This supplements Guideline 5606.							
10-03	10-03 New	Objective	N/A	N/A	Within five years of a formal research natural area (RNA) designation, manage for a moderate-to-low-fire hazard between RNAs and at-risk communities and other resources at risk as needed where the topography, wind conditions, and fuels would create the potential for wildfire spread to the at-risk community or resources (e.g., sensitive plants, heritage resources), except those designated in Management Area (MA) 1.1 Black Elk Wilderness.	N/A	Within five years of a formal research natural area (RNA) designation, manage for a moderate-to-low-fire hazard between RNAs and at-risk communities and other resources as needed where the topography, wind conditions, and fuels could create the potential for high intensity crown-fire spread to the at-risk community or resources (e.g., sensitive plants, heritage resources), except those designated in Management Area (MA) 1.1 Black Elk Wilderness.
Rationale: Allows managers flexibility to reduce risk to RNAs and lands surrounding RNAs. RNAs will be managed for the vegetation communities for which they are established. Fire hazard reduction may or may not be part of this strategy. If not, fire hazard may reach high or greater levels inside the RNA. This objective provides direction to reduce fuel loads adjacent to the RNAs to reduce the potential for higher intensity fires between RNAs and the surrounding lands. There are no candidates in the following management areas: MA 4.2B Peter Norbeck Scenic Byway and MA 5.4A Norbeck Wildlife Preserve.							
N/A	10-04 New	Objective	N/A See Goal 2, Objective 223	N/A See Goal 2, Objective 223	Use management-ignited fires and prescribed natural fires to achieve desirable vegetative diversity and fuel profiles on about 4,000 acres +/- 15 percent per year for the next decade. Use natural fire on a limited basis under specifically prescribed conditions.	Use management-ignited fires and prescribed natural fires to achieve desirable vegetative diversity and fuel profiles on about 2,000 acres +/- 15 percent per year for the next decade. Use natural fire on a limited basis under specifically prescribed conditions.	N/A
Rationale: Moved from Goal 2 to Goal 10. Treatment levels vary depending on budget and operation factors. Alternative 6 has overall fire hazard objectives in Objective 10-01..							

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10-04	10-05 New	Objective	N/A See Goal 2, Objective 224	N/A See Goal 2, Objective 224	Reduce or otherwise treat fuels commensurate with risks (fire occurrence), hazard (fuel flammability), and land and resource values common to the area, using the criteria in Forest-wide Guideline 4110.	Same as Alternative 3	Same as Alternative 3
Rationale: Moved from Goal 2 to Goal 10 in Alternatives 3, 4, and 6.							
10-05	10-06 New	Objective	N/A See Goal 2, Objective 225	N/A See Goal 2, Objective 225	Manage wildfires using the appropriate response based on MA emphasis, existing values, risk of ignition, and fuel hazards within a given area.	Same as Alternative 3	Same as Alternative 3
Rationale: Moved from Goal 2 to Goal 10. Updated to new terminology.							
10-06	10-07 New	Objective	N/A See Goal 2, Objective 226	N/A See Goal 2, Objective 226	Develop fuel management and protection strategies for intermixed land ownerships in partnership with private, state, and other federal agencies.	Same as Alternative 3	Same as Alternative 3
Rationale: Moved from Goal 2 to Goal 10. Same as 1997 Revised Plan.							
N/A	10-08 New	Objective	N/A See Goal 2, Objective 227	N/A See Goal 2, Objective 227	Treat about 20,000 acres +/- 15 percent acres of activity and natural fuels annually during the next decade to improve condition class, protect communities and restore ecosystem components. This acreage includes acres specified in Objective 10-04.	Treat about 12,500 acres +/- 15 percent acres of activity and natural fuels annually during the next decade to improve condition class, protect communities and restore ecosystem components. This acreage includes acres specified in Objective 10-04.	N/A
Rationale: Treatment levels may vary in Alternative 6 to meet Objective 10-01. For Alternatives 1 and 2 see Goal 2, Objective 227.							

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10-07	10-09 New	Objective	N/A See Goal 2, Objective 228	N/A See Goal 2, Objective 228	Within planning units (diversity unit, watershed and/or landscape association) where outbreaks of mountain pine beetle could threaten management objectives for ponderosa pine (especially where timber production is desired), maintain or reduce acreage of ponderosa pine stands that are in medium or high risk for infestation.	Same as Alternative 3	Where outbreaks of mountain pine beetle could present risks to management objectives for ponderosa pine, reduce acreage of ponderosa pine stands that are in medium or high risk for infestation.
Rationale: Moved from Goal 2 to Goal 10. Provides direction for all ponderosa pine multiple uses including timber production. Alternative 6 simplifies language and broadens scope of concern to the Forest as a whole. Did not adopt suggestion to allow only 25% of a land area in moderate to high mountain pine beetle risk, as this would require that 75% of the unit be in structural stages 1, 2, or 3A.							
10-08	10-10 New	Objective	N/A See Goal 2, Objective 229	N/A See Goal 2, Objective 229	Using analyses of insect-and-disease populations, determine where suppression strategies are needed to meet management objectives and minimize value loss of tree vegetation affected by outbreaks of insect-and-disease pests.	Same as Alternative 3	Using analyses of insect-and-disease occurrence; prioritize suppression strategies to meet management objectives and minimize value loss of tree vegetation affected by outbreaks of insect-and-disease pests.
Rationale: Moved from Goal 2 to Goal 10. Provides direction for all ponderosa pine multiple uses including timber production. Changed wording from "population" to "occurrence" because occurrence better defines the problem and the need to act.							
11	11 New	Goal	N/A	N/A	Enhance or maintain the natural rate of recovery after significant fire and other natural events while maintaining a mosaic of fuel-loading conditions to facilitate future fire suppression activities.	Outside of reserves, enhance or maintain the natural rate of recovery after significant fire and other natural events while maintaining a mosaic of fuel-loading conditions to facilitate future fire suppression activities.	Enhance or maintain the natural rate of recovery after high severity fires and other natural events by maintaining a mosaic of fuel-loading conditions.

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Rationale: A mosaic of fuel loading conditions can provide defensible space for fire fighters in the event of future wildfires on fallen dead timber. Wildfires occurring in dead fallen timber can remove whatever restored conditions exist and provide enough heat to sterilize the soil and greatly prolong future recovery of the site. The mosaic of fuel loading can help reduce the extent of such high intensity fires, yet retaining some down-woody material will aid the recovery of the area.							
11-01	11-01 New	Objective	N/A	N/A	Achieve a non-emergency watershed condition as soon as possible after an event but generally no later than 3 to 5 years.	Same as Alternative 3	Same as Alternative 3
Rationale: See FSM 2521.05 for definitions of a functioning watershed. Stand-replacing events (e.g., fire, insects, storm damage) can create a significant future fuel-loading risk resulting in reburn and significant further damage to soils and delayed watershed recovery.							
11-02	11-02 New	Objective	N/A	N/A	Achieve fuel-loading mosaic within 3 to 5 years and reassess as conditions change over time.	N/A	Same as Alternative 3
Rationale: The primary source of funding for creating the fuel loading mosaic is often a portion of the value of the timber removed.							

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11-03	11-03 New	Objective	N/A	N/A	Following a wildfire, dead trees will be available for value recovery, except for 50 percent of the recent (0-5 years) stand-replacing fire acreage Forest-wide, up to 10,000 acres reserved from value recovery. Highest priority to retain is areas with greater than 70 percent pre-fire canopy closure. Standard 2301a does not apply to the salvaged area.	Following a wildfire, no dead trees will be available for value recovery.	Following a wildfire, dead trees will be available for value recovery. Retain 50 percent of the recent (0-5 years) stand-replacing fire acreage up to 10,000 acres Forest-wide. Generally the highest priority areas to retain are those with greater than 70 percent pre-fire canopy closure. The following will be included in determining if the 10,000-acre figure has been met: stand-replacing fire and associated out-year fire/insect mortality, and relatively large blocks of stand-replacing insect outbreaks that can be combined into 1,000-acre areas. Standard 2301a does not apply to the salvaged area.
Rationale: The purpose of this objective is to facilitate recovery of damaged trees while retaining an important habitat component. Recovery of economic value helps create the fuel mosaic described in objective 11-02. Five years was selected because insect populations and food for black-backed woodpecker has significantly declined after five years. Insects contribute to black-backed woodpecker and other woodpecker habitat similar to fires (Bonnot 2004, progress report).The 1,000-acre insect-outbreak size is the home-range size of black-backed woodpecker, an indicator of this type of habitat (Dixon and Saab 2000). The 10,000-acre pool of burned/insect-killed timber is consistent with the Wyoming Partners in Flight Strategic Plan. Research indicates some species were more closely associated with stands with more than 70 percent pre-fire canopy closure (see woodpecker assessment on Black Hills NF web page). Retaining large snags under Standard 2301a is not needed to meet snag habitat needs as Objective 11-03 retains 10,000 acres within the burned area in addition to other snags across the Forest.							
11-04	11-04 New	Objective	N/A	N/A	Encourage and conserve the establishment of shrubs in moderate-to-high intensity burn areas the first 5 years following a wildfire.	Encourage and conserve the establishment of shrubs in moderate-to-high intensity burn areas the first five years following a wildfire.	Encourage and conserve the establishment of shrubs in moderate-to-high intensity burn areas the first five years following a wildfire.
Rationale: Shrubs are an important habitat component and help protect exposed soils. Shrubs often respond after a fire, but are vulnerable to browsing by big game and livestock.							

APPENDIX D
Land and Resource Management Plan Direction By Alternative

FOREST-WIDE STANDARDS AND GUIDELINES

Forest Plan Phase II Amended No.	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
1110	1110	Guideline	Initiate re-vegetation as soon as possible, not to exceed 6 months, after termination of ground-disturbing activities. Re-vegetate all disturbed soils with native species when available in seed/plant mixtures that are noxious-weed-free. On areas needing the immediate establishment of vegetation, non-native non-aggressive annuals, non-aggressive perennials (such as alfalfa or sterile perennial species may be used while native perennials are becoming established. This is used to prevent the spread of noxious-weeds and prevent erosion. If mulches are used they are to be noxious-weed free.	Same as Alternative 1	Initiate re-vegetation as soon as possible, not to exceed 6 months, after termination of ground-disturbing activities. Re-vegetate all disturbed soils with native species in seed/plant mixtures that are noxious-weed-free. On areas needing the immediate establishment of vegetation non-native, non-aggressive annuals (e.g., wheat, oats, rye), or sterile species may be used while native perennials are becoming established, or when native species are not available (e.g., during drought years or years when wildfire burns large acreages in the U.S.). Other aggressive non-native perennials (e.g., smooth brome, timothy) will not be used. Seed will be tested for noxious weeds. If mulches are used they are to be noxious-weed free. Weed-free alfalfa seed may be used only when native legume seed is not available and only	Initiate re-vegetation as soon as possible, not to exceed 6 months, after termination of ground-disturbing activities. Re-vegetate all disturbed soils with native species in seed/plant mixtures that are noxious-weed-free. On areas needing the immediate establishment of vegetation, non-native non-aggressive annuals (e.g., wheat, oats, rye), or sterile species may be used while native perennials are becoming established, or when native species are not available (e.g., during drought years or years when wildfire burns large acreages in the U.S.). Other aggressive non-native perennials (i.e., smooth brome, timothy) will not be used. At a minimum, seed will be tested for noxious weeds. If mulches are used they are to be noxious-weed free. There are only two situations where weed-free alfalfa seed may be used, and only if native legume seed	Same as Alternative 3

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					when there is extensive disturbance associated with road construction or mine reclamation where topsoil is no longer available. STANDARD	is not available: a. Extensive disturbance associated with road construction; b. mine reclamation where topsoil is no longer available. STANDARD	
Rationale: This has been rewritten and changed to a STANDARD because many interpretations have been applied to this guideline and undesired non-native aggressive perennials (e.g., timothy, smooth brome) have continued to show up in seed mixes. This guideline was originally written so that alfalfa (non-native perennial) could be used for highway construction since it is a nitrogen fixing legume, but this has also been interpreted more "broadly" and alfalfa has been used for reclaiming other disturbances and should not be because it can out-compete natives at less droughty, higher moisture holding sites. This identifies generally acceptable conditions and seed not to use. Non-native aggressive perennials such as timothy and smooth brome contribute to diversity loss and are competitors to native plants, including emphasis plant species.							
1401	1401	Guideline	For caves which have been determined significant, or which have not been evaluated for significance, manage to protect or enhance biological, cultural, ecological, hydrological and physical characteristics with the following actions:	For caves which have been determined significant, or which have not been evaluated for significance [as per 36 CFR 290.3 (c) or (d)], manage to protect or enhance biological, cultural, ecological, hydrological and physical characteristics with the following actions: STANDARD	For caves that have been determined significant or that have not been evaluated for significance [as per 36 CFR 290.3 (c) or (d)], manage to protect or enhance biological, cultural, ecological, hydrological, and physical characteristics with the following actions: STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Phase I Amendment was changed to include the CFR reference. Changed to standard because NEPA decision cannot change the CFR.							
1401a	1401a	Guideline	a. Avoid ground disturbance within 100 ft of an opening of a natural cave.	a. Avoid ground disturbance within 500 ft of an opening of a natural cave. STANDARD	a. Avoid ground disturbance within 100 ft of an opening of a natural cave (see also Standard 3207). STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Added reference for additional information. This was changed to 500 feet in Phase I (Alt. 2) to provide for conservation of bat species consistent with Pierson et al. (1999). This standard was changed back to 100 feet for general cave conservation, and Standard 3207 was modified to include 500 feet around known bat hibernacula and maternity roosts.							

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1509	1509	Standard	For classified lands not withdrawn from operations under the general mining laws (Research Natural Areas, National Recreational Areas, Special Interest Areas such as "scenic" and "geologic", National Historical Sites, and "scenic" and "recreation" segments of Wild and Scenic Rivers): a. The status of classified lands with respect to withdrawal must be checked before an operating Plan can be approved. b. Provide for reasonable protection of the purposes for which the lands were classified. c. Reclaim disturbed lands to a condition suitable for the purposes for which the lands were classified. d. Pursue withdrawals where appropriate.	Same as Alternative 1	For classified lands not withdrawn from operations under the general mining laws (Research Natural Areas, National Recreational Areas, Special Interest Areas such as "scenic", “botanical”, and "geologic", National Historical Sites, and "scenic" and "recreation" segments of Wild and Scenic Rivers): a. The status of classified lands with respect to withdrawal must be checked before an operating Plan can be approved. b. Provide for reasonable protection of the purposes for which the lands were classified. c. Reclaim disturbed lands to a condition suitable for the purposes for which the lands were classified. d. Pursue withdrawals where appropriate.	Same as Alternative 3	Same as Alternative 3
Rationale: Added botanical areas to the list of areas considered for this existing Forest Plan standard							

Forest Plan Phase II Amended No.	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Deleted	1511	Standard	Recreational panning and sluicing shall be allowed outside of Wilderness where such activities do not interfere with the rights of mining claimants protected under the 1872 Mining Law. These activities shall be evaluated by the authorized Forest Service official on a case-by-case basis to determine if a Plan of operations is needed.	Recreational panning and sluicing shall be allowed outside of Wilderness where such activities do not interfere with the rights of mining claimants protected under the 1872 Mining Law. These activities shall be evaluated by the authorized Forest Service official on a case-by-case basis following direction found at 36 CFR 228, Subpart A.	Deleted	Deleted	Deleted
Rationale: This standard was changed to comply with 1997 Forest Plan Appeal Decision on recreational mining. Panning and sluicing are legitimate prospecting and mining methods and are authorized by the United States mining laws, as amended, and regulated under the Forest Service regulations at 36 CFR 228 Subpart A, and do not need to be addressed in the LRMP. (From Alternatives 3, 4, & 6							
2107	2107	Guideline	Pine encroachment on areas that have formed over grass or meadow vegetation may be treated to maintain forage base and landscape diversity. Consider soils that formed under grass or meadow plant communities in determining extent of pine-encroachment removal.	Same as Alternative 1	Conifer encroachment on areas that have formed over grass, meadow, or hardwood vegetation may be treated (e.g., to conserve habitat for threatened, endangered, and sensitive (TES) species and species of local concern, maintain forage base, and landscape diversity). Consider soils that formed under grass or meadow plant communities and other factors in determining extent of pine-encroachment removal.	Same as Alternative 1	Conifer encroachment on areas that have formed over grass, meadow, or hardwood vegetation may be treated (e.g., to conserve habitat for threatened, endangered, and sensitive (TES) species, management indicator species (MIS) and species of local concern (SOLC), maintain forage base, and landscape diversity). Consider soils that formed under grass or meadow plant communities and other factors in determining extent of pine-encroachment removal.
Rationale: (For Alternatives 3 and 6) Changed wording from pine to conifer because encroachment occurs in conifers not just pine. Added TES and SOLC habitat as a reason for treating conifer encroachment. Kept as a guideline because it provides information in implementing objective 205.							
2201	2201	Guideline	Disperse aspen/birch treatments across the Forest.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale for deletion: This standard is very similar to Goal 201. (							

Forest Plan Phase II Amended No.	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
2203	2203	Guideline	Successful aspen regeneration should yield several thousand stems per acre at least 6 feet tall with at least 1 unbrowsed terminal leader(s) within 3 to 5 years.	Same as Alternative 1	An aspen stand shall be considered regenerated when it has yielded per acre 2,000 stems at least 6 feet tall with unbrowsed terminal leaders.	Same as Alternative 1	Same as Alternative 3
Rationale: Conversations with Dr. Wayne Shepperd indicated this would generally provide a successfully regenerated stand of aspen on the Black Hills. Retained as a guideline is it provides information in implementing objective 201.							
2205	2205	Guideline	When treating mixed conifer/ hardwood stands to meet the hardwood restoration objective (201), leave no more than 10 overstory conifers per acre, and treat the conifer understory and hardwood component in order to shift the dominance of basal area from conifer to hardwood.	Same as Alternative 1	When treating mixed conifer/ hardwood stands to meet the hardwood restoration objective (201), remove all conifers. STANDARD	Same as Alternative 1	Same as Alternative 3
Rationale: Leaving conifers within stands promotes future encroachment. Research has shown there is no increase in bird species diversity from leaving conifers within hardwoods (Rumble et al. 2001). Aspen restoration involves trade-offs in habitat, in this case some pine sensitive species habitat will be traded for aspen sensitive species habitat. Ponderosa pine regeneration is prolific in the Black hills where only 46,000 acres are typed as aspen, another 160,000 acres are being overtaken by ponderosa pine which has successfully seeded the aspen sites and is replacing the aspen.							
2207	2207	Guideline	Locate livestock/wildlife water sites (e.g., drinking structures) outside of hardwood communities when feasible.	Locate new livestock/wildlife water sites (e.g., drinking structures) outside of hardwood communities. STANDARD	Locate new livestock/wildlife water sites (e.g., drinking structures) outside of hardwood communities, except when no other option is available. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: This pertains to new livestock/wildlife water sites or existing ones that need reconstruction.							
Deleted	2208	Guideline	Alter age classes of shrubs in a planning unit by no more than 25 percent within a 10-year period.	Same as Alternative 1 except a standard	Deleted	Deleted	Deleted
Rationale: Shrub age classes are not tracked in the database, and tracking is impractical to implement.							

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Deleted	2301	Standard	2301. Design vegetative treatments to maintain an average of 1.08 hard snags per conifer forested acre in all planning units (diversity unit, watershed and/or land type association).	Within the associated watershed, for each vegetation management project, retain the following minimum densities of hard snags at least 25 ft in height: (see a-e below)	Deleted	Same as Alternative 2	Deleted
Rationale: Alternatives 3 and 6 are replaced by Objective 211. See 2301a below. Literature for some species suggests 8 snags per acre while other species should need less than 1 snag per acre. If 3 snags (Raphael and White, 1983) are provided on average, some areas will have none or few; other areas will likely have 6, 8, or more snags per acre (from fire, insects, disease, etc.). Retaining 1.08 snags per acre is not well supported in recent literature. The Black Hills has an abundance of snags for the decade as over 13% of the Forest has burned since 1997; a small percentage of these stands have been salvaged and the Forest is in the middle of a very significant episodic mountain pine beetle epidemic. Snags are abundant and well scattered across the Forest (Black Hills USFS monitoring reports 2002, 2003, 2004, 2005).							
2301a	2301a	Standard	N/A	a. Ponderosa pine on north- or east-facing slopes or in protected areas which would have historically supported an infrequent, stand replacing fire regime: Retain an average of 4 snags per acre > 10 in dbh (diameter at breast height), collectively 25 percent of which must be > 20 in dbh. If 20 in dbh or 25 ft high snags are not available, retain snags in the largest size class available.	a. Retain all snags greater than 20-inch dbh unless a safety hazard. If snag densities within a project area are below Objective 211, retain all snags unless they are a safety hazard. If large snags (>14 in dbh) are not available, retain snags in the largest size class available.	Same as Alternative 2	a. Retain all snags greater than 20-inch dbh unless a safety hazard. If snag densities within a project area are below Objective 211, retain all snags unless they are a safety hazard. If large snags (>16 in dbh) are not available, retain snags in the largest size class available. This standard does not apply to areas salvaged under Objective 11-03.
Rationale: From Alternatives 3 and 6. Alternatives 2 and 4 retain the language from the 1999 Appeal Decision and Phase I Amendment. This has proven complicated to analyze, implement, and monitor since the Phase I amendment. Alternatives 3 and 6 simplify the snag objective (211) and provide the average of what the Phase I Amendment provides. This standard is designed to accomplish the snag objective (211) by directing projects to retain snags of certain sizes if Objective 211 is not met. All snags over 20 in dbh are retained to provide snag habitat diversity and to provide for species that need very large snags, such as the pygmy nuthatch. Snag habitat retention objective 11-03 provides adequate snag habitat.							

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2301b	2301b	Standard	N/A	b. Ponderosa pine on south- or west-facing slopes or in exposed areas which would have historically supported a more frequent, lower intensity fire regime: Retain an average of 2 snags per acre > 10 in dbh, collectively 25 percent of which must be > 20 in dbh. If 20 in dbh or 25 ft high snags are not available, retain snags in the largest size class available.	b. Retain at least six hardwood snags per acre in hardwood stands.	Same as Alternative 2	b. Retain at least six hardwood snags per acre in hardwood stands. Retain all snags in hardwood stands with snag density of less than six per acre.
Rationale: Hardwood snags are retained to provide habitat diversity for cavity-dependent and aspen-associated species. Six snags per acre were identified during the Phase I Amendment. Conifer snag definitions are identified in Objective 211 and Standard 2301a							
Deleted	2301c	Standard	N/A	c. Retain a minimum average of 6 snags per acre > 10 in dbh for Forest types other than ponderosa pine, unless snags are a safety hazard.	Deleted	Same as Alternative 2	Deleted
Rationale: See hardwood snag standards above.							
Deleted	2301d	Standard	N/A	d. Snags chosen for retention should represent the largest diameter class available.	Deleted	Same as Alternative 2	Deleted
Rationale: Addressed elsewhere in standard 2301.							
Deleted	2301e	Standard	N/A	e. Provide large diameter trees and snags along habitat interface zones.	Deleted	Same as Alternative 2	Deleted
Rationale: The standard is removed in Alternatives 3 and 6 because large tree requirements are covered in the structural stage objectives for specific MAs, and snag locations are dependent on which tree dies.							

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Deleted	2302	Standard	If a planning unit (diversity unit, watershed, and/or land type association) does not meet the minimum hard snag diversity requirement across the conifer forested portion, project implementation within the planning unit (planning unit, watershed, and/or land type association) will move hard snag densities toward this objective.	In watersheds not meeting the minimum hard snag direction, all vegetation management projects will be designed to move hard snag densities toward this objective.	Deleted	Same as Alternative 2	Deleted
Rationale in Alternatives 3 and 6: The standard is unnecessary because it is covered in the snag Standard 2301. Green tree replacements for snags are addressed in the structural stage objectives for specific MAs.							
Deleted	2303	Guideline	Snags can be clumped or individual, but should be well-distributed throughout the planning unit.	Snags can be clustered or individual, but must be well-distributed within the watershed.	Deleted	Same as Alternative 2	Deleted
Rationale in Alternatives 3 and 6: This guideline is unnecessary because it is covered in Objective 211 and Standard 2301.							
2304a	2304a	Guideline	a. In planning units not meeting the snag objective, consider snag cutting restrictions and treating live replacement trees to create snags.	a. Prohibit cutting of standing dead trees for fuelwood, except in designated areas. STANDARD	a. Cutting of standing dead trees for fuelwood, is allowed in designated areas. STANDARD	Same as Alternative 2	Same as Alternative 2.
Rationale: Alternatives protect snag habitat, but allow firewood removal. Where snag objectives are met, e.g., “where designated.”							
2304b	2304b	Guideline	N/A	b. In areas where cutting restrictions are not effective, consider identifying roads to be closed or restricted from use to protect snags from removal. STANDARD	Deleted	Same as Alternative 2	Same as Alternative 3.
Rationale: Alternative 4 retains direction from Alternative 2, Alternatives 3 and 6 remove this standard as it is covered in 2304a and prescribing solutions to potential problems is better left to project managers.							
2305	2305	Guideline	All soft snags should be retained unless they are a safety hazard.	Same as Alternative 1 except a standard	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
Rationale: This guideline is revised to a standard. Soft snags are hard snags that have rotted. They do not last very long, but provide habitat value.							

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Deleted	2306	Guideline	When necessary, provide live tree replacements to meet the minimum snag objective.	During vegetation management activities in ponderosa pine, retain a sufficient number of green trees > 20 in dbh or from the largest diameter class available, to move towards or maintain an average minimum density of one large green tree per acre within the associated watershed, for the purpose of recruitment of snags and large diameter down woody material.	Deleted	Same as Alternative 2	Deleted
Rationale in Alterantives 3 and 6: Covered in structural stage objectives for specific MAs.							
2308a	2308 a	Standard	a. Prescriptions shall be developed prior to timber harvest to identify the amount, size(s), and distribution of down logs to be left on-site. On conifer-forested sites (ponderosa pine and white spruce) retain an average of at least 50 linear feet per acre of coarse woody debris with a minimum diameter of 10 inches (where materials are available). (See Table, page II-27, 1997 Forest Plan.)	Same as Alternative 1	a. During vegetation management activities on ponderosa pine forested sites, retain an average of at least 50 linear feet per acre of coarse woody debris with a minimum diameter of 10 inches. On white spruce forested sites retain an average of at least 100 linear feet per acre of coarse woody debris with a minimum diameter of 10 inches.	Same as Alternative 1	Same as Alternative 3
Rationale in Alterantives 3 and 6: Modified to simplify and combine 2308a and 2308b into 1 standard. Greater amount in spruce is for pine marten habitat. Fifty feet is consistent with Reynolds 1992 southwest Goshawk guidelines. Spruce naturally has a greater amount of down woody material. Maintaining 20,000 acres of spruce will provide adequate habitat.							

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Deleted	2308 b	Standard	N/A	b. Design vegetation management activities, including prescribed fire, to maintain ten sound logs per acre (8 logs minimum length 10 feet, 10-inch diameter; 2 logs minimum length 10 feet, 20-inch diameter) to provide future den sites, resting sites, and prey habitat within areas currently occupied by martens or with high potential for occupancy. (See Table, page II-27, 1997 Forest Plan.)	Deleted	Same as Alternative 2	Deleted
Rationale: Deleted because it is included in 2308a.							
2402	2402	Guideline	After the first decade, until the plan is revised, do not offer each year more than 18.1 million cubic feet of sawtimber and 2.1 million cubic feet of POL.	Same as Alternative 1	After the first decade, until the plan is revised, do not offer more than 181 million cubic feet of sawtimber and 21 million cubic feet of POL in the second decade.	Same as Alternative 1	Same as Alternative 3
Rationale: Deleted “each year” and put on a decade basis to be consistent with 1997 ROD (March 13, 1997 p. 35). This implements the 1997 decision and allows for annual variation in program size and resource need within the decade total.							
2408	2408	Guideline	2408e. The preferred silvicultural system used for treating ponderosa pine on suitable lands will be shelterwood. Other systems may be used to meet specific resource objectives.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale: This guideline dropped from Alternatives 3, 4, and 6 to provide more flexibility in silvicultural planning to meet a variety of resource objectives in applying the acceptable silvicultural systems in Guideline 2408.							

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2411	2411	Guideline	Regeneration harvests of even-aged timber stands should not be undertaken until the stands have generally reached (or surpassed 95 percent of the) culmination of the mean annual increment measured in cubic feet. Exceptions may be made where resource management objectives or special resource considerations require earlier harvest. Exceptions include serving specific management objectives such as forest health, wildlife diversity, and ecosystem restoration and management.	Same as Alternative 1 except a standard	Regeneration harvests of even-aged timber stands should not be undertaken until the stands have generally reached (or surpassed 95 percent of the) culmination of the mean annual increment measured in cubic feet. Exceptions may be made where resource management objectives or special resource considerations require earlier harvest. Exceptions include serving specific management objectives such as forest health condition, wildlife diversity, reduction of fuels adjacent to plant species of concern occurrences and ecosystem restoration and management. Guideline	Same as Alternative 3	Same as Alternative 3
Rationale: Retained current forest plan direction that provides sufficient flexibility to manage a variety of species and to meet fire hazard reduction objectives.							
2414	2414	Guideline	For travel corridors and other places where scenic quality is emphasized, manage tree stands to enhance the scenic quality and recreational opportunities. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine, areas of hiding cover for wildlife, and areas with open park-like conditions. Extend rotation ages to approximately 200 years before final harvests.	Same as Alternative 1	For travel corridors and other places where scenic quality is emphasized, manage tree stands to enhance the scenic quality and recreational opportunities, except where it conflicts with emphasis species needs. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine, areas of hiding cover for wildlife, and areas with open park-like conditions.	For travel corridors and other places where scenic quality is emphasized, manage tree stands to enhance the scenic quality and recreational opportunities, except in reserve areas. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine, areas of hiding cover for wildlife, and areas with open park-like conditions. Reserve areas will not be on a rotation for cutting in these corridors.	For travel corridors and other places where scenic quality is emphasized, manage tree stands to enhance the scenic quality and recreational opportunities. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine in open, park-like conditions, and scattered, young ponderosa pine, hardwoods, open meadows and grassland conditions.

Forest Plan Phase II Amended No.	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Rationale: Added hardwoods, meadows and grassland as a part of some scenic corridors in Alternatives 3 and 6.							
2416c	2416c	Guideline	2416c. When intermediate treatments will be done in the future, the minimum level considered adequate for restocking is 300 seedlings per acre for conifers.	Same as Alternative 1	Same as Alternative 1	Same as Alternative 1	When intermediate treatments will be done in the future, the minimum level considered adequate for restocking is 300 seedlings per acre for conifers, except where a lower stocking is needed to maintain fire-hazard-reduction objectives.
Rationale: Alternative 6 provides an exception for meeting fire-hazard objectives.							
2420	2420 New	Guideline	N/A	N/A	N/A	N/A	Fuelwood removal permits will be focused within the WUI.
Rationale: Focusing firewood permits in the WUI will help remove fuels from this area.							
Deleted	2501	Guideline	Achieve or maintain rangeland in satisfactory range condition class, meaning that the existing vegetation is at or progressing towards the desired conditions. If rangeland within an allotment is not in satisfactory condition, project implementation within that allotment will move range condition toward satisfactory.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale: Replaced with Objective 302. (From Alternative 3, 4, & 6.							

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2504	2504	Guideline	The site-specific rangeland analysis necessary for preparation of allotment management plans shall document selected desired conditions and evaluate whether the designated area is at, moving towards, or moving away from the desired conditions. a. Satisfactory range conditions occur when the existing conditions are at, or progressing toward the desired conditions identified through the project planning process. b. When trends towards satisfactory range conditions are not achieved within five years by changes in grazing systems, allowable use or residual guidelines, more restrictive use or residual guidelines, or changes to the grazing systems shall be adopted.	Same as Alternative 1 except a standard	The site-specific rangeland analysis necessary for preparation of allotment management plans shall document selected desired conditions and evaluate whether the designated area is at, moving towards, or moving away from the desired conditions. a. Satisfactory range conditions occur when the existing conditions are at, or progressing toward the desired conditions identified through the project planning process. b. When trends towards satisfactory range conditions are not achieved within five years by changes in grazing systems, allowable use or residual guidelines, more restrictive use or residual guidelines, changes to the grazing systems shall be adopted or cattle use be removed or relocated for a period of time. Guideline	Same as Alternative 3	Same as Alternative 3
Rationale in Alternatives 3, 4, and 6: Clarifies that cattle removal or relocation is an option in meeting desired range conditions and can target diversity for conservation of emphasis species. Retained as a guideline to allow consideration of reason for non-compliance through NEPA analysis.							

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2505	2505	Guideline	Livestock and wild herbivore allowable forage use or residual levels on rangelands by grazing system and range condition are as follows: (See 1997 Forest Plan table on page II-36) RESIDUAL LEVELS FOR WETLANDS AND RIPARIAN AREAS Residual levels (or remaining height of key plant species) can be prescribed for riparian areas in the AMP or the annual letter of operating instructions (AOI) to the livestock permittee. Residual levels will be based upon specific objectives for the location in question and take into account season of use and range conditions.	Same as Alternative 1 except a standard	Livestock and wild herbivore allowable forage use or residual levels on rangelands by grazing system and range condition are as follows: (See 1997 Forest Plan table on page II-36) RESIDUAL LEVELS FOR WETLANDS AND RIPARIAN AREAS Residual levels (or remaining height of key plant species) will be prescribed for riparian areas in the allotment management plan (AMP) or the annual letter of operating instructions (AOI) to the livestock permittee. Residual levels will be based upon specific objectives for the location in question and will consider season of use and range conditions. STANDARD	Same as Alternative 2	Same as Alternative 3
Rationale: Changed to a standard to provide clear direction for emphasis species. Changed from "can be prescribed" to "will be prescribed" to make it a standard.							
Deleted	2505a	Guideline	a. These guidelines are for key management species within key grazing areas for range condition classes of satisfactory and unsatisfactory, as determined through a range analysis.	Same as Alternative 1 except a standard	Deleted	Same as Alternative 2	Deleted
Rationale: Deleted from Alternative 3 and 6 because it is covered in 2505.							

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Deleted	2505b	Guideline	b. Proper utilization is dependent upon species of vegetation, intensity of use, and frequency and season of use. These guidelines are general in nature; they assume typical conditions and are based on key areas being grazed by domestic livestock only once per growing season each year. Different percent utilization may be allowed based on specific resource conditions or special management systems, if documented in an allotment management plan or annual operation instructions.	Same as Alternative 1 except a standard	Deleted	Same as Alternative 2	Deleted
Rationale: Deleted from Alternative 3 and 6 because it is covered in 2505 (general).							
2505c	2505c	Guideline	c. Utilization of willow, shrubs, woody vines or young deciduous trees (such as aspen, birch and oak) in any year by livestock or wildlife is limited to browsing 40 percent of the total individual leaders produced in that year (not to be confused with 40 percent use on each and every leader produced).	Same as Alternative 1 except a standard	c. Utilization of willow, shrubs, woody vines or young deciduous trees (such as aspen, birch and oak) in any year is limited to browsing only 40 percent of the total individual leaders produced in that year (not to be confused with 40 percent use on each and every leader produced).	Same as Alternative 2	Same as Alternative 2

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2505d	2505d	Guideline	d. Remove livestock from the grazing unit or allotment when further utilization on key areas in that year will exceed proper allowable use or prescribed residual level in the Forest Plan, AMP, or Annual Letter of Operating Instructions for either grass and forbs or shrubs.	Same as Alternative 1 except a standard	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2
2505e	2505e New	STANDARD	N/A	N/A	e. No authorized utilization will be allowed by domestic livestock on known occurrences of willow emphasis species (e.g., *Salix candida, Salix serissima, Salix lucida*.).	N/A	Same as Alternative 3
Rationale: Sage willow, shining willow, and autumn willow are the species being conserved. Added to provide for conservation of these species that are very limited on the Forest in Alternatives 3 and 6.							
2505f	2505f-New	STANDARD	N/A	N/A	N/A	N/A	Implement additional measures to assure avoidance of livestock use on *Carex alopecoidea*. Restrict livestock use of all or portions of five of the largest geographically spaced occurrences at site numbers: CAAL8-19, CAAL8-20, CAAL8-22, CAAL8-30, CAAL8-31. STANDARD
Rationale: Monitoring data indicates that all or a portion of the majority of *Carex alopecoidea* occurrences receive authorized livestock use. Avoid livestock use of all or portions of 5 sites, the core monitoring sites, geographically spaced headwater occurrences or a combination. Additional measures were needed to provide species viability for *Carex alopecoidea*. Alternatives 3 and 4 are treated as objectives.							

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2507	2507	Guideline	Allow use of forage by livestock and wildlife in fenced riparian pastures as designated in AMPs. a. Spring and summer grazing of herbaceous forage should not exceed 50 percent of the current growth for use before August 1, or prescribed residual levels of the AMP or AOI. b. Late season grazing of herbaceous forage should not exceed 30 percent of the current growth within the entire riparian area after grazing is completed, or for use after August 2, or prescribed residual levels of the AMP or AOI.	Same as Alternative 1 except a standard	Allow use of forage by livestock and wildlife in fenced riparian pastures so long as it meets the objectives of maintaining, enhancing, or conserving the riparian ecosystem and species viability. STANDARD	Same as Alternative 2	Allow use of forage by livestock and wildlife in fenced riparian pastures so long as it meets the objectives of maintaining, enhancing, or conserving the riparian ecosystem and emphasis species persistence. STANDARD
Rationale: Simplified and changed to a standard in Alternatives 3 and 6 to provide for emphasis species habitat. The scale of species viability is based on each species. A single species may be limited to a single allotment as is the case of some plants.							

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Deleted	2508	Guideline	Design and implement activities in MAs to protect and manage the fenced riparian pastures designated in AMPs. a. As a first choice, design the grazing systems for riparian pastures to feature spring use with early removal followed by rest for the remainder of season. Monitor stream-bank stability. b. Design grazing systems with fall use as the second choice with strict adherence to utilization levels or residual levels. Monitor stream-bank stability. c. Design grazing systems with summer use as the last choice and carefully control time in the pasture and utilization levels or residual levels. Monitor stream-bank stability.	Same as Alternative 1 except a standard	Deleted	Same as Alternative 2	Deleted
Rationale: In Alternatives 3 and 6, 2508 Guideline Deleted Covered by Standard 2507, AMP process.							

Forest Plan Phase II Amended No.	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
3101	3101	Standard	To protect endangered and threatened species: a. Chlorinated hydrocarbons will not be used as chemical agents on the Black Hills National Forest; b. Prohibit new disturbances, not existing at the time of bald eagle or peregrine falcon nest initiation, that may detrimentally influence nest success during the nesting season (approximately February 1 through September 1); c. Protect traditional bald eagle winter roost sites; human activities should be prohibited within 100 yards of roosting areas between November 15 and March 1. d. In stands being used by bald eagles on a transitory basis, avoid timber harvest activities when in use. Harvest may resume when birds have vacated the stands.	Same as Alternative 1	To protect endangered and threatened species: a. Organochlorine pesticides will not be used as chemical agents on the Black Hills National Forest; b. In stands being used by bald eagles on a transitory basis, avoid timber harvest activities when in use. Harvest may resume when birds have vacated the stands.	Same as Alternative 3	To protect endangered and threatened species: a. Organochlorine pesticides will not be used as chemical agents on the Black Hills National Forest. b. Prohibit new disturbances not existing at the time of bald eagle nest initiation that may detrimentally influence nest success within one mile of bald eagle nests during the nesting season (February 1 through September 1). The distance may be reduced where forest characteristics or topography reduce the line-of-site distance from the nest, based on site-specific analysis. c. Protect traditional communal bald eagle winter roost sites. Restrict activities that may disturb bald eagles within one mile of communal roosting areas from November 1 through April 1. d. In stands being used by bald eagles on a transitory basis, avoid timber harvest activities when in use. Harvest may resume when birds have vacated the stands.
Rationale: The description of chemical agents was corrected. Disturbance distances and dates for nests and roosts are not included in Alternatives 3 and 4 because they are included in Standard 3100-01 New. Disturbance distances and dates were included in Alternative 6 because Standard 3100-01 is not included in this alternataive. Disturbance distances and dates are based on USFWS raptor guidelines, Wyoming raptor protection dates and discussions with USFWS. Peregrine falcon was removed because it is no longer listed under ESA and is covered in Standard 3100-01 (Alternatives 3 and 4) and in Standard 3204 (Alternative 6).							

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3102	3102	Guideline	Where caves are important nurseries or hibernacula for sensitive bat species protect the caves and their microclimates when designing management activities (e.g., timber harvest, road construction, recreation facilities).	Where caves are important nurseries or hibernacula for sensitive bat species protect the caves and their microclimates when designing management activities (e.g., timber harvest, road construction, recreation facilities). Protect known bat day and night roosts. STANDARD	Where caves are important nurseries or hibernacula for sensitive and local concern bat species protect the caves and maintain their microclimates when designing management activities (e.g., timber harvest, road construction, recreation facilities). Protect known bat day and night roosts. STANDARD	Same as Alternative 2	Same as Alternative 3
Rationale: Add protection for SOLC and known bat day and night roosts. (in Alternatives 3, 4, & 6)							

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3103	3103	Standard	For the snail "species of special concern," conserve habitat at colonies identified by Frest and Johannes in their 1993 report.	Ensure that all identified colonies (as indicated in Frest 1993, and subsequent Frest report [expected in 2001] of the following 2 regionally sensitive snail species: *Discus shimeki* (Pilsbry, 1890); *Oreophelix strigosa cooperi* (Binney, 1958); and the following 5 snail species: *Vertigo arthuri* (von Martens, 1882); *Vertigo paradoxa* (Sterki, 1900); *Catinella gelida* (Baker, 1927); *Oreohelix strigosa n. subsp.; Oreohelix strigosa berryi* (pilsbry, 1915), are protected from adverse effects of livestock use and other management activities.	For known sensitive species and species of local concern snail colonies. Allow management as long as it maintains mesic site conditions and surface organic material, or enhances habitat for the snail. As new information or taxonomic status change, management actions will reflect the best available information.	Ensure that all identified colonies (as indicated in Frest 1993, and subsequent Frest report of regionally sensitive snail species and snail species of local concern are protected from adverse effects of livestock use and other management activities.	Manage known sensitive species and species of local concern snail colonies to: a) Retain overstory sufficient to maintain moisture regimes, ground level temperatures and humidity; b) Retain ground litter, especially deciduous litter; c) Avoid burning, heavy grazing, off-highway vehicles, heavy equipment and other activities that may compact soils or alter vegetation composition and ground cover; d) If prescribed burning is unavoidable, burn when snails are hibernating, usually below 50 degrees F, and use fast moving fires to minimize effects to snails; e) Control invasive weeds, but use herbicides when snails are not on the surface and treat individual plants rather than broadcast application.
Rationale: Removed the species names due to changes in the list. Deleted the word "protect" which was difficult to define. The ID Team created direction to conserve moist conditions and surface organic matter needed for snail habitat. Project-level analysis is the appropriate place to determine how this was to be accomplished. Additional direction is based on information in the Regional Assessments for *Vertigo* spp. (Anderson 2004), Burke et al. (1999, Management Recommendations for Terrestrial Mollusks), and FWS comments.							
3104	3104	Guideline	Conserve habitat for sensitive plants and animals associated with moist soil conditions during development of springs or seeps as water facilities.	Protect habitat for sensitive plants and animals associated with moist soil conditions. Do not develop springs or seeps as water facilities where sensitive species exist. STANDARD	Do not develop springs or seeps as water facilities where sensitive species or species of local concern exist unless development mitigates an existing risk. STANDARD	Conserve or avoid habitat for sensitive plants and animals associated with moist soil conditions. Do not develop springs or seeps as water facilities where sensitive species exist. STANDARD	Same as Alternative 3
Rationale: Kept as a standard to better conserve key habitat for species of local concern.							

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3105	3105	Guideline	Consider habitat needs (survey as appropriate) of regal fritillary butterflies prior to prescribed burning on prairies or meadows. This is especially important for prescribed burns scheduled from September through April. Design the project to conserve important habitat components of known sightings.	Same as Alternative 1 except a standard	Consider habitat needs (survey as appropriate) of regal fritillary and Atlantis fritillary butterflies prior to prescribed burning on prairies or meadows. This is especially important for prescribed burns scheduled from September through April. Design the project to conserve important habitat components of known sightings.	Same as Alternative 3	Same as Alternative 3
Rationale: Added Atlantis fritillary because it is a SOLC. (From alternatives 3, 4, and 6) Did not use 3103 strategy because surveying and monitoring needs will vary by species and project.							
3106	3106	Guideline	Riparian areas or wetlands where populations of sensitive plants are located should be protected during and after trail, road, and highway construction activities.	Same as Alternative 1 except a standard	Riparian areas or wetlands where populations of sensitive species are located are to be avoided during ground disturbing activities. Use one or more of the following (or other mitigation measure) tied to the site-specific conditions for disturbances adjacent to known occurrences: STANDARD	Same as Alternative 2	Same as Alternative 3
3106a	3106a	Standard	N/A	N/A	a. Avoid removing riparian or wetland vegetation; filling or dredging the riparian area or wetland; diverting stream flow from the current channel.	N/A	Same as Alternative 3
3106b	3106b	Standard	N/A	N/A	b. Prevent storm runoff from washing silt into the stream or wetland.	N/A	Same as Alternative 3

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3106c	3106c	Standard	N/A	N/A	c. Reseed and/or replant cut and fill slopes with native seed and/or native plants promptly to control erosion and for prevention of noxious-weed infestations. Use appropriate measures to control erosion on disturbed areas that are steep, are highly erosive, and/or adjacent to the riparian area.	N/A	Same as Alternative 3
3106d	3106d	Standard	N/A	N/A	d. Timing, placement, and installation of temporary stream diversions shall allow passage of aquatic life and protect sensitive and species of local concern.	N/A	Same as Alternative 3
Rationale: In Alternatives 3 and 6 rationale was to expand beyond trail, road and highway construction activities and to make the wording more of a "standard" format to conserve sensitive species.							
Moved to 3106.	3107	Guideline	Consider the use of one, or a combination of the following protection measures, to protect sensitive plants or their habitat during and after trail, road and highway construction activities:	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Moved to 3106	3107a	Guideline	a. To the extent possible avoid the following: disturbing locations with known populations of sensitive plant species; removing riparian or wetland vegetation; filling or dredging the riparian area or wetland; diverting stream flow from the current channel.	a. Avoid the following: disturbing locations with known populations of sensitive plant species; removing riparian or wetland vegetation; filling or dredging the riparian area or wetland; diverting stream flow from the current channel.	Deleted	Same as Alternative 2	Deleted
Moved to 3106	3107b	Guideline	b. Install silt fences above wet areas to prevent storm runoff from washing silt into the stream or wetland.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted

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Moved to 3106	3107c	Guideline	c. Reseed and/or replant cut and fill slopes with native seed and/or native plants promptly, to control erosion and for prevention of noxious-weed infestations. Use hydromulch, jute mesh, or a type of erosion control blanket on disturbed areas that are steep and/or adjacent to the riparian area.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Moved to 3106	3107d	Guideline	d. If temporary stream diversions are necessary, determine the seasonal timing such that diversions would have the least potential to adversely affect sensitive plant populations.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in 3106 in Alternatives 3 and 6. Connectivity for marten is covered in 3215							
3108	3108	Standard	Limit activities in at least 3 goshawk nest stands (approximately 30 acres each) in each historically active territory. Use historical nest stands as a first priority, and other structurally and compositionally appropriate stands as a second priority.	The following additional protective measures will apply relative to the northern goshawk for all projects involving the removal of trees in suitable habitat, except those done for the express purpose of enhancing goshawk habitat:	Same as Alternative 2	Same as Alternative 2	Same as Alternative 2

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3108a	3108a	Standard	N/A	a. A goshawk nest survey must be conducted prior to any projects in forested areas.	a. Identify nest areas around historically active nests. Nest areas shall consist of 180 acres best suited for nesting habitat within one-half mile of the nest. Nest areas need not be contiguous but must occur in 30-acre units or larger. Nest areas shall include alternate nests, if known. If these conditions cannot be met, then nest areas will include stands that are not currently suitable but that could be managed to meet nesting conditions over time. Vegetation management activities within nest areas shall be limited to those that maintain or enhance the stands value for goshawk.	Same as Alternative 2	a. Identify nest areas around historically active nests. Nest areas shall consist of 180 acres best suited for nesting habitat within one-half mile of the nest and greater than 300 ft from buildings. Nest areas need not be contiguous but must occur in 30-acre units or larger. Nest areas shall include alternate nests, if known. If these conditions cannot be met, then nest areas will include stands that are not currently suitable but that could be managed to meet nesting conditions over time. Vegetation management activities within nest areas shall be limited to those that maintain or enhance the stands value for goshawk.
Rationale: Alternatives 3 and 6 were changed to add clarity over Alternatives 2 and 4. In Alternative 6 the protection would not apply to nests within 300 ft of structures in WUI to be consistent with the fire emphasis of this alternative.							
3108b	3108b	Standard	N/A	b. If the project area includes an historically active nest or a replacement stand associated with an historically active territory, this acreage will be excluded from the project.	b. If a nest area described above occurs within one-half mile of the project area and a protected area has not yet been identified for that nest, the project analysis will determine whether some of the protected acreage should occur within the project area.	Same as Alternative 3	Same as Alternative 3
Rationale: Alternatives 3, 4, and 6 ensure neighboring goshawk nests are considered in project analysis.							

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Deleted	3108c	Standard	N/A	c. If an historically active territory occurs within one-half mile of the project area and protected acreage has not yet been identified, the project analysis will determine whether some of the protected acreage should occur within the project area.	Deleted	Same as Alternative 2	Deleted
Rationale: Covered in 3108 a and b for Alternatives 3 and 6.							
Deleted	3108d	Standard	N/A	d. If the pre-project survey identifies a previously unknown active nest, the project analysis will determine where protected acreage will be located.	Deleted	Same as Alternative 2	Deleted
Rationale: In Alternatives 3 and 6 once a nest is discovered, it becomes and active or historically active nest and is covered above.							
Deleted	3109	Standard	Limit activities in at least 3 replacement nest stands in each goshawk territory that will be suitable when existing sites are no longer functional.	In all cases, protected acreage will include 180 acres best suited for nesting habitat within one-half mile of the historically active or currently active nest. The acreage need not be contiguous but must occur in 30-acre units or larger. If these conditions cannot be met, then the acreage will include stands that are not currently suitable but that could be managed to meet nesting conditions over time. Activities within these stands should be limited to those that aid in maintaining or enhancing the stand's value for goshawks.	Deleted	Same as Alternative 2	Deleted

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Rationale: Covered in 3108 in Alternatives 3 and 6.							
Deleted	3110	Guideline	Activities should not reduce the structural and compositional integrity of active and alternate conifer-forested goshawk nest stands.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in 3108 in Alternatives 3 and 6.							
3111	3111	Standard	Minimize human-caused disturbances (e.g., road traffic, construction activities) not present at nest initiation in active goshawk nest areas from March 1 through September 30.	From March 1 through August 31, minimize additional human-caused noise and disruption beyond that occurring at the time of nest initiation (e.g. road traffic, timber harvests, construction activities) within 1/4 mile of all active goshawk nests.	From March 1 through August 31, minimize additional human-caused noise and disruption beyond that occurring at the time of nest initiation (e.g. road traffic, timber harvests, construction activities) within one-half mile of all active goshawk nests.	Same as Alternative 3	From April 1 through August 15, minimize additional human-caused noise and disruption beyond that occurring at the time of nest initiation (e.g. road traffic, timber harvests, construction activities) within one-half mile of all active goshawk nests up until the nest has failed or fledglings have dispersed.
Rationale: In Alternatives 3, 4, and 6 one-half mile is based on FWS recommendation for goshawk from the FWS "Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances" (USFWS, Utah Field Office, January 1999) and Wyoming Game and Fish Department Raptor Survey Dates and Protection Dates.							
Deleted	3112	Guideline	Management at goshawk nest sites should be designed to conserve or enhance site conditions (e.g., thin regeneration).	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in 3108 in Alternatives 3 and 6.							
Deleted	3113	Guideline	From March 1 through September 30, avoid timber harvest schedules that cause simultaneous, widespread disturbance across active goshawk fledgling habitat. Fledgling habitat should include areas without constant human disturbance.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in 3111 in Alternatives 3 and 6.							

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Deleted	3114	Guideline	Treatments in goshawk fledgling habitat associated with active and alternate nests should be designed to enhance prey species habitat, structural, and compositional diversity.	Design silvicultural prescriptions and manage activities to enhance prey species habitat by maintaining vegetative diversity and striving for a balance of structural stages, from stand initiation to late-successional, within goshawk fledgling habitat (approximately 420 acres around each historically active goshawk nest and alternate nests). Post-Fledging Family Area Balance of SS: Tree Sze Class / Diam Range (Inches) / Min Canopy Closure% / Percent of Bal 1. grs/frb shrb — na — na — 7-13% 2. sed/sap — < 5 — na — 7-13% 3. Young Forest — 5-9 “ — na — 15-25% 4. Mid-aged Forest — 9-14” — 50 — 8-18% 4. — 9-14” — 60 — 2-12% 5. Mature Forest — 14-20” — 50 — 15-25% 6. Old Forest — >=20” — 50 — 15-25%	Deleted	Same as Alternative 2	Deleted
Rationale: Covered in the structural stage objectives for specific management areas in Alternatives 3 and 6.							

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3115	3115	Standard	A sensitive species located after contract or permit formation will be appropriately managed by active coordination between permittee, contractor or purchaser, Forest Service line officer, project administrator, and biologist. Viable solutions need to be based on the circumstances surrounding each new discovery and must consider the individual sensitive species needing protection, contractual obligations and costs, and mitigation measures available at the time of discovery.	Same as Alternative 1	A R2 sensitive species or species of local concern located after contract or permit issuance will be appropriately managed by active coordination between permittee, contractor or purchaser, Forest Service line officer, project administrator, and biologist and/or botanist. Solutions need to be based on the circumstances of each new discovery and must consider the species need, contractual obligations and costs, and mitigation measures available at the time of discovery.	Same as Alternative 1	Same as Alternative 3
Rationale: Added species of local concern which is not covered under Alternative 1 and 2.							
3116	3116	Standard	N/A	Avoid creating barriers (i.e., new open roads) between red-bellied snake hibernacula and wetlands.	Deleted	Same as Alternative 2	Same as Alternative 2
Rationale: Identified during expert interviews (2000) as a threat to red-belly snakes.							
3117	3117	Standard	N/A	Where timber harvest activities occur in stands adjacent to potential marten habitat (spruce sites or conifer sites with significant spruce component) maintain approximately one pile of woody material per two acres to create near-ground structure for marten prey species.	In vegetation treatment units, leave one pile of woody material per two acres to create near-ground structure for small mammal species.	Same as Alternative 2	In vegetation treatment units, leave one pile of woody material per two acres to create near-ground structure for small mammal species, except within 300 ft of buildings.

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Rationale: For near ground structure for marten prey species and other small mammals that serve as prey for other predators. Alternative 2 was based on Interim Direction in the 1999 Appeal Decision. Alternative 4 is the same as Alternative 2. Alternative 3 and 6 removed the limitation of potential marten habitat because of confusion over the definition and because woody material is important for other species in addition to marten. Alternative 3 includes the exception within 300 feet of buildings to avoid creating fire hazards near buildings.							
Deleted	3118	Standard	N/A	Maintain existing black-tailed prairie dog populations on the Forest.	Prohibit major soil disturbing activities, (e.g. road construction, building construction) in existing prairie dog towns.	Same as Alternative 2	Deleted
Rationale: Added in Alternative 2 to reduce impacts to prairie dog towns because Alternative 3 does not include Objective 200-09. In Alternative 6, replaced with prairie dog objective 200-09 based on comments received. No need to have standard if objective is being met.							
3119	3100-19 New	Standard	N/A	N/A	The Forest Supervisor may issue permits to collect sensitive or species of local concern plants or plant parts for scientific or educational purposes, but not for commercial or personal use. Such collection must not jeopardize the continued vigor or existence of a plant population. Collecting of plants or plant parts in MAs 1.1A Black Elk Wilderness, 2.2 RNAs, 3.1 BAs, or at the Cascade Complex in MA 8.2 Developed Recreation Complexes shall not be allowed for other than administrative purposes except by permit issued by the Forest Supervisor for scientific or educational purposes.	N/A	Issue permits to collect sensitive or species of local concern plants or plant parts only for scientific or educational purposes, but not for commercial or personal use except for the provisions of Standard 7103. Such collection must not jeopardize the continued vigor or existence of a plant population. Collecting of plants or plant parts in MAs 1.1A Black Elk Wilderness, 2.2 RNAs, 3.1 BAs, or at the Cascade Complex in MA 8.2 Developed Recreation Complexes shall not be allowed except by permit issued by the Forest Supervisor for scientific or educational purposes.
Rationale: *Sanguinaria canadensis* has been "over collected" as a medicinal plant elsewhere in it's range, and although not an issue in the Black Hills yet, it is identified in the plant assessment as a significant risk to the species here if it would begin to occur. Some of the other sensitive species and species of local concern are orchids that in general are susceptible to collection.							

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Deleted	3100-01 New	Standard	N/A	N/A	Prohibit the following activities within the minimum distances of active raptor nests and winter roost areas during the dates specified below: Activities: Construction (e.g. roads, water impondments, facilities), reclamation, gravel mining, oil and gas and water well drilling, timber harvest and fuel treatments, precommercial thinning, and blasting. Distances and dates: Bald eagle nest: 1 mile, 3/1 through 8/31. Bald eagle winter roost area: 1 mile, 11/1 through 3/31. Golden eagle nest: 0.5 mile, 3/1 through 8/31. Coopers hawk nest: 0.5 mile, 4/1 through 8/15. Sharp-shinned hawk nest: 0.5 mile, 5/1 through 8/31. Merlin nest: 0.5 mile, 4/1 through 8/15. Ferruginous hawk nest: 0.5 mile, 4/1 through 7/31. Broad-winged hawk nest: 0.5 mile, 4/15 through 8/15. Peregrine falcon nest: 0.5 mile, 3/15 through 8/15. Northern Harrier nest: 0.5 mile, 4/1 through 7/31. Burrowing owl nest: 0.25 mile, 4/1 through 8/31. Other raptor nests: 0.125 mile, 3/1 through 8/31 (dates may vary depending on species).	Same as Alternative 3	N/A

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Rationale: Alternative 6 is covered by Standards 3101 and 3204..							
3120	3100-02 New	Standard	N/A	N/A	Do not spray grasshoppers within 0.25 mile of known burrowing owl nests.	Same as Alternative 3.	Same as Alternative 3
Rationale: Grasshoppers are a food source from the burrowing owl which lives in prairie dog colonies. Provides guidance similar to Thunder Basin Nat. Grassland.							
3121	3100-03 New	Standard	N/A	N/A	Design new structures and facilities in or near prairie dog towns or occupied mountain plover habitat with low profiles and/or perch inhibitors. This does not apply to structures and facilities less than 4 ft in height or those not expected to be used as hunting perches by raptors.	Same as Alternative 3	Same as Alternative 3
Rationale: To avoid attracting avian predators. Also provides protection to black footed ferrets, mountain plover, and burrowing owls. Obtained from the Thunder Basin LRMP							
Deleted	3100-05 New	Standard	N/A	N/A	In sagebrush cover types within 3 miles of active sage grouse display grounds, manage (during the AMP process or as opportunities arise) to support 15 to 25 percent canopy cover of sagebrush.	Same as Alternative 3.	N/A
Rationale: Sage grouse not known to occur on the Forest. Only 40 acres on the Forest typed as sagebrush. The Black Hills does not provide good sage grouse habitat. Direction provided in case they are found on the Forest.							
3122	3100-06 New	Standard	N/A	N/A	Prohibit development of new facilities within 0.25 miles of known mountain plover nests or nesting areas. This does not apply to pipelines, fences and underground utilities.	Same as Alternative 3.	Same as Alternative 3.
Rationale: Sensitive species. Not currently known to occur on the Forest. Direction provided in case they are found on the Forest. Standard taken from the Thunder Basin National Grassland LRMP.							

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3123	3100-07 New	Standard	N/A	N/A	Prohibit the following activities in mountain plover nesting areas or within 0.25 miles of plover nests from March 15 through July 31: construction (e.g., roads, water impoundments, oil and gas facilities), reclamation, seismic exploration, gravel mining, well drilling, prescribed burning.	Same as Alternative 3	Same as Alternative 3
Rationale: Sensitive species. Not currently known to occur on the Forest. Direction provided in case they are found on the Forest. Standard taken from the Thunder Basin Nat. Grassland LRMP.							
Deleted	3100-08 New	Standard	N/A	N/A	Record and report all documented threatened and endangered species sightings to the appropriate USDI Fish and Wildlife Service office.	N/A	N/A
Rationale: See earlier comment on 3101.d. ESA requires federal agencies to carry out programs to conserve T&E species. This standard adds an administrative burden with no biological benefit. For example, the threatened bald eagle is a common winter resident on the forest. No benefit is derived by this species by reporting these incidental observations to the FWS.							
3124	3100-09 New	Standard	N/A	N/A	During aspen restoration treatments, conserve live aspen with cavities.	N/A	Same as Alternative 3
Rationale: Leaving aspen with cavities will continue to provide potential habitat for cavity nesting birds, while not inhibiting aspen regeneration.							
3125	3100-10 New	Standard	N/A	N/A	Prescribe burn no more than 60 percent of any contiguous grassland area at a time and burn in early spring or fall.	N/A	Same as Alternative 3
Rationale: Burning should avoid nesting season of ground nesting birds (emphasis species such as the grasshopper sparrow). Burning portions of small isolated tracts leaves adjacent habitat with higher structure to form a mosaic and habitat diversity.							

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3204	3204	Guideline	Protect active raptor nests. Consider potential effects of disturbance, nesting phenology, human activities existing at the onset of nest initiation, species, topography, Forest cover, and other appropriate factors when designing protection.	Protect known current and historic raptor nests (other than goshawks). Consider potential effects of disturbance, nesting phenology, human activities existing at onset of nest initiation, species, topography, forest cover, nest protection standards and recommendations used by state or federal agencies, and other appropriate factors when designing protection.	Protect known raptor nests. Consider potential effects of disturbance, nesting phenology, human activities existing at onset of nest initiation, species, topography, other R2 sensitive species and plant species of local concern, forest cover, nest protection standards and recommendations used by state or federal agencies, and other appropriate factors when designing protection. STANDARD	Same as Alternative 2	Same as Alternative 3
Rationale: In Alternatives 3 and 6, added R2 sensitive and species of local concern so they are taken into consideration during protection for raptors. Added nest standards used by other state and federal agencies to ensure the latest knowledge is used at the project level.							

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3206	3206	Guideline	Work with state wildlife agencies to determine suitability and need for transplanting wildlife species. At a minimum, evaluate the following prior to initiating transplants : a. Project goals; b. Population objectives; c. Suitable transplant sites; d. Likely extent of habitat; e. Species under consideration with respect to existing wildlife populations and land uses; f. Historical range; g. Transplant policy for wilderness areas.	Same as Alternative 1	Work with state wildlife agencies to determine suitability and need for transplanting and re-introducing wildlife and plant species for viability purposes. At a minimum, evaluate the following prior to initiating transplants and reintroductions: a. Project goals; b. Population objectives; c. Suitable transplant and reintroduction sites; d. Likely extent of habitat; e. Species under consideration with respect to existing wildlife populations and land uses; f. Historical range; g. Transplant and reintroduction policy for wilderness areas; h. Risks to R2 sensitive and species of local concern.	Same as Alternative 1	Same as Alternative 3
Rationale: In Alternatives 3 and 6, includes plants, reintroductions so that risks to other high priority species are considered (e.g., a risk identified for plant species in the central core is mountain goats and elk, a risk to native fish are non-native game fish.							
3207	3207	Standard	Protect known bat nursery roosts and hibernacula during those critical periods.	Protect known bat nursery roosts and hibernacula.	Where caves or abandoned mines are suitable nurseries or hibernacula for bats, avoid vegetative changes within 500 feet of the opening except where needed to maintain bat habitat.	Same as Alternative 2	Where caves or abandoned mines serve as nurseries or hibernacula for bats, vegetative changes within 500 feet of the opening are allowed only if needed to maintain bat habitat or topography or other features to protect the openings from disturbance.

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Rationale: Alternative 3 and 6 added the 500 feet distance because Guideline 1401a was reduced to 100 feet for general cave protection. The 500 feet distance is based on conservation strategy recommendations – Townsend's big-eared bat from Pierson et al. (1999). Alternative 6 was changed to allow activities with 500 feet only if needed to maintain habitat or if topography or other features protect the openings from disturbance because sometimes vegetation management is needed to maintain bat access to the openings and sometimes topography is such that 500 feet is not needed (for example, over a ridge).							
3208	3208	Guideline	Use seasonal closures for known nursery roosts and hibernacula where there are conflicts with people. Work with interested groups to design closures and recreation opportunities that will not adversely impact bats during critical periods.	Use seasonal closures for known nursery roosts and hibernacula where there are conflicts with people. Work with interested groups to design closures and recreation opportunities that will not adversely impact bats.	Use seasonal closures in caves or abandoned mines that are known bat nurseries or hibernacula and there are identified conflicts with people. STANDARD.	Same as Alternative 2	Same as Alternative 3
Rationale: Reworded to be more concise and specific to caves and mines. Working with interested groups is policy and does not need to be restated. Changed to a standard to give more emphasis to sensitive species in Alternatives 3 and 6.							
3214	3214	Standard	For animal damage control activities conducted by other governmental entities, the Forest Service will cooperate by providing mitigation measures to protect National Forest resources. Mitigation measures emphasize protection of public safety; threatened, endangered, and sensitive species; water quality; and other resource values.	Same as Alternative 1	For animal damage control activities conducted by other governmental entities, the Forest will cooperate by providing mitigation measures to protect national forest resources. Mitigation measures emphasize public safety; threatened, endangered, sensitive species, and species of local concern; water quality; and other resource values.	Same as Alternative 3	Same as Alternative 3
Rationale: Species of local concern was added. These species were not identified in the 1997 Plan (Alternative 1).							

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3215	3215	Standard	N/A	All vegetation management projects should be designed to prevent further decrease in patch size of late-successional Forests within areas currently occupied by martens or with high potential for occupancy. Seek opportunities to increase connectivity of such areas. Maintain microclimate conditions within potential marten habitat (spruce sites or conifer sites with significant spruce comp1nt). In areas identified as important connectivity corridors for marten, maintain canopy closure and density (e.g. do not thin). Avoid building roads in high potential marten habitat. See Table in 1997 Forest Plan page II-49 for marten habitat definition.	In areas identified as important connectivity corridors for marten, maintain canopy closure of at least 40 percent. Standard	Same as Alternative 2	In areas identified as important connectivity corridors for marten, maintain canopy closure of at least 50 percent. Standard
Rationale: Changed because the spruce objective (200-01) no longer speaks to connectivity. The 50 percent standard references Buskirk 2002. Connectivity corridors are generally conifer dominated forest types connecting moist, spruce dominated sites (Buskirk 2002).							
3216	3200-01 New	Standard	N/A	N/A	Where livestock management conflicts with bighorn sheep lambing areas, preference shall be given to bighorn sheep from April 1 through June 30.	N/A	Where livestock management conflicts with bighorn sheep lambing areas, preference shall be given to bighorn sheep from April 1 through June 15.
Rationale: Birth occurs from May through mid-June (D. Merwin's Thesis, 2000). Timing dates were shortened in Alternataive 6 to allow more flexibility for livestock grazing while still encompassing the bighorn sheep birthing dates.							

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3217	3200-02 New	Standard	N/A	N/A	Do not apply insecticides for gypsy moth control within two miles of known bat hibernacula and maternity roosts. Utilize species specific control measures (e.g., pheromone confusants, mass trapping, sterile male release, predator/parasite release) where feasible.	N/A	Utilize species specific control measures (e.g., pheromone confusants, mass trapping, sterile male release, predator/parasite release) where feasible, to control insects. Do not apply insecticides for gypsy moth control within two miles of known bat hibernacula and maternity roosts.
Rationale: Added to Alternatives 3 and 6 because insecticides can kill other moths and butterflies, important food item for many bats (Schmidt (2002, Townsend's Bat Assessment) and (Pierson et al. 1999) and pollinators (see plant assessments).							
3218	3200-03 New	Standard	N/A	N/A	Wildfire suppression camps will not be placed at known mapped archeological sites or locations of R2 sensitive or plant species of local concern.	Same as Alternative 3	Same as Alternative 3
Rationale: Alternatives 3, 4 and 6 provide additional protection for sensitive plants and SOLC. Known occurrences of the current R2 sensitive plant species are mapped. Some plant species of local concern are mapped. Maps are located at each District office and at the Supervisor's office. These maps and the database are updated annually.							
3219	3200-04 New	Standard	N/A	N/A	Clearcutting may only be used to meet ecosystem management objectives such as reducing fuels and fire risk adjacent to known R2 sensitive or species of local concern sites, the WUI, and ARC, enhancing diversity, providing forage for wildlife, reducing insect-and-disease infestations, regenerating aspen and birch stands, improving visuals or increasing water yield. Patch clearcuts will be limited to 10 acres or less.	N/A	Clearcutting may only be used to meet ecosystem management objectives such as reducing fuels and fire risk adjacent to known R2 sensitive or species of local concern sites, and within the WUI, enhancing diversity, providing forage for wildlife, reducing insect-and-disease infestations, regenerating aspen and birch stands, improving visuals or increasing water yield. Patch clearcuts will be limited to 10 acres or less unless would make achieving the ecosystem management objective unlikely.

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Rationale: In Alternatives 3 and 6, this was moved from Objective 306 to Standards. The clear cut size limitation was removed to provide flexibility to meet ecosystem management objectives. For example openings for aspen restoration may need to be a large as possible to reduce the overall effect of livestock and big game browsing on the site and to take advantage of good aspen restoration sites. Unfenced small aspen restoration sites can be a complete failure due to browsing as evidenced by Cooperator comments.							
4101	4101	Standard	Fire Management Direction Summary Table	Same as Alternative 1	Replaced with revised table shown in Final EIS Section 3-7.1.2.	Same as Alternative 3	Same as Alternative 3
Rationale: “Fire management Direction Summary Tab le” (1997 LRMP p. 11-54) revised to add MA 2.2 - RNA direction and update terminology. No other changes made from the 1997 Revised Forest Plan.							
4102	4102	Guideline	Protect heritage resources, streams, stream banks, shorelines, lakes and associated vegetation from degradation by wildfire suppression efforts.	Same as Alternative 1 except a standard	Protect heritage resources, R2 sensitive species and species of local concern plants, BAs, RNAs, streams, stream banks, shorelines, lakes and associated vegetation from degradation by wildfire suppression efforts.	Same as Alternative 2	Same as Alternative 3, but standard
Rationale: For Alternatives 3 and 6 added R2 sensitive species and species of local concern plants, BAs, and RNAs. Alternative 3 is a guideline and Alternative 6 is a standard.							
4102a	4102a	Guideline	a. Avoid the use of earth-moving equipment within National Register eligible heritage resource sites, or in stream channels,	Same as Alternative 1 except a standard	a. Avoid the use of earth-moving equipment within National Register eligible heritage resource sites, known locations of R2 sensitive species and species of local concern plants, BAs, RNAs, or in stream channels, except at designated points and with proper mitigation. Avoid this use in the Wilderness.	No change	a. Avoid the use of earth-moving equipment within national register eligible heritage resource sites, known locations of R2 sensitive species and species of local concern plants, BAs, RNAs, or in stream channels, except at designated points and with proper mitigation. Prohibit this use in the Wilderness. STANDARD
Rationale: In Alternatives 3 and 6 added R2 sensitive species and species of local concern plants, BAs, and RNAs.							

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4102b	4102b	Guideline	b. Discourage the application of fire-retardant chemicals over riparian areas, wetlands and open waters. Avoid applications in these areas in wilderness.	Same as Alternative 1 except a standard	b. Discourage the application of fire-retardant chemicals over riparian areas, wetlands and open waters. Avoid applications in these areas in Wilderness and RNAs. STANDARD	Same as Alternative 2	Same as Alternative 3
Rationale: Added RNAs and made guideline in Alternative 3, Standard in Alternative 4 and 6.							
4102c	4102c	Guideline	c. To prevent soil erosion, re-vegetate burned areas that will not naturally re-vegetate quickly. See MA 1.1A for re-vegetation in wilderness.	Same as Alternative 1 except a standard	c. To prevent soil erosion, re-vegetate burned areas that will not naturally re-vegetate quickly. See MA 1.1A for re-vegetation in the Wilderness. No re-vegetation efforts will occur within designated RNAs.	Same as Alternative 2	Same as Alternative 3 except a standard
Rationale: Addresses RNA management needs and species conservation. Alternatives 3 and 6 vary in whether guidance is standard or guideline.							
4108	4108	Guideline	Prescribed burn Plans will identify acceptable levels of tree mortality for seedling/saplings, poles, and sawtimber; burning prescriptions will be established to meet these levels. In planning prescribed burns, consider how the potential loss of trees is offset by the beneficial effects of fire in terms of overall stand health and wood fiber production.	Same as Alternative 1	Prescribed burn plans will identify acceptable levels of tree mortality for seedling/saplings, poles, and sawtimber; burning prescriptions will be established to meet these levels. In planning prescribed burns, consider how the potential loss of trees is offset by the beneficial effects of fire in terms of overall stand health and wood fiber production. Consider value recovery if tree mortality exceeds project objectives.	Same as Alternative 1	Same as Alternative 3
Rationale: Alternatives 3 and 6 were changed to encourage removing excess mortality to recover value and reduce long- term fire hazard.							

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Deleted	4113	Standard	Reduce the threat of wildfire to public and private developments by following standards in the National Fire Protection Association Publication 1144, Protection of Life and Property from Wildfire, and reduce the fuel loading to acceptable standards.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale: Covered in Objective 1001.							
4201b	4201b	Guideline	b. During scheduled management activities, minimize susceptibility to mountain pine beetle epidemics by reducing average basal area to 80 or less in pine stands, except where denser stands are needed to meet management objectives, for example, goshawk nest sites, thermal cover, late-successional habitat and turkey roost sites, and hiding cover.	Same as Alternative 1 except a standard	b. During scheduled management activities, minimize susceptibility to mountain pine beetle epidemics by reducing average basal area to 80 or less in pine stands, except where denser stands are needed to meet other management objectives	Same as Alternative 2	b. During scheduled management activities, minimize susceptibility to mountain pine beetle epidemics by reducing average basal area to 70 or less in pine stands, except where denser stands are needed to meet other management objectives. STANDARD
Rationale: Simplified current forest plan direction which references objectives replaced with structural stage objectives. Basal area changed to 70 per recent scientific publication (Schmid and Mata)							

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4201c	4201c	Guideline	c. Manage vegetation in and adjacent to high use recreation areas to improve Forest health, as needed to maintain or improve the desired recreation setting(s). In and adjacent to developed recreation sites, apply suppression techniques (e.g., sanitation removal, insecticide application, pherom1s) to reduce pest populations and tree mortality.	Same as Alternative 1 except a standard	Use the following insect-and-disease protection measures: Manage vegetation in and adjacent to high-use recreation areas to improve forest condition, as needed to maintain or improve the desired recreation setting(s) or to conserve R2 sensitive or species of local concern and snails. In and adjacent to developed recreation sites, apply suppression techniques (e.g., sanitation removal, insecticide application, pheromones) to reduce pest populations and tree mortality.	Same as Alternative 2	Use the following insect-and-disease protection measures: Manage vegetation in and adjacent to high-use recreation areas to improve forest condition, as needed to maintain or improve the desired recreation setting(s) or to conserve R2 sensitive or species of local concern and snails. In and adjacent to developed recreation sites actively treat insects and diseases (e.g., sanitation removal, insecticide application, pheromones) to reduce pest populations and tree mortality. STANDARD
Rationale: In Alternatives 3 and 6 removed old terminology (e.g., late-successional habitat and thermal cover), added emphasis for sensitive and species of local concern, changed Forest health to Forest condition, and varied between standard or guideline.							
4201d	4201d	Guideline	d. Consider spatial array of stand conditions when planning harvests to reduce their potential for mountain pine beetle epidemics. For example, if consistent with management objectives, silvicultural treatments may be appropriate adjacent to dense mature stands (e.g., late-successional habitat and thermal cover) to limit potential spread.	Same as Alternative 1 except a standard	d. Consider spatial array of stand conditions when planning harvests to reduce their potential for mountain pine beetle epidemics. For example, silvicultural treatments may be appropriate adjacent to dense mature stands.	Same as Alternative 2	d. Consider spatial array of stand conditions when planning harvests to reduce their potential for mountain pine beetle epidemics. For example, silvicultural treatments may be appropriate within or adjacent to dense mature stands. STANDARD
Rationale: Removed old terminology (e.g., late-successional habitat and thermal cover).							

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4301	4301	Standard	For all proposed projects or activities, determine the risk of noxious-weed introduction or spread, and implement appropriate mitigation measures.	Same as Alternative 1	For all proposed projects or activities, determine the risk of noxious-weed introduction or spread, and implement appropriate mitigation measures and treatment.	Same as Alternative 1	Same as Alternative 3
Rationale: Added language to emphasize treatment.							
4303	4303	Guideline	Develop a noxious-weed management program that addresses the following components: awareness, prevention, inventory, planning, treatment, monitoring, reporting, and management objectives. Control noxious-weeds using the following priority order: a. new invaders; b. new areas of infestation; c. spreading or expanding infestations; d. existing infestations.	Same as Alternative 1	Develop a noxious-weed management program that addresses the following components: awareness, prevention, inventory, planning, treatment, monitoring, reporting, and management objectives. Control noxious-weeds using the following priority order: a. R2 sensitive and species of local concern occurrences of snails and plants; b. RNAs; c. BAs; d. new invaders; e. new areas of infestation; f. spreading or expanding infestations; g. existing infestations.	Same as Alternative 3	Same as Alternative 3
Rationale: From assessments, one of the primary risks for most sensitive and species of local concern plants is noxious-weeds and treatment methods. In Alterantives 3, 4 and 6 addressed species conservation and RNA management.							
4304	4304	Guideline	Treat individual plant or group of plants, instead of broadcast chemical treatments, where practical.	Same as Alternative 1 except a standard	Treat individual plants or group of plants in areas where R2 sensitive or species of local concern plants occur. Use a treatment method that is the least risk to the species being protected. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: From assessments, two of the primary risks for most sensitive and species of local concern plants are noxious weeds and treatment methods. Changed to a standard to protect sensitive species.							

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4306	4306	Standard	Use certified noxious-weed-free seed, feed and mulch.	Same as Alternative 1	Use certified noxious-weed-free seed, feed and mulch. Seed will be tested for noxious weeds at the time of purchase.	Same as Alternative 3	Same as Alternative 3
Rationale: From assessments, two of the primary risks for most sensitive and species of local concern plants are noxious weeds and treatment methods. Previous noxious-weed-free seed has in fact been found to contain noxious weeds.							
Deleted	4307	Standard	When feeding recreational livestock and other ungulates use certified noxious-weed-free feed.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Deleted in Alternatives 3 and 6 since covered in 4306.							
4309	4300-01 New	Standard	N/A	N/A	Monitor weed treatments used at R2 sensitive and species of local concern plant occurrences and retreat as needed during the season.	Same as Alternative 3	Same as Alternative 3
Rationale: From assessments, two of the primary risks for most sensitive and species of local concern plants are noxious weeds and treatment methods.							
5205	5205	Standard	Design facilities and access to provide site protection, efficient maintenance and user convenience.	Same as Alternative 1	Design facilities and access to provide site protection, to restrict access or route recreational use away from R2 sensitive and species of local concern plants that are located within or immediately adjacent to developed recreation sites and to provide for efficient maintenance and user convenience.	Same as Alternative 3	Same as Alternative 3
Rationale: Plant species assessments have identified recreation use as a risk to R2 sensitive and species of local concern.							

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5213	5200-01 New	Standard	N/A	N/A	Do not locate any new developed recreation sites in or immediately adjacent to known locations of R2 sensitive or species of local concern plants.	N/A	Same as Alternative 3
Rationale: Plant species assessments have identified recreation use as a risk to R2 sensitive and species of local concern							
5605	5605	Guideline	Plan, design and locate vegetation manipulation in a scale that retains the color and texture of the landscape character, borrowing directional emphasis of form and line from natural features.	Same as Alternative 1	Plan, design, and locate vegetation manipulation in a scale that retains the color and texture of the landscape character, borrowing directional emphasis of form and line from natural features. However, the scale of vegetation manipulation around ARC will be on a landscape scale. The design will borrow from the prairie-forest edge character to create an open landscape with trees scattered across it.	Same as Alternative 3	Same as Alternative 3
Rationale: Changed in the action alternatives to recognize the effects of ARC and WUI fire- hazard reduction treatments.							

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5606	5606	Guideline	Where the SIO criterion is High or Moderate, meet the criterion within 1 full growing season after completion of a project. Where it is Low or Very Low, meet the criterion within 3 full growing seasons after completion of a project.	Same as Alternative 1	Where the SIO criterion is high or moderate, meet the criterion within 1 full growing season after completion of a project. In WUI areas, the moderate SIO should be met within 2 to 4 years after fire- hazard objective is met. Future management activities in WUIs shall meet SIO within 1 year of treatment. Where it is low or very low, meet the criterion within 3 full growing seasons after completion of a project.	Same as Alternative 3	Same as Alternative 3
Rationale: Changed in action alternatives to recognize the effects of WUI fire-hazard reduction treatments							
5610	5610	Guideline	Within the immediate foreground of primary travelways/use areas, manage tree stands to enhance the scenic quality and recreational opportunities. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine, areas of hiding cover for wildlife, and areas with open park-like conditions.	Same as Alternative 1	Within the immediate foreground of primary travelways/use areas, manage tree stands to enhance the scenic quality and recreational opportunities. Manage for a variety of scenic conditions including areas of large, yellow-barked ponderosa pine, areas of hiding cover for wildlife, and areas with open park-like conditions, except as needed to meet Objective 10-02.	Same as Alternative 3	Same as Alternative 3
Rationale: Changed in action alternatives to recognize the effects of WUI fire-hazard reduction treatments.							

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7103	7103	Standard	Recognize American Indian traditions of gathering herbs, medicinal and edible plants, and other materials for religious purposes and make provisions for those who wish to gather such plants and materials.	Same as Alternative 1	Recognize American Indian traditions of gathering herbs, medicinal and edible plants, and other materials for religious purposes and make provisions for those who wish to gather such plants and materials. Where conflicts occur over traditional plant use and R2 sensitive and species of local concern plants, the Forest will consult with Tribes to maintain species viability and recognize traditional plant use.	Same as Alternative 1	Same as Alternative 3
Rationale: In Alternatives 3 and 4, recognized the need for additional collaborative efforts to conserve plant species viability and legal tribal obligations in light of fuel treatment emphasis of alternatives. The Forest has an obligation, to the extent practical, to facilitate access to and use of sacred and/or traditional use sites as directed in Executive Order 13007, the American Indian Religious Freedom Act of 1978, (AIRFA) (P.L. 95-341), and Forest Service Manual direction (FSM 2723.12; 1563.01.4 and 1563.05) and 42 USC 1996.							

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8308	8308	Guideline	Existing powerline poles, in high probability raptor habitat listed below, with unsafe configurations shall be replaced or reconfigured with raptor-safe designs during normal pole and line replacement schedules. Approximately 1/2 mile either side of: Spearfish Creek below Savoy Boxelder Creek below Boxelder Forks Campground Rapid Creek below Rochford Castle Creek from 4 miles above Deerfield Lake to Rapid Creek Spring Creek below Mitchell and Sheridan Lakes French Creek below Custer Within approximately 1 mile of: Deerfield Lake, Pactola Lake, Sheridan Lake, Stockade Lake High probability raptor habitat also includes large grasslands such as Reynolds Prairie, Gillette Prairie, Bald Hills, Slate Prairie, Sidney Park, Berne Park and other grasslands where an unobstructed view of approximately 1/2 mile in at least 2 adjacent directions (i.e. north and east) is possible from pole locations.	Same as Alternative 1 except a standard	Existing powerline poles with unsafe raptor configurations should be replaced or reconfigured with raptor-safe designs during normal pole and line replacement schedules. In areas with identified raptor electrocution problems, power line poles will be replaced or reconfigured with raptor safe designs as soon as possible. STANDARD	Same as Alternative 2	Same as Alternative 3
Rationale: Various raptor species inhabit a variety of habitats across the Forest. Action alternatives reflect that raptor safe designs are desired for all areas.							
8402	8402	Guideline	Manage vegetation to improve scenic integrity. Allow re-vegetation with non-native species.	Same as Alternative 1	Manage vegetation to improve scenic integrity. Re-vegetate with native species where available.	Same as Alternative 3	Same as Alternative 3
Rationale: In the action alternatives, meets intent of Region 2 direction to use native species when available.							

APPENDIX D

Land and Resource Management Plan Direction By Alternative

Management Area Goals and Objectives

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
2.2-401	2.2 New	Goal	N/A	N/A	Establish Research Natural Areas (RNAs) to form a long-term network of ecological reserves designated for non-manipulative research and education and the maintenance of biological diversity.Include the following candidate RNAs: Canyon City Fanny/Boles Geis Spring Sheep Nose Mountain	Establish Research Natural Areas (RNAs) to form a long-term network of ecological reserves designated for non-manipulative research and education and the maintenance of biological diversity. Include the following candidate RNAs: Canyon City Cranberry Springs Fanny/Boles Geis Spring Iron Mountain North Lemming Draw North Fork Castle Creek Sheep Nose Mountain Upper Sand Creek	Establish Research Natural Areas (RNAs) to form a long-term network of ecological reserves designated for non-manipulative research and education and the maintenance of biological diversity.Include the following candidate RNAs: Canyon City Fanny/Boles Geis Spring North Fork Castle
Rationale: Implementation of Forest Service direction. The management practices, acreages, and the exact boundary locations will be finalized in the establishment record.							
2.2-402	2.2-New	Objective	N/A	N/A	Prepare establishment records and management plans following Forest Service Manual direction for selected candidate RNAs within three years of Phase II approval	Same as Alternative 3	Same as Alternative 3

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Rationale: Implementation of Forest Service direction ifAlternatives 3, 4 or 6 are selected.							
3.1-201	3.1-201	Objective	Maintain or enhance the botanical features of these areas.	Same as Alternative 1	Maintain or enhance the botanical features of these areas. Monitor to determine if botanical features (including R2 sensitive and species of local concern plants) are being maintained within 2 years of signing of the ROD.	Same as Alternative 1	Maintain or enhance the botanical features of these areas. Monitor to determine if botanical features are being maintained.
Rationale: Provides for species conservation.							
3.7-201	3.7-201	Objective	Manage each contiguous unit within this MA as a late-successional landscape, so that late-successional structure is always present within some portion of each unit.	Same as Alternative 1	Manage each contiguous unit within this MA as a late-successional landscape.	Same as Alternative 1	Same as Alternative 1
Rationale: Current Forest Plan direction is consistent with species viability, fire hazard and insect hazard direction.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
4.1-203	4.1-203 New	Objective	N/A	N/A	Manage for the following percentages of structural stages in ponderosa pine across the landscape in a diversity of sizes and shapes. Manage for 15 percent of structural stages 4 and 5 basal area in the 15 to 18.9 inch size class and 10 percent of the structural stages 4 and 5 basal area in the 19+ size class. SS1 5% SS2 5% SS3A 10% SS3B 10% SS3C 5% SS4A 20% SS4B 30% SS4C 10% SS5 5%	N/A	Manage for the following percentages of structural stages in ponderosa pine across the management area in a variety of sizes and shapes. SS1 -5% SS2 -5% SS 3A -10% SS 3B -15% SS 3C -5% SS 4A -25%* SS 4B -25%* SS 4C -5%* SS 5 -5%** *10% of the structural stage 4 ponderosa pine acreage in the management area will have an average tree size of “very large”. Seek opportunities to increase understory shrubs in open-canopy structural stages. **Active management is allowed, and may be necessary, to provide desired late-successional characteristics.

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Rationale: Percentages are displayed to the nearest five percent to reflect the actual accuracy the Forest will be able to measure and manage for in a dynamic ponderosa pine ecosystem. Overall, 10 percent of the ponderosa pine forest is in an opening or a shrub condition (non-stocked to 1" DBH – diameter at breast height), 30 percent is in young forest (1" to 9" DBH), and 60 percent is in mature forest (9" and greater DBH). This provides a basic balance to the size and density distribution of forest over time. The structural stage objective is a compilation of many factors, species habitat needs, fire hazard, insect hazard, controlling regeneration in a pine understory, balancing the risk of losing a high density stand to fire or insects with the need to have dense stands for habitat, and balancing size classes through time. Structural stages 1 and 2 were kept low at five percent each because ponderosa pine can grow out of these structural stages in a decade. That means the entire forest could cycle through structural stage 1 and 2 in 100 years corresponding to a 100 year rotation which is not a reasonable average rotation length. A 100 year rotation would be less than CMAI (Culmination of Mean Annual Increment - the age of a stand when the growth rate begins to decline) in the majority of Black Hills stands. Some structural stage 1 and 2 stands may need to be kept at the structural stage 1 and 2 condition through treatment to avoid bottlenecks in the future age/size class distribution of the forest and to allow the average rotation age to be greater than CMAI. Structural stage 3A and 3B are important to the future growth of the forest, but 3B provides higher quality knot-free wood product so it is favored slightly over 3A (15 percent versus 10 percent). Structural stage 3C tends to stagnate (will not reach a mature size class) because of excessive competition, it is a very high fire hazard, and is important for hiding cover; it is kept at five percent. Of the mature structural stages, structural stage 5 is maintained at five percent as in the 1997 Plan. Structural stage 4C has a very high fire hazard and high insect hazard, but is important habitat for several forest species and is maintained at five percent well distributed across the landscape. Structural stage 4A and 4B are at 25 percent. In both structural stages a pine understory could serve as ladder fuel into the crowns. A 4B stand has less of a tendency to develop a thick pine ladder-fuel understory. The 4A on the other hand would generally require treatment to limit the understory pine regrowth. Structural stage 4A and 4B both provide key habitat components. To provide additional diversity the structural stage 4 also has an objective to have 10 percent of the stands defined as very large trees in addition to the five percent in SS5 which also has a very large tree requirement. "Very large" means an average diameter greater than 16-inch dbh (see Appendix B).							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.1-204	5.1-204 New	Objective	N/A	N/A	Manage for the following percentages of structural stages in ponderosa pine across the landscape in a diversity of sizes and shapes. Manage for 15 percent of structural stages 4 and 5 basal area in the 15 to 18.9 inch size class and 10 percent of the structural stages 4 and 5 basal area in the 19+ size class. SS1 5% SS2 5% SS 3A 10% SS 3B 10% SS 3C 5% SS 4A 20% SS 4B 30% SS 4C 10% SS 5 5%	N/A	Manage for the following percentages of structural stages in ponderosa pine across the management area in a variety of sizes and shapes. SS1 -5% SS2 -5% SS 3A -10% SS 3B -15% SS 3C -5% SS 4A -25%* SS 4B -25%* SS 4C -5%* SS 5 -5%** *10% of the structural stage 4 ponderosa pine acreage in the management area will have an average tree size of "very large." Seek opportunities to increase understory shrubs in open-canopy structural stages. **Active management is allowed, and may be necessary, to provide desired late-successional characteristics.
Rationale: See Rationale 4.1-203 above.							
5.1A-205	5.1A-205 New	Objective	N/A	N/A	Remove pine encroachment in grasslands and shrublands.	N/A	Same as Alternative 3
Rationale: Pine is encroaching into the surrounding prairie grasslands and shrublands, reducing habitat for species associated with those areas.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.4-202	5.4-202	Objective	Manage at least 20 percent of planning units (diversity unit, watershed, and/or land-type association) for forage production (meadows, structural stages 1, 3A and 4A).	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Alternatives 3 and 6 are covered in the structural stage objective and forest-wide restoration objectives for meadows, hardwood, and grassland.							
5.4-203	5.4-203	Objective	Vary tree densities (0- to 140-basal area. within stands on up to 20 percent of the area to create small-scale diversity (i.e., to enhance understory shrubs or herbage), if compatible with other habitat objectives.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Alternatives 3 and 6 are covered in the structural stage objective and forest-wide restoration objectives for meadows, hardwood, and grassland.							
5.4-205	5.4-205	Objective	Provide thermal cover for elk, deer and winter turkey habitat on at least 20 percent of the forested portion of this MA.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Alternatives 3 and 6 are covered in the structural stage objective and forest-wide restoration objectives for meadows, hardwood, and grassland.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.4-206	5.4-206 New	Objective	N/A	N/A	Manage for the following percentages of structural stages in ponderosa pine across the landscape in a diversity of sizes and shapes. Manage for 15 percent of structural stages 4 and 5 basal area in the 15 to 18.9 inch size class and 10 percent of the structural stages 4 and 5 basal area in the 19+ size class. SS1 5% SS2 5% SS3A 10% SS3B 10% SS3C 5% SS4A 30% SS4B 20% SS4C 10% SS5 5%	N/A	Manage for the following percentages of structural stages in ponderosa pine across the management area in a variety of sizes and shapes. SS1 -5% SS2 -5% SS 3A -10% SS 3B -15% SS 3C -5% SS 4A -25%* SS 4B -25%* SS 4C -5%* SS 5 -5%** *10% of the structural stage 4 ponderosa pine acreage in the management area will have an average tree size of "very large." Seek opportunities to increase understory shrubs in open-canopy structural stages. ** Active management is allowed, and may be necessary, to provide desired late-successional characteristics.
Rationale: See Rationale 4.1-203 above.							
5.4-207	5.4-207 New	Objective	N/A	N/A	Manage for an open-road density of one mile of road per square mile or less from December 15 through May 15.	N/A	Manage for an open-road density of one mile of road per square mile or less for general public travel from December 15 through May 15.
Rationale: This MA emphasizes big game winter range. Winter is a stressful time for big game, and road use can increase stress. SAIC (2003) recommend one mile of road per square mile for elk. In Alternatives 3, 4 and 6 used elk guidance, but direction will also benefit white tailed deer (MIS). Administrative and permitted use is allowed.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.4A-207	5.4A-207	Objective	In portions of a planning unit (diversity unit, watershed and/or land type association) dominated by ponderosa pine, maintain at least an average of 1.8 hard snags per acre throughout the rotation, well-dispersed across the pine-dominated portions of the planning unit. Minimum snag diameter is 10 in dbh and minimum height is 15 ft.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale: Deleted in Alternatives 3, 4, and 6 because it is covered by forest-wide snag objective (211), which is higher than 1.8 snags per acre.							
5.43-202	5.43-202	Goal	Manage forest cover types to provide variety in stand sizes, shape, crown closure, age structure and interspersion.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in the structural stage objective in Alternatives 3 and 6.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.43-204-FC	5.43-204 New	Objective	N/A	N/A	Manage for the following percentages of structural stages in ponderosa pine across the landscape in a diversity of sizes and shapes. Manage for 15 percent of structural stages 4 and 5 basal area in the 15 to 18.9 inch size class and 10 percent of the structural stages 4 and 5 basal area in the 19+ size class. SS1 5% SS2 5% SS3A 10% SS3B 10% SS3C 5% SS4A 30% SS4B 20% SS4C 10% SS5 5%	N/A	Manage for the following percentages of structural stages in ponderosa pine across the management area in a variety of sizes and shapes. SS1 -5% SS2 -5% SS 3A -10% SS 3B -15% SS 3C -5% SS 4A -25%* SS 4B -25%* SS 4C -5%* SS 5 -5%** *10% of the structural stage 4 ponderosa pine acreage in the management area will have an average tree size of "very large." Seek opportunities to increase understory shrubs in open-canopy structural stages. ** Active management is allowed, and may be necessary, to provide desired late-successional characteristics.
Rationale: See Rationale 4.1-203 above.							
5.43-205-FC	5.43-205 New	Objective	N/A	N/A	Manage for an open-road density of one mile of road per square mile or less from December 1 to May 15.	N/A	Same as Alternative 3
Rationale: See 5.4 Objective 207.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.6-201	5.6-201	Goal	Manage forest cover types to provide variety in stand sizes, shape, crown closure, age structure and interspersion.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Covered in the structural stage objective in Alternatives 3 and 6.							
5.6-204-FC	5.6-204 New	Objective	N/A	N/A	Manage for the following percentages of structural stages in ponderosa pine across the landscape in a diversity of sizes and shapes. Manage for 15 percent of structural stages 4 and 5 basal area in the 15 to 18.9 inch size class and 10 percent of the structural stages 4 and 5 basal area in the 19+ size class. SS1 5% SS2 5% SS3A 10% SS3B 10% SS3C 5% SS4A 30% SS4B 20% SS4C 10% SS5 5%	N/A	Manage for the following percentages of structural stages in ponderosa pine across the management area in a variety of sizes and shapes. SS1 -5% SS2 -5% SS 3A -10% SS 3B -15% SS 3C -5% SS 4A -25%* SS 4B -25%* SS 4C -5%* SS 5 -5%** *10% of the structural stage 4 ponderosa pine acreage in the management area will have an average tree size of “very large.” Seek opportunities to increase understory shrubs in open-canopy structural stages. ** Active management is allowed, and may be necessary, to provide desired late-successional characteristics.
Rationale: See Rationale 4.1-203 above.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
8.2-201	8.2-201	Goal	Manage vegetation in high use recreation areas to provide for public safety and to improve forest health, as needed to maintain or improve the desired recreation setting(s).	Same as Alternative 1	Manage vegetation in high use recreation areas to provide for public safety, to improve forest condition, or protect sensitive plants and plant species of local concern as needed to maintain or improve the desired recreation setting(s) and conserve botanical features.	Same as Alternative 1	Same as Alternative 3
Rationale: Alternatives 3 and 6 consider R2 sensitive species and species of local concern plants in the overall management of vegetation in MA 8.2.							
8.2-206	8.2-206	Goal	Control insect-and-disease pest populations in and adjacent to the area through active monitoring and reducing the potential through vegetative management.	Same as Alternative 1	Control insect-and-disease pest populations in and adjacent to the area through active monitoring while reducing pest-population potential through vegetative management. At Cascade Creek, using an insect-control method other than chemical pesticides is a priority.	Same as Alternative 1	Same as Alternative 3
Rationale: It is unknown if insecticides affect the pollinator for *Epipactis gigantea.*							
8.2-207	8.2-207 New	Objective	N/A	N/A	Prevent and control erosion, including erosion brought on by recreational use at locations along Cascade Creek where known *Epipactis gigantea, Adiantum capillus-veneris*, and *Eleocharis rostellata* populations exist if monitoring reveals that existing measures are not adequate.	N/A	Same as Alternative 3
Rationale: Conservation of *Epipactis gigantea, Adiantum capillus-veneris*, and *Eleocharis rostellata* requires monitoring erosion and taking preventive action if needed.							

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8.2-208-FC	8.2-208 New	Objective	N/A	N/A	At Cascade Creek, document any occurrences of salt cedar or purple loosestrife and treat as soon as control would be effective. Treat using the method(s) that would pose the least risk to R2 sensitive and species of local concern plants that occur there.	N/A	Same as Alternative 3
Rationale: Conservation of *Epipactis gigantea, Adiantum capillus-veneris*, and *Eleocharis rostellata* requires monitoring salt cedar and purple loosestrife (noxious weeds, both of which can out-compete riparian vegetation) populations and to take population control action. Current monitoring protocol for R2 species targets documenting existence of these weeds if observed.							

APPENDIX D

Land and Resource Management Plan Direction By Alternative

MANAGEMENT AREA STANDARDS AND GUIDELINES

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
1.1A-9109	1.1A –1202 New	Standard	N/A	N/A	If trails are to be constructed or relocated, route them away from R2 sensitive and species of local concern plant occurrences. Do not increase climbing access over what currently exists where R2 sensitive or species of local concern plants occur.	N/A	Same as Alternative 3
Rationale: Recreation (climbing and trails accessing climbing areas) has been listed as a potential risk to sensitive and species of local concern plants in the Wilderness. No impacts are being realized at currently known sites (although close in some areas), but populations no longer occur at some of the popular climbing spots in Custer State Park. The current monitoring protocols for R2 plants in this area have direction to target recreational effects. Refer to the Viola selkirkii, Platanthera orbiculata, and Carex bella assessments.							
Deleted	1.1A-2506	Standard	The Upper Pine Creek Research Natural Area is designated unsuitable to livestock grazing. However, because the area is not fenced, occasional livestock use may take place.	Same as Alternative 1	Deleted	Deleted	Deleted
Rationale: Covered by Standard 2.2-2501							
2.2-1001	2.2-1001	Standard	N/A	N/A	Conserve the natural condition of the ecosystem, its processes, and any species or values for which the RNA was established.	Conserve the natural condition of the ecosystem, its processes, and any species or values for which the RNA was established.	Conserve the natural condition of the ecosystem, its processes, and any species or values for which the RNA was established.

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Rationale: Region 2 Desk Guide							
2.2-1002	2.2-1002	Guideline	N/A	N/A	Allow uses that maintain or improve the ecological characteristics for which the RNA was designated. If monitoring reveals that a use begins to affect the ecological characteristic, the use will be removed from the RNA.	Same as Alternative 3	Same as Alternative 3
Rationale: Some areas have been selected as candidate RNAs because ecological characteristics are documented to be in a good condition with the low levels of use that they are currently receiving. However, if monitoring reveals that this use is changing or beginning to have an affect on the area, then the use could be removed.							
2.2-1501	2.2-1501	Standard	N/A	N/A	Withdraw from mineral entry in conformance with Section 204 of Federal Land Policy and Management Act of 1976 (PL 94-579). All lease applications will have "no surface occupancy" stipulation. No mineral material permits will be issued.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-2401	2.2-2401	Standard	N/A	N/A	RNAs will not be included in the suitable timberland base.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-2501	2.2-2501	Standard	N/A	N/A	Do not increase permitted livestock animal unit months (AUMs) or developments pending the RNA management plan in RNAs. Grazing suitability and desired vegetative conditions will be determined by the RNA management plan.	Same as Alternative 3	Same as Alternative 3

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Rationale: Grazing suitability will be determined as part of the RNA management plan. Existing conditions will be maintained until the management plan is developed.							
2.2-3201	2.2-3201	Standard	N/A	N/A	Allow habitat manipulation only for the protection of threatened, endangered, and sensitive species, or where it is necessary to perpetuate or restore natural conditions.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-4101	2.2-4101	Standard	N/A	N/A	Use Minimum Impact Suppression Tactics (MIST) when suppressing wildfire.	Allow fire use. Use Minimum Impact Suppression Tactics (MIST) when suppressing wildfire.	Same as Alternative 3
Rationale: MIST tactics are appropriate in an RNA when wildfire suppression occurs.							
2.2-4102	2.2-4102	Standard	N/A	N/A	Use management-ignited prescribed fire when necessary to restore a natural fire regime, to achieve resource management objectives, or to reduce unnatural fuel loading.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-4103	2.2-4103	Standard	N/A	N/A	The use of natural control features and hand tools are the preferred means to confine, contain and/or control wildfires.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-4201	2.2-4201	Guideline	N/A	N/A	Control populations of invasive, non-native plant and wildlife species. Use control measures, which minimize threats to native species.	Same as Alternative 3	Same as Alternative 3 except a standard
Rationale: Region 2 Desk Guide							

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2.2-5101	2.2-5101	Guideline	N/A	N/A	The recreation opportunity spectrum class is "semi-primitive, non-motorized."	Same as Alternative 3	Same as Alternative 3 except a standard
Rationale: Region 2 Desk Guide							
2.2-5201	2.2-5201	Standard	N/A	N/A	Use restrictions or closures under 36 CFR 219 Subpart B to protect the area from actual or potential damage due to public use.	Same as Alternative 3	Same as Alternative 3 except a standard
Rationale: Region 2 Desk Guide							
2.2-5202	2.2-5202	Guideline	N/A	N/A	Allow pre-existing trails to be used for recreational and scientific or educational access, except when they are a threat to the values for which the RNA was established.	Same as Alternative 3	Same as Alternative 3 except a standard
Rationale: Region 2 Desk Guide							
2.2-5401	2.2-5401	Standard	N/A	N/A	Do not permit collection of special forest products.	Same as Alternative 3	Same as Alternative 3
Rationale: Protects RNA values and moves special forest product collection to other areas of the forest.							
2.2-5601	2.2-5601	Guideline	N/A	N/A	The adopted SIO is high.	Same as Alternative 3	Same as Alternative 3
Rationale: Region 2 Desk Guide							
2.2-8301	2.2-8301	Standard	N/A	N/A	No new utility corridors or additional development within existing corridors will be permitted.	Same as Alternative 3	Same as Alternative 3
Rationale:							

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2.2-9101	2.2-9101	Standard	N/A	N/A	Prohibit motorized and mechanized use, except when it provides necessary access for research or emergency purposes (i.e., human life, fire).	Same as Alternative 3	Same as Alternative 3.
Rationale: Limit mechanized access to all parties except for research or to protect human life or a fire emergency.							
2.2-9102	2.2-9102	Standard	N/A	N/A	Close or obliterate existing roads.	Same as Alternative 3	Same as Alternative 3
Rationale: Closed roads for all users.							
3.1-1001	3.1-1001	Standard	Protect the unique biodiversity, geological, historical, and paleontological along with the botanical values for which the botanical area was designated. No new mineral material permits will be issued for this area.	Same as Alternative 1	Protect the unique biodiversity, geological, historical, paleontological, or additional botanical values that may continue to be discovered, along with the botanical values for which the BA was designated. No new mineral material permits will be issued for this area.	Same as Alternative 1	Same as Alternative 3
Rationale: Added ability to manage for new botanical features as they are discovered.							
3.1-2503	3.1-2503	Standard	N/A	Protect plants in designated Botanical Areas from adverse impacts of domestic livestock grazing.	Restrict access of domestic livestock use to protect the R2 sensitive and species of local concern plant occurrences in designated BAs.	Same as Alternative 3	Same as Alternative 3
Rationale: Monitoring must ensure that livestock grazing does not affect sensitive species and species of local concern in botanical areas. This will be included in the Monitoring Implementation Guide.							

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3.1-4101	3.1-4101	Standard	Manage fire and fuels through control practices and prescribed fire to protect the values for which the botanical area was designated.	Same as Alternative 1	Manage fire and fuels through control practices and prescribed fire to protect the values for which the botanical area was designated. Use MIST when suppressing wildfire.	Same as Alternative 3	Same as Alternative 3
Rationale: Dozer lines could significantly affect important resources within a botanical area.							
3.1-9101	3.1-9101	Guideline	Travel is restricted to designated routes.	Same as Alternative 1	Travel is restricted to designated routes except for emergency and administrative use. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Needed to provide protection for autumn and sage willow found in BAs, which are R2 sensitive species							
3.1-9102	3.1-9102	Guideline	Off-road motorized travel is prohibited.	Same as Alternative 1	Off-road motorized travel is prohibited except for emergency and administrative use. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Needed to provide protection for autumn and sage willow found in BAs, which are R2 sensitive species							
3.1-9103	3.1-9103	Guideline	Over-the-snow motorized travel is restricted to designated routes and areas.	Same as Alternative 1	Over-the-snow motorized travel is restricted to designated routes and areas except for emergency and administrative use. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Needed to provide protection for autumn and sage willow found in BAs, which are R2 sensitive species							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
3.31-3202	3.31-3202	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 50 % Elk Winter = 45 %t Deer Summer = 50 % Deer Winter = 45%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 40% Elk Winter = 35% Deer Summer = 37% Deer Winter = 33%	Deleted	Deleted	Deleted
Rationale: In Alternatives 3, 4 and 6, Objective 3.31-2101 emphasizes mature forest appearance, and Objective 3.31-3201 allows for habitat improvements that may increase habitat effectiveness. Managing for deer and elk habitat effectiveness may not meet the overall objectives of the MA.							
3.32-3202	3.32-3202	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 50 percent Elk Winter = 45 percent Deer Summer = 50 percent Deer Winter = 45 percent	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 39 percent Elk Winter = 36 percent Deer Summer = 41 percent Deer Winter = 35 percent	Deleted	Deleted	Deleted
Rationale: In Alternatives 3, 4 and 6, 3.32-2102 emphasizes recreation and mature trees and 3201 allows for habitat improvement. Managing for deer and elk habitat effectiveness may not meet the overall objectives of the MA.							

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3.32-9103	3.32-9103	Guideline	Motorized trails will not be developed except for snow trails and over-the-snow dispersed use areas where there are no conflicts with non-motorized use.	Same as Alternative 1	Motorized trails will not be developed except for snow trails and over-the-snow dispersed use areas where there are no conflicts with non-motorized use, MIS, and R2 sensitive and species of local concern. STANDARD	Same as Alternative 3	Same as Alternative 3
Rationale: Changed to conserve emphasis species in Alternatives 3, 4 and 6.							
4.1-3201	4.1-3201	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 50% Elk Winter = 45% Deer Summer=50% Deer Winter = 45%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk Summer = 39% Elk Winter = 36% Deer Summer=41% Deer Winter = 35%	Management activities in ponderosa pine will maintain or move conditions toward the structural stage Objective 4.1-203. STANDARD	Deleted	Deleted
Rationale: Replaced by structural stage objectives. in Alternatives 3, 4 and 6.							
4.2A-4101	4.2A-4101	Standard	Manage fire and fuels through control practices and prescribed fire to protect the biological and scenic values.	Same as Alternative 1	Manage fire and fuels through various methods to protect the biological and scenic values.	Same as Alternative 1	Manage fire and fuels through various methods to protect the biological and scenic values, but in the WUI the priority will be fuel reduction.
Rationale: In Alternatives 3 and 6 added "various methods" to have all tools available and in Alternative 6 to provide fire-hazard reduction in the WUI.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
4.2B-4101	4.2B-4101	Objective	Manage fire and fuels through control practices and prescribed fire to improve wildlife habitat and to protect the biological and scenic values of the area.	Same as Alternative 1	Manage fire and fuels through various methods to improve wildlife habitat and to protect the biological and scenic values of the area.	Same as Alternative 1	Manage fire and fuels through various methods to improve wildlife habitat and to protect the biological and scenic values of the area, but in the WUI the priority will be fuel reduction.
Rationale: In Alternatives 3 and 6 added "various methods" to have all tools available and in Alternative 6 provide fire-hazard reduction in the WUI.							
5.1-3201	5.1-3201	Guideline	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=50% Elk winter=45% Deer summer=50% Deer winter=45%	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer = 43% Elk winter = 34% Deer summer =40% Deer winter = 35%	Ponderosa-pine management activities will maintain or move conditions toward the structural stage Objective 5.1-204.	Deleted	Deleted
Rationale: In Alternative 4 and 6, this was replaced by structural stage Objective 5.1-204. Alternative 3 also includes Objective 5.1-204, but this guideline was changed in Alternative 3 to place more emphasis on achieving the objective.							
5.1A-3201	5.1A-3201	Guideline	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=50% Elk winter=45% Deer summer=50% Deer winter=50%	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=34% Elk winter=33% Deer summer=39% Deer winter=39%	Deleted	Deleted	Deleted

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Rationale: Habitat effectiveness model modifications have made this objective obsolete. Deer and elk habitat diversity is covered in Objectives 5.4A-201 and 5.4A-202.							
5.2A-3201	5.2A-3201	Guideline	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=50% Elk winter=45% Deer summer=50% Deer winter=45%	Deer and elk habitat effectiveness values in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=40% Elk winter=35% Deer summer=37% Deer winter=33%	Deleted	Deleted	Deleted
Rationale: In Alternatives 3, 4 and 6 emphasis is on watershed conditions, not wildlife. Managing for deer and elk habitat effectiveness may conflict with the overall objectives of the MA.							
5.4-1501	5.4-1501	Guideline	Operating and reclamation Plans should minimize or mitigate impacts to deer and elk habitat. Operating Plans should restrict the period of operation to reduce the disturbance of deer and elk during periods of high use.	Same as Alternative 1	Operating and reclamation plans shall minimize or mitigate impacts to deer and elk habitat. Operating plans shall restrict the period of operation to reduce the disturbance of deer and elk during periods of high use. STANDARD	Same as Alternative 1	Same as Alternative 3
Rationale: Written as a standard to improve effectiveness and to compensate for deleted HABCAP direction in Alternatives 3 and 6.							
5.4-2101	5.4-2101	Guideline	Do not harvest thermal cover if the planning unit does not meet Objective 5.4-205.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: In Alternatives 3 and 6 Objective 5.4-205 is deleted. It is covered in the structural stage Objective 5.4-206. 5.4-205							
5.4-2501	5.4-2501	Guideline	Design livestock management strategies including distribution and stocking rates to be compatible with big-game habitat objectives.	Same as Alternative 1	Same as Alternative 1 except a standard	Same as Alternative 1 except a standard	Same as Alternative 1 except a standard

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
Rationale: To emphasize forage for deer and elk.							
5.4-3203	5.4-3203	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=60% Elk winter=55% Deer summer=55% Deer winter=50%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=54% Elk winter=47% Deer summer=45% Deer winter=46%	All management activities in ponderosa pine will maintain or move conditions toward the structural stage Objective 5.4-206.	Deleted	Deleted
Rationale: Replaced by structural stage Objective 5.4-206 in Alternatives 3 and 6. Alternative 3 also includes Objective 5.4-206, but this guideline was changed in Alternative 3 to place more emphasis on achieving the objective.							
5.4-9101	5.4-9101	Guideline	Off-road motorized travel may be restricted.	Same as Alternative 1	Off-road motorized travel is prohibited from December 15 through May 15. STANDARD	Same as Alternative 1	Same as Alternative 3
Rationale: Added in Alternatives 3 and 6 to complement new winter open road density objective. This MA emphasizes big game winter range. Winter is a stressful time for big game and off-road use can increase stress. Forest-wide year-round restrictions are covered in forest-wide Standard 9101.							
5.4-9103	5.4-9103	Guideline	Over-the-snow motorized travel is restricted to designated routes and areas.	Same as Alternative 1	Over-the-snow motorized travel is restricted to designated routes and areas. STANDARD	Same as Alternative 1	Same as Alternative 3
Rationale: changed to standard for better white tailed deer MIS emphasis							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.4A-2101	5.4A-2101	Standard	If a planning unit (diversity unit, watershed and/or land type association) does not meet the minimum hard snag density objective (described in Objective 5.4A-207), project implementation within the planning unit will move hard snag densities toward the minimum.	Same as Alternative 1	Deleted	No change	Deleted
Rationale: Deleted in Alternatives 3 and 6 because these alternatives do not include Objective 5.4A-207.							
5.4A-2102	5.4A-2102	Guideline	Treat entire clones when aspen stands are regenerated. Leave 1 birch stem uncut in each treated clump. Prevent damage to new sprouts from grazing.	Same as Alternative 1	Deleted	Same as Alternative 1	Deleted
Rationale: Treating entire clones is not the best practice in all cases, e.g., decadent clones. This should be left up to project management decisions.							
5.4A-3202	5.4A-3202	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer = 65% Elk winter = 65% Deer summer = 60% Deer winter = 60%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer = 46% Elk winter = 43% Deer summer = 42% Deer winter = 38%	Ponderosa-pine management activities will maintain or move conditions toward Objective 5.4A-203.	Same as Alternative 3	Deleted
Rationale: Covered in 5.4A Objective 203.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.4A-3203	5.4A-3203	Standard	Protect active goshawk nest sites by prohibiting activities, which were not occurring at nest initiation and by deferring treatment within the nest stand (approximately 30 acres). In addition, prohibit road construction, timber harvest, and other activities, which were not occurring at nest initiation within 1/4th mile of the active nest site between March 1 and September 30.	Protect active goshawk nest sites by prohibiting activities, which were not occurring at nest initiation and by deferring treatment within the nest stand (approximately 30 acres). In addition, prohibit road construction, timber harvest, and other activities, which were not occurring at nest initiation within 1/4th mile of the active nest site between March 1 and August 31.	Deleted	Same as Alternative 2	Deleted
Rationale: Defer to forest-wide goshawk standards and guidelines.							
5.43-3202	5.43-3202	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer = 55% Elk winter = 50% Deer summer = 60% Deer winter = 50	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer = 46% Elk winter = 43% Deer summer = 42% Deer winter = 38%	Ponderosa-pine management activities will maintain or move conditions toward the structural stage Objective 5.43-204.	Deleted	Deleted
Rationale: Replaced by structural stage Objective 5.43-204 in Alternatives 4 and 6.							
5.6-2101	5.6-2101	Standard	Maintain existing stands and acres of hardwoods.	Same as Alternative 1	Maintain existing stands or expand acres of hardwoods.	Same as Alternative 1	Same as Alternative 3
Rationale: This standard is consistent with forest-wide Objective 201							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
5.6-3202	5.6-3202	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=65% Elk winter=55% Deer summer=60% Deer winter=50%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=46% Elk winter=43% Deer summer=42% Deer winter=38%	Ponderosa-pine management activities will maintain or move conditions toward structural stage (SS) Objective 5.6-204.	Same as Alternative 2	Deleted
Rationale: Replaced by structural stage Objective 5.6-204 in Alternatives 3 and 6. Alternative 3 also includes Objective 5.4-206, but this guideline was changed in Alternative 3 to place more emphasis on achieving the objective.							
8.2-2104	8.2-2104	Standard	Protect unique biological features.	Same as Alternative 1	Protect unique biological features. If monitoring of R2 sensitive or species of local concern plant occurrences documents these species are being impacted by recreational use, practices will be implemented to protect the species.	Same as Alternative 3	Same as Alternative 3
Rationale: Some R2 sensitive and species of local concern plants are known to occur in developed recreation sites; and because use is increasing it has been identified as a potential risk to the viability of the species.							

Forest Plan Phase II Amended Number	2005 FEIS	Type	Alternative 1 No-Action, 1997 LRMP	Alternative 2 No-Action, Phase I Amendment Direction	Alternative 3 Diversity Across the Landscape	Alternative 4 Phase I with Additional Mature Forests	Alternative 6 Reduce Fire Hazard and Insect Hazard
8.2-3203	8.2-3203	Guideline	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=50% Elk winter=45% Deer summer=50% Deer winter=45%	Deer and elk habitat effectiveness in a planning unit should at least meet the following values. Projects in planning units currently below these values should result in increased habitat effectiveness. Elk summer=40% Elk winter=35% Deer summer=37% Deer winter=33%	Deleted	Deleted	Deleted
Rationale: These areas are emphasizing recreation, not wildlife habitat values. Managing for deer and elk Habitat effectiveness may conflict with overall MA objectives in Alternatives 3, 4 and 6.							
8.2-9106	8.2-9106	Standard	N/A	8.2-9106. No new developments, including road and trail construction, in the Cascade Creek/Spring area. (T8S, R5E, Sec. 20, SE¼ SW¼).	8.2-9106. No new developments, including road and trail construction, will take place in the Cascade Creek/ Spring area. (T8S, R5E, Sec. 20, SE¼ SW¼).	Same as Alternative 3	Same as Alternative 3
Rationale: Minor wording change to existing direction. This standard addresses R2 sensitive plant species needs. See stream orchid and southern maidenhair fern plant species assessments.							

MONITORING ITEMS (1997 Amended Plan - Phase I) TABLE

The following table illustrates how each program is monitored using different approaches, from reports to database screening to sampling. Further details about units of measure, indicators, sample designs, precision and reliability are provided in the Monitoring Implementation Guide.

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
AIR	Air Quality	Objective 101; Clean Air Act	1,2	Coordinate with States	A	1
SOILS	Soil Productivity	Objective 104	2,3	Sample; Aggregate Project Information	B/A	5
SOILS	Revegetation	Objective 104	3	Sample; Aggregate Project Information	B	5
WATER	Watershed Health	Objectives 102, 213	2,3	Sample; Aggregate Project Information; Consult with States	A/B	2-10
WATER	Water Quantity	Objective 108	2	WRENS	A	5
RIPARIAN/ WETLANDS	Riparian Habitat Restoration	Objectives 104, 107, 214-215	2,3	Sample; Aggregate Project Information	B	5
VEGETATIVE DIVERSITY	Species Composition and Structure	Objectives 201-210, 213, 222	2,3	Database	B/A	5
VEGETATIVE DIVERSITY	Late Successional	Objectives 207-208	2,3	Database; Research	A	5
VEGETATIVE DIVERSITY	Snag Retention	Objective 211	2,3	Survey; Aggregate Project Information	B	1
VEGETATIVE DIVERSITY	Thermal Cover	Objective 5.4-205	2	Database, Aggregate Project Information	B	3
VEGETATIVE DIVERSITY	Down/Dead Woody Material	Objective 212	2,3	Survey; Aggregate Project Information	B	1
COMMODITY PRODUCTION	Growth Rate	Objectives 303-305	2,3	Sample; RIS	A	10
COMMODITY PRODUCTION	Regeneration	Objectives 303-305	2,3	Sample; RIS	A	1
COMMODITY PRODUCTION	Timber Production	Objectives 303-305	2	Reports	A	1
COMMODITY PRODUCTION	Forage Production	Objective 301	2	Database	B	10
COMMODITY PRODUCTION	Rangeland Trend	Objective 302		Sample	B	10
COMMODITY PRODUCTION	Forage Utilization/ Residual	Objective 301	2,3	Sample	B	1

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
SENSITIVE SPECIES	Sensitive Species (Plant and Animal)	Objective 221	1,2,3	Sample; RIS, GIS, Habitat Capability Models, Research	A**	3
NOXIOUS WEEDS	Noxious Weeds, Species; Trend	Objective 230-231	2,3	Database; Coordinate with Counties	B	5
INSECTS AND DISEASES	Population, Damage Trend, and Hazard	Objectives 228-229	2,3	Sample; Database	B	1
INSECTS AND DISEASES	Exotics	Objective 230	2	Sample; Coordinate w/ APHIS	B	1
FIRE	Fuel Loading Hazard	Objective 223, 224	2	Database	B	1
FIRE	Fuel Treatment	Objective 223, 224,226,227	2	Database	A	1
FIRE	Suppression and Prevention	Objectives 225-227	2	Aggregate Project Information; Database	A/B	1
WILDLIFE	Threatened and Endangered Species	Objective 220	1,2,3	Sample; RIS; GIS; Habitat Capability Models	B	1
WILDLIFE	Habitat Capability Relationship, including MIS	Objectives 217-222	1,2,3	Research; RIS; GIS; Habitat Capability Models	B	3
SCENERY	Scenic Integrity	Objectives 401-402	2,3	Database; Sample; Aggregate Project Information; GIS	B	1
HERITAGE RESOURCES	Protection of Resources	Objectives 403, 405, 406	2,3	Database; Sample; Aggregate Project Information	A	1
WILDERNESS	Wilderness Ecosystem Condition; Use; and Trend	Objectives 1.1A-401; 1.1A-405	2	Database; Survey	B	5
RECREATION	Recreation Opportunities	Objectives 407-415	2	Database; GIS	A	1
RECREATION	Recreation Use, Trend and Demographics	Objectives 413, 417, 419, 421, 422	2	Database; Survey	A	1
ACCESS	Road Mileage	Objectives 309, 420, 421	2,3	Database; GIS	A	1
ACCESS	Off-Road Vehicle Access	Objective 422	2	Database; GIS	A	1
ACCESS	Trail Opportunities	Objectives 416-419	2,3	Database; GIS	A	1
ACCESS	Right-of-Way Acquisition	Objective 503	2	Reports	A	1

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
REAL ESTATE	Land Adjustment	Objectives 501-505	2	Reports	A	1
ECONOMIC EFFICIENCY	Cost	Objectives 601-602	2	TSPIRS; Reports	A	1

MONITORING ITEMS (Alternatives 3, 4, and 6) TABLE

The following table illustrates how each program is monitored using different approaches, from reports to database screening to sampling. Further details about units of measure, indicators, sample designs, precision and reliability are provided in the Monitoring Implementation Guide.

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
AIR	Air Quality	Objective 101; Clean Air Act	1,2	Coordinate with States	A	1
SOILS	Soil Productivity	Objective 104	2,3	Sample; Aggregate Project Information	B/A	5
SOILS	Revegetation	Objective 104	3	Sample; Aggregate Project Information	B	5
WATER	Watershed Health	Objectives 102, 104, 108, 217, 219, 221, Clean Water Act	2,3	Sample; Aggregate Project Information; Consult with States	A/B	2-10
WATER	Water Quantity	Objective 108	2	WRENNS	A	5-10**
RIPARIAN	Condition/Trend	Objectives 104	2,3	Sample; Aggregate Project Information	A	1-5**
RIPARIAN/ WETLANDS	Restoration	Objectives 107, 214, 215	2,3	Inventory; Aggregate Project Information	A/B	1-5**
VEGETATIVE DIVERSITY	Species Composition and Structure	Objectives 201-210, 213, 222, 239-LVD**	2	Database	A/B	1**
**VEGETATIVE DIVERSITY	Structural Stages	Objectives 4.1-203, 5.1-204, 5.4-206, 5.43-204, 5.6-204, 3.7-201 (Alternative 4: not applicable; structural stages not specified in alternative)	2	Field Exam, Database	A/B	1
**VEGETATIVE DIVERSITY	Large Trees	Objectives 4.1-203, 5.1-204, 5.4-206, 5.43-204, 5.6-204, 3.7-201 (Alternative 4: not applicable; tree size retention not specified)	2	Field Exam, Database	A/B	1
VEGETATIVE DIVERSITY	Snags	Objective 211 (Alternative 4: not applicable: all snags retained)	2	Database	A/B**	1-5**

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
**VEGETATIVE DIVERSITY	Burned Forest Habitat	Objective 11-03 (Alternative 4: Not applicable: no burned forest available for value recovery)	2	Research; database, GIS; sample	B	1
COMMODITY PRODUCTION	Growth Rate	Objectives 303-305	2,3	FIA**	A	10
COMMODITY PRODUCTION	Regeneration	Objectives 303-305	2,3	Database	A	1
COMMODITY PRODUCTION	Timber Production	Objectives 303-305	2	Reports	A	1
COMMODITY PRODUCTION	Rangeland Trend	Objective 302	3	Database/ sampling	A	3
COMMODITY PRODUCTION	Forage Utilization/ Residual	Objective 301	2,3	Database/ sampling	B	1
EMPHASIS SPECIES**	Sensitive Species	Objective 221	2	Sample; GIS, research, database	A/B	1-5
EMPHASIS SPECIES**	Species of Local Concern	Objective 221	2	Sample; database, GIS, research	A/B	1-5
EMPHASIS SPECIES	Threatened and Endangered Species	Objective 220	1,2,3	Sample; database; GIS;	B	1-5**
EMPHASIS SPECIES**	Management Indicator Species (MIS)	Objective 238	2	Research; database; GIS; sample	A	1-5
NOXIOUS WEEDS	Noxious Weeds, Species; Trend	Objective 230-231	2,3	Database; coordinate with counties	B	5
INSECTS AND DISEASES	Population, Tree Mortality, and Hazard	Objectives 10-09-10-10**	2,3	Survey**	B	1
INSECTS AND DISEASES	Exotics	Objective 230	2	Survey**	B	1
FIRE	Fire Hazard in WUI and Forest Interior	Objective 10-01, 10-05 (Alternative 4: Forest Interior Fire Hazard Portion of Monitoring is Not Applicable)	2	Database	B	1-5 ***
FIRE	Fuel Treatment	Objective 10-01, 10-04, 10-07 (Alternative 4 fuel treatment monitoring would not include areas outside of WUI)	2	Database	A	1

ACTIVITY OR RESOURCE	ITEM	REFERENCE	LEVEL[1]	APPROACH[2]	P/R[3]	FREQ[4]
FIRE	Suppression and Prevention	Objectives 10-01, 10-06, 10-07** (Alternative 4 fuel treatment monitoring would not include areas outside of WUI)	2	Aggregate project information; database	A/B	1
**FIRE	Non-emergency watershed condition after stand-replacing fire	Objective 11-01, 11-02 (Alternative 4 monitoring for 11-01, but would not include 11-02)	2	Assessment of watershed recovery	B	1 (until recovered)
SCENERY	Scenic Integrity	Objectives 401-402	2,3	Database; sample; aggregate project information; GIS	B	1
HERITAGE RESOURCES	Protection of Resources	Objectives 403, 405, 406	2,3	Database; sample; aggregate project information	A	1
WILDERNESS	Wilderness Ecosystem Condition; Use; and Trend	Objectives 1.1A-401; 1.1A-405	2	Database; survey	B	5
RECREATION	Recreation Opportunities	Objectives 407-415	2	Database; GIS	A	1
RECREATION	Recreation Use, Trend and Demographics	Objectives 413, 417, 419, 421, 422	2	Database; survey	A	1
ACCESS	Road Mileage	Objectives 309, 420, 421	2,3	Database; GIS	A	1
ACCESS	Off-Road Vehicle Access	Objective 422	2	Database; GIS	A	1
ACCESS	Trail Opportunities	Objectives 416-419	2,3	Database; GIS	A	1
ACCESS	Right-of-Way Acquisition	Objective 503	2	Reports	A	1
REAL ESTATE	Land Adjustment	Objectives 501-505	2	Reports	A	1
ECONOMIC EFFICIENCY	Cost	Objectives 601-602	2	Accounting Reports	A	1

[1]Regionwide level (1); ecological province, section level, Forest or management area (2); Local or Project Level (3)
[2]Techniques used to collect and store monitoring information
[3]Precision/Reliablity - for items noted as A/B, Forest will do type 'A' when appropriate for the species, and funding is available; monitoring may be done for habitat or population levels
[4]Frequency of reporting in years, data compilation may be more frequent
** Indicates a Phase II Amendment change
*** Protocol to be developed in 2006

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