

## 4.22. WOODLANDS AND FOREST RESOURCES

### 4.22.1. IMPACTS COMMON TO THE PROPOSED RMP AND ALL ALTERNATIVES

The Proposed RMP and all of the alternatives would allow open and/or limited OHV use areas. In general, OHV effects would have short-term and long-term adverse and beneficial impacts on woodland resources. Adverse impacts would be created by trails leading into formerly inaccessible woodland resource areas if the trails were unmanaged and unmonitored: these OHV trails would create opportunities for unmanaged and unmonitored woodcutting and/or harvesting of woodland products. The indirect adverse effects of open OHV use would be the ruts and gullies on steep slopes that would contribute to soil erosion. Long-term beneficial impacts, created by increasing managed OHV access to the resource, would tend to improve woodland resource management, and allow controlled woodland products harvesting to meet resource objectives.

Mineral and hydrocarbon leasing for oil, natural gas, Gilsonite, and phosphate would be allowed under all of the alternatives and the Proposed RMP. These activities would have direct short-term and long-term adverse effects on woodland resources by removing the resource from production and use during the construction and maintenance of well pads, access roads, processing facilities, pipelines, or support facilities, until reclamation and re-growth, or for the lifetime of a project.

Woodland resources would be treated or harvested under the Proposed RMP and all of the alternatives; however, under the Proposed RMP and Alternative E, non-WSA lands with wilderness characteristics would be managed with prohibitions on woodland and timber harvesting and salvage. These prohibitions would have adverse impacts on harvesting opportunities in the long term. Prescriptive fire treatments would be applied under all of the alternatives and the Proposed RMP. These activities would tend to be adverse in the short term and beneficial in the long term. Short-term adverse impacts would result from surface disturbance caused by harvesting, chemical and mechanical treatments, reseeding, fire suppression, and/or burned areas temporarily denuded of vegetation that would tend to increase soil erosion and increase the potential for noxious weed infestation in treated areas. Vehicles and equipment used in vegetation and woodland treatments would have short-term adverse ground-disturbing impacts on woodland resources. Long-term beneficial impacts would result from the reduction of excessive fuel loads within the treated areas, which would reduce the potential for stand-replacing wildland fire; allow public use of woodland products; make improvements to woodland habitat; and make improvements in woodland productivity by restoring woodland and forest health. Prescriptive fire or other treatments that reduce the number of diseased and/or insect-infested trees in the resource area would also have long-term beneficial impacts to woodland health.

Locatable mineral withdrawals would be considered for all of the alternatives, for the Green River Scenic Corridor in Browns Park (8,208 acres) and in the Lears Canyon relic vegetation area (1,375 acres) for the Proposed RMP, and Alternatives A, B, C, and E. Under Alternative D (No Action), the designated acres for these areas would be different than the action alternatives:

Green River Scenic Corridor in Browns Park would encompass 19,400 acres) and the relict vegetations areas in Lears Canyon would include 3,600 acres. These protective measures would have direct long-term protection-related beneficial impacts on woodland and forest resources.

The Proposed RMP and all of the alternatives designate some acreage within the VPA as VRM Class I and VRM Class II (as well as VRM Class III and Class IV). The resource-protective visual quality objectives of VRM I and VRM II would have direct and indirect beneficial impacts on woodland resources by preventing the degradation of the resource from unmanaged OHV use which would otherwise potentially lead to noxious weed and invasive species spread, and soil erosion.

Socioeconomically, the impacts of the Proposed RMP and alternatives would have the greatest economic benefits under Alternative B because harvesting would be managed to achieve the greatest output of forest and woodland products. The Proposed RMP and Alternative D (No Action) would have the next highest level of socioeconomic benefit, with the least economic benefit under Alternatives C and E. Under the Proposed RMP and each alternative the resource would remain available to the public for fuel, timber, Christmas tree cutting, biomass, fence posts, pinyon nut gathering, landscaping, and special forest products. The restrictions and/or land use designations described under the Proposed RMP, and Alternatives, C and E, and to a lesser extent under Alternative D (No Action), would impair woodcutting harvesting.

The impacts of grazing would have similar impacts for the Proposed RMP and all of the alternatives. The impacts would be minor or negligible on woodland resources except along the Green and White River riparian corridors where aging, over-mature cottonwood stands are not regenerating due to a combination of grazing and lack of flooding conditions. Grazing impacts on cottonwoods would be direct and adverse in the short-term and long-term.

Special Designation Areas are proposed under the Proposed RMP and all of the alternatives. These areas include SRMAs, ACECs, and the identification of stretches along rivers recommended for designation into the National Wild and Scenic River System. Where riparian resources are to be protected, these designations would have direct short-term and long-term beneficial, protection-related impacts on woodland resources within the designated areas by requiring all surface-disturbing activities to conform to the goals and objectives of a particular Special Designation Area. Each ACEC and proposed Wild and Scenic River segment would have a management plan created, which would protect specific resources within the area. Generally, Wild or Scenic River suitability designation would have long-term beneficial protection-related impacts on riparian woodlands.

Abandoned Mine Lands, Air Quality, Cultural, Wildlife, Paleontology, Wild Horses, and Hazardous Materials management actions for the Proposed RMP and alternatives would have minor or negligible effects on woodland resources and therefore will not be analyzed further.

## **4.22.2. ALTERNATIVE IMPACTS**

### **4.22.2.1. IMPACTS OF FIRE MANAGEMENT DECISIONS ON WOODLAND RESOURCES**

#### **4.22.2.1.1. PROPOSED RMP, AND ALTERNATIVES A, B, C, AND E**

The Proposed RMP and all of the action alternatives would have direct beneficial and adverse effects on woodland resources from fire management, as described under Impacts Common to All Alternatives. The beneficial effects of prescribed fire on 156,425 acres of woodlands per decade would be to reduce fuel loads, aid in regeneration of some desirable species such as aspen and ponderosa pine, and other species, create wildlife snags from burned trees, and reduce the level of woodland disease and insect infestation.

Compared to Alternative D (No Action), the Proposed RMP and these alternatives would provide approximately three times the beneficial impacts to woodland resources from prescribed fire, based on the proposed VPA acreage available for fire treatments. Short-term adverse indirect effects from fire treatments would include increased soil erosion and soil loss from steep slopes. Off highway vehicle (OHV) use in these areas would have short-term and long-term adverse impacts on woodland resources by intensifying the adverse fire-related soil erosion impacts.

#### **4.22.2.1.2. ALTERNATIVE D (NO ACTION)**

Alternative D (No Action) would use prescriptive fire on up to 27,950 acres within the Book Cliffs RMP area, and manipulate 22,950 acres within the Diamond Mountain RMP area (totaling 50,900 acres). The types of impacts would be similar to those discussed above for the Proposed RMP and the action alternatives, but on a smaller scale.

### **4.22.2.2. IMPACTS OF LANDS AND REALTY DECISIONS ON WOODLAND RESOURCES**

#### **4.22.2.2.1. PROPOSED RMP**

The Proposed RMP would have additional long-term beneficial, protection-related impacts on woodland resources by pursuing locatable mineral withdrawals along the White River in non-WSA lands with wilderness characteristics (6,720 acres), the White River SRMA (1,110 acres), Lears Canyon relict vegetation areas (1,375 acres), the Book Cliffs Natural Area (401 acres), and in the Green River Scenic Corridor in Browns Park (8,208 acres), totaling 22,814 acres. This alternative would provide beneficial resource-protection and use impacts for woodland resources, but based on acres of mineral withdrawals pursued under this alternative, the acreages would be less than those under Alternative D (No Action).

#### **4.22.2.2.2. ALTERNATIVE A**

The impacts on woodland resources under this alternative would be the same as discussed under Proposed RMP because the management decisions are similar.

**4.22.2.2.3. ALTERNATIVE B**

The impacts on woodland resources would be the same as discussed under the Proposed RMP because the management decisions are similar.

**4.22.2.2.4. ALTERNATIVE C**

Alternative C would have the same types of impacts on woodlands from locatable minerals withdrawals as discussed under the Proposed RMP, but to a greater degree. Under Alternative C, a total of 36,265 acres would be withdrawn in the Book Cliffs Natural Area, along the Green River Scenic Corridor, in Lears Canyon, and within the Lower Green River ACEC. Compared to Alternative D (No Action), this alternative would provide more beneficial resource-protection and use impacts for woodlands because more area would be protected from mineral surface disturbances.

**4.22.2.2.5. ALTERNATIVE D (NO ACTION)**

Alternative D (No Action) would have beneficial protection-related impacts on woodland resources that would include 19,400 acres within the Green River Scenic Corridor, 3,600 acres of relict vegetation, 7,900 acres in the Lower Green River ACEC, and 5,000 acres within developed and potential recreation sites, totaling 35,900 acres.

**4.22.2.2.6. ALTERNATIVE E**

The impacts of lands and realty decisions would be similar to the discussion under Alternative C, except that approximately 131,809 acres of woodlands within non-WSA lands with wilderness characteristics would be managed as ROW exclusion areas and closed to disposal of mineral materials. This would have long-term, beneficial impacts on woodland resources by prohibiting ROW-related surface disturbances and maintaining woodland productivity within these areas. The alternative would have more beneficial impacts on woodland resources than Alternative D (No Action) because protection would be applied to the resource.

**4.22.2.3. IMPACTS OF MINERALS DECISIONS ON WOODLAND RESOURCES****4.22.2.3.1. PROPOSED RMP**

The impacts of mineral exploration and development are described under subsection 4.20.1 Impacts Common to All Alternatives. Under the Proposed RMP, approximately 18,860 acres of woodlands could be directly and adversely affected by short-term and long-term minerals impacts from oil and gas development. This alternative would adversely impact approximately 648 more woodland acres than Alternative D (No Action).

**4.22.2.3.2. ALTERNATIVE A**

Under Alternative A, approximately 18,971 acres of woodlands could be directly and adversely affected within the VPA by short-term and long-term surface disturbance-related impacts from

oil and gas development, with those impacts discussed under subsection 4.20.1 above. This alternative would adversely impact approximately 759 more acres than Alternative D (No Action).

#### **4.22.2.3.3. ALTERNATIVE B**

Under Alternative B, approximately 19,033 acres of woodlands could be adversely affected in the short-term and long term by minerals development, with impacts as discussed under subsection 4.20.1. This alternative would adversely impact approximately 821 acres more than Alternative D (No Action).

#### **4.22.2.3.4. ALTERNATIVE C**

Under this alternative, approximately 18,757 acres could be adversely affected in the short-term and long-term by minerals development. This alternative would impact approximately 545 acres less than Alternative D (No Action).

#### **4.22.2.3.5. ALTERNATIVE D (NO ACTION)**

Alternative D (No Action) could adversely affect approximate 18,212 acres of woodland resources in the short term and long term from the development of oil and gas resources. The impacts would be caused by surface disturbances discussed above under subsection 4.20.1.

#### **4.22.2.3.6. ALTERNATIVE E**

Under this alternative, approximately 17,469 acres could be adversely affected in the short-term and long-term by minerals development. This alternative would impact approximately 743 acres less than Alternative D (No Action).

In summary, and based on the number of acres potentially disturbed by oil and gas minerals activities, and in comparison to Alternative D (No Action), Alternative B would have the most long-term adverse impacts on woodland resources, followed by Alternative A and the Proposed RMP, then Alternative D (No Action). Alternatives E and C would have the least adverse impacts on woodland resources from minerals-related surface disturbances. As discussed under Impacts Common to the Proposed RMP and All Alternatives above, the adverse impacts to woodland resources would be caused primarily by the loss of resource production and availability of woodland products during the lifetime of minerals projects. Direct, long-term adverse impacts to woodlands management would include well pads, support facilities, and access roads created by developing minerals areas in woodlands.

#### **4.22.2.4. IMPACTS OF NON-WSA LANDS WITH WILDERNESS CHARACTERISTICS DECISIONS ON WOODLANDS**

Areas with non-WSA wilderness characteristics would be managed under the Proposed RMP and Alternative E, with management decisions that include prohibitions on woodland harvesting and salvage (but allowing vegetation and fuel reduction treatments). Under the Proposed RMP, these

lands would be designated as VRM Class II, closed to oil and gas leasing, and allow OHV travel along designated routes. Under Alternative E, non-WSA lands with wilderness characteristics would be closed to cross-country OHV access, designated as VRM Class I, closed to minerals leasing, and excluded from ROW designation. These decisions would have beneficial and adverse impacts on woodland resources: closing non-WSA lands with wilderness characteristics to woodland harvesting and OHV access would preserve the resource by beneficially reducing direct and indirect impacts from surface disturbances within these areas (e.g., soil compaction and erosion, increased fire risks from motorized OHVs, an increased potential of invasive species invasion and replacement of woodland resources); long-term, adverse impacts would be produced by the reduced opportunities for woodland harvesting within the VPA.

#### **4.22.2.5. IMPACTS OF RECREATION DECISIONS ON WOODLAND RESOURCES**

##### **4.22.2.5.1. PROPOSED RMP**

The Proposed RMP would manage 2,831 acres along the White River as an SRMA. Designating and managing other SRMAs areas on Blue Mountain (42,729 acres), Red Mountain-Dry Fork (24,259 acres), Pelican Lake (1,014 acres), Browns Park (18,490 acres), Fantasy Canyon (69 acres), and Nine Mile Canyon (44,168 acres). These management decisions would have direct long-term, beneficial impacts on woodland resources by restricting OHV use to designated trails and managing recreational woodcutting on a total of 133,560 acres of area proposed as SRMAs. This alternative would provide more protection to woodland resources than Alternative D (No Action), which would continue to manage 87,931 acres of SRMAs.

##### **4.22.2.5.2. ALTERNATIVE A**

Alternative A would manage 24,183 acres along the White River as an SRMA. In the proposed White River SRMA, the restriction of surface-disturbing activities would be of up to one mile from the up to ½ mile from center-line of the river corridor and would have direct beneficial impacts to woodland resources by restricting OHV travel in the river corridor. This restriction would reduce recreation-related impacts to cottonwood stands along the river corridor. Under Alternative A, designating and managing portions of the White River, other SRMAs areas on Blue Mountain (42,758 acres), in the Book Cliffs (273,486 acres), Browns Park (52,720 acres), and Nine Mile Canyon (81,168 acres) as SRMAs would have direct long-term beneficial impacts on woodland resources by restricting OHV use to designated trails and managing recreational woodcutting. This alternative would manage and protect a total of 499,620 acres within SRMAs, including woodlands. This alternative would provide more protection for woodland resources than Alternative D (No Action) because of the substantially increased acreage proposed for management under SRMAs (a 568% increase over current management).

##### **4.22.2.5.3. ALTERNATIVE B**

Under Alternative B, unspecified or minimal management oversight of recreational use would have direct, major, adverse impacts on woodland resources caused by unlimited and unconfined recreation within the VPA. Off highway vehicle use, however, would be limited to designated trails, reducing unmanaged access to woodland areas. The White River, Blue Mountain, Fantasy

Canyon, and Book Cliffs SRMAs would not be designated under this alternative. However, Alternative B would continue to manage the existing Browns Park, Nine Mile Canyon, Pelican Lake, and Red Mountain-Dry Fork SRMAs with the same acreages as Alternative D (No Action) (86,454 acres), which would have direct beneficial protection-related impacts on woodland resources. The impacts under this alternative would have the same impacts on woodlands resources as current management under Alternative D (No Action).

#### **4.22.2.5.4. ALTERNATIVES C AND E**

Alternatives C and E would manage 47,130 acres along the White River as an SRMA, 42,729 acres at Blue Mountain, 273,486 acres in the Book Cliffs, 52,720 acres in Browns Park, 81,168 acres in Nine Mile Canyon, and 69 acres in Fantasy Canyon, 1,014 acres at Pelican Lake, and 24,259 acres at Red Mountain-Dry Fork. The impacts would be similar to those discussed under Proposed RMP, but to a greater degree, because more area (a total of 522,604 acres) would be managed as SRMAs that would provide protection to and management of woodland resources. Thus, this alternative would provide more protection for woodland resources than Alternative D (No Action).

#### **4.22.2.5.5. ALTERNATIVE D (NO ACTION)**

Under Alternative D (No Action), unspecified or minimal management oversight of recreational use would have direct, major, adverse impacts on woodland resources. The areas open to cross-country OHV use and limited to designated trails would continue under current conditions, which would have direct, adverse impacts on woodland resources from unmanaged harvesting, unmanaged access to the resource from unmanaged road and trail development, soil erosion, vegetation trampling, and the increased risks of wildland fire. There would be no specified monitoring of dispersed camping-related firewood use or other recreational uses of woodland resources, which would have direct adverse impacts on the resource. The White River, Blue Mountain, and Book Cliffs SRMAs would not be designated under this alternative, but the existing SRMAs (as described under Alternative B) would continue to be managed for the protection of woodland resources, totaling 86,454 acres.

In summary, Alternatives C and E would provide the most protection to woodland resources, followed by the Proposed RMP and Alternative A. Alternatives B and D (No Action) would provide the least protection to woodland resources.

#### **4.22.2.6. IMPACTS OF SOILS/WATERSHED/RIPARIAN DECISIONS ON WOODLAND RESOURCES**

##### **4.22.2.6.1. PROPOSED RMP, AND ALTERNATIVES A, B, C AND E**

Under the Proposed RMP and the action alternatives, managing the browse in riparian areas for woody species would have direct long-term beneficial affects on aging cottonwood stands. Proper grazing use of woody vegetation and allowing the recruitment and recovery of woody species would have a major long-term beneficial impact on restoring healthy cottonwood stands along riparian corridors.

No surface disturbance on slopes greater than 40% (under Alternatives C and E), erosion control measures on 21%–40% percent slopes (under the Proposed RMP and Alternative A) and greater than 20% slope erosion control measures under Alternative B would produce direct long-term beneficial effects on woodland stands by reducing the impacts associated with woodland treatments, particularly prescribed fire treatments. The Proposed RMP and these alternatives would provide more protection of woodland resources than Alternative D (No Action).

#### **4.22.2.6.2. ALTERNATIVE D (NO ACTION)**

Alternative D (No Action) would allow grazing within riparian areas without regard for woody riparian species, and only prohibit surface disturbances to minerals-related activities on slopes greater than 40%. This would have direct, adverse, long-term impacts on woodland resources where recruitment of riparian woody species is necessary to maintain woodland areas for biological and genetic diversity.

In summary, Alternatives C and E would provide the most protection to woodland resources, followed by the Proposed RMP and Alternatives A, and then Alternative B. Alternative D (No Action) would provide the least riparian and soils-related protection to woodland resources.

#### **4.22.2.7. IMPACTS OF SPECIAL DESIGNATIONS DECISIONS ON WOODLAND RESOURCES**

Under management common to the Proposed RMP and all action alternatives, the Pariette Wetlands ACEC (10,437 acres), Red Creek Watershed ACEC (24,475 acres), and Lears Canyon ACEC (1,375 acres) designated under the current RMP would be re-designated. These ACECs would be managed to protect high value wetland and plant habitat, wildlife habitat, and relict vegetation and would have direct, beneficial, long-term protection-related impacts on woodland resources. The proposed Nine Mile Canyon and Lower Green River ACECs would be managed to protect relict vegetation and would be expanded under some alternatives, which would also have direct, long-term protection-related beneficial impacts on woodland resources.

The management of riparian woodlands along river stretches under the National Wild and Scenic River System would have direct, long-term beneficial effects on woodland resources by protecting riparian woodland habitats. Long term, beneficial impacts on riparian woodlands would result from continued protection of the Lower Green River Corridor, and Upper and Lower Green River segments under the Proposed RMP and all alternatives.

A comparison of acreages by alternative is located in the Chapter 4 Special Designations (section 4.16), and a summary of resources to be protected is located in the discussion in Chapter 3 Special Designations (section 3.16).

##### **4.22.2.7.1. PROPOSED RMP**

The Proposed RMP would designate Browns Park (18,490 acres), the Lower Green River (8,470 acres), Nine Mile Canyon (44,168 acres), and Red Mountain-Dry Fork complex (24,285 acres) as ACECs (totaling 131,700 acres that includes the ACECs discussed above in subsection 4.20.2.6) with long-term beneficial, protection-related impacts to woodland resource. Lears

Canyon would be managed to protect relict vegetation; and the Lower Green River would be managed to protect riparian habitat, including cottonwood and willow woodlands. All of the proposed ACECs would be managed to protect and prevent damage to important cultural or scenic values, wildlife habitat, or ecosystem processes, which would indirectly protect woodland resources from surface disturbances. Compared to Alternative D (No Action), which would maintain the currently established and designated ACECs within a total of 165,944 acres, the impacts to woodlands would be similar.

With the exception of protected Upper and Lower Green River segments as discussed above, the Proposed RMP would not identify any other river segments as suitable for WSR designation, which would provide less protection to riparian woodlands along White and Green River segments than Alternative D (No Action). Under Alternative D (No Action), suitability findings would not be made on either the White or Green rivers, but would continue protection of eligible segments along the White River, and Upper and Lower Green River.

#### **4.22.2.7.2. ALTERNATIVE A**

Alternative A would designate Bitter Creek (68,834 acres), the Lower Green River (10,170 acres), Coyote Basin-Snake John-Kennedy Wash (87,743 acres), Nine Mile Canyon (48,000 acres), Red Mountain-Dry Fork (24,285), Browns Park (52,721 acres), and the White River corridor (17,810) as ACECs and the three ACECs discussed above under current management (Lears, Pariette, and Red Creek). These ACECs would have a total area of 345,850 acres that would have the same impacts to woodlands as discussed under the Proposed RMP, but to a greater degree, because more acreage would be protected within ACECs. Alternative A would have the same impacts on proposed Wild and Scenic River segments as discussed under the Proposed RMP alternative.

This alternative provides more long-term, beneficial protection-related impacts on woodland resources than Alternative D (No Action). Under alternative A, 345,850 acres (179,906 more acres than Alternative D) would be designated or maintained as ACECs when compared to Alternative D (No Action).

#### **4.22.2.7.3. ALTERNATIVE B**

This alternative proposes ACEC designation and management of 18,474 acres in Browns Park, 47,659 acres in Coyote Basin, 44,181 acres in Nine Mile Canyon, and 24,285 acres in Red Mountain-Dry Fork ACECs. Including the ACECs carried forward under current management (Pariette, Lears, and Red Creek ACECs, the total acreage within ACECs under this alternative would be 170,886 acres. Alternative B would recommend designation of the Lower and Upper Green River as suitable for consideration as Wild and Scenic (a decision common to all alternatives). Under this alternative, there would be more beneficial impacts to woodlands from ACEC designation because more area (4,942 more acres than under Alternative D) would be designated or maintained as ACECs when compared to Alternative D (No Action).

**4.22.2.7.4. ALTERNATIVES C AND E**

Alternatives C and E would affect woodland resources by designating Bitter Creek and Bitter Creek/PR Spring (147,425 acres), 52,721 acres in Browns Park, the Coyote Basin Complex (124,161 acres), Four Mile Wash (50,280 acres), the Lower Green River (10,170 acres), Main Canyon (100,915 acres), the Middle Green River (6,768 acres), Nine Mile Canyon (81,168 acres), Red Mountain-Dry Fork (24,285 acres), and the White River corridor (47,130 acres) as ACECs. In addition to the Lear, Pariette, and Red Creek ACECs brought forward under current management, the total acreage of proposed ACECs would be 681,310 acres. The types of impacts to woodlands would be the same as discussed under the Proposed RMP, but to a greater degree, because more acres of riparian and upland woodlands would receive protection within these special designation areas.

Compared to Alternative D (No Action), this alternative would have substantially more beneficial impacts to woodlands because 515,366 more acres would be protected (and the woodlands within them) under these alternatives than under the No Action.

In addition to segments along the Upper and Lower Green Rivers, Alternatives C and E would recommend segments of the White River (approximately 44 miles), Nine Mile Creek (approximately 19 miles), the Middle Green River (36 miles), and Evacuation Creek (21 miles), Bitter Creek (22 miles), and Argyle Creek (22 miles) as suitable for designation into the NWSRS. The designation of these segments would have long-term beneficial impacts on woodland resources by providing more resource protection for woodland riparian resources and biodiversity, as compared to Alternative D (No Action).

Under Alternative E, 197,170 acres of non-WSA lands with wilderness characteristics lie within proposed ACECs. These areas would be managed to prohibit woodland harvesting or salvage, which would have long-term, adverse impacts on harvesting opportunities and long-term, beneficial impacts on resource preservation and productivity. These acreages would be available for fuels reduction treatments, so there would be indirect, long term, beneficial impacts to woodlands from the reduced risks of stand-altering wildland fire.

**4.22.2.7.5. ALTERNATIVE D (NO ACTION)**

Management actions under Alternative D (No Action) would not designate any new ACECs or recommend new river segments for consideration as Wild and Scenic. Management of current ACECs would continue under existing management actions and goals, which would include 165,944 acres of currently designated ACECs, and continued protection of segments along the White River, and the Upper and Lower Green Rivers.

Special Designation decisions would have the most long-term beneficial impacts under Alternatives E and C, followed by Alternatives A and B, then Alternative D (No Action), based on the number of woodland acres protected under ACEC integrated activity plans, and actions to control and enhance woodland resources. The Proposed RMP would have the least beneficial impacts on woodland resources within proposed ACEC special designation areas.

**4.22.2.8. IMPACTS OF TRAVEL/ROADS/TRAILS DECISIONS ON WOODLAND RESOURCES****4.22.2.8.1. PROPOSED RMP**

The Proposed RMP would allow for the improvement and/or development of up to 800 miles of motorized trails. The impacts would be both adverse and beneficial. Developing 800 miles of motorized trails would have indirect adverse impacts on woodland resources by potentially increasing soil erosion rates along the trail system, introducing noxious weeds, and increasing the potential for unmanaged, unmonitored woodcutting. Expanding the potential access to woodland resources if woodland resources activities are regulated and monitored would produce beneficial impacts. Under the Proposed RMP, 106,178 acres of Non-WSA lands with wilderness characteristics would be closed to woodland harvesting, which would have adverse impacts on harvesting opportunities in the long term.

Developing trails (400 miles of mechanized [non motorized]) along the Green River and in other riparian areas would have direct long-term, adverse impacts on cottonwood habitat and the relict stands in the riparian corridor. Assuming that campers would use riparian cottonwood as firewood, and considering that riparian cottonwood stands are relict, aging, and without recruitment, this would have a major adverse impact on riparian woodland species.

New, permitted roads and trails would be obliterated and/or reclaimed after serving their useful purposes. This would have direct and indirect beneficial impacts on woodland resources by recreating woodlands habitat and reducing adverse impacts caused by potential soil erosion conditions. The Proposed RMP (also Alternatives A, C, and E) would prohibit OHV use for off-trail big game retrieval (Alternative D, No Action, is unspecified). The impacts of this management decision would be beneficial and long-term for woodland resources by reducing the unmanaged extension of OHV trails and reducing the potential for soil erosion and noxious weed spread from these trails.

Compared to Alternative D (No Action), the Proposed RMP provides more protection for woodland resources because opportunities for open, cross-country OHV surface disturbances within woodlands would be greatly reduced; however, opportunities for woodland harvesting would be reduced, in comparison to Proposed, because of harvesting prohibitions in non-WSA lands with wilderness characteristics.

**4.22.2.8.2. ALTERNATIVE A**

The impacts of travel decisions under this alternative would be the same as discussed above under the Proposed RMP because the management decisions would be the same.

**4.22.2.8.3. ALTERNATIVE B**

Alternative B proposes OHV use for big game retrieval off of designated routes (the only alternative that proposes this management decision), which would have short-term and long-term direct and indirect adverse impacts on woodland resources as described under Impacts Common to All Alternatives.

Alternative B would not propose obliteration or reclamation of permitted roads and trails, and 800 miles of motorized trails would be developed or improved. This management action would have long-term direct and adverse impacts on woodland resources by potentially creating opportunities for unmanaged, unregulated woodcutting and woodland products harvesting. Indirect, adverse impacts would be created by increasing soil erosion rates along these roads and trails, as they are widened and expanded by OHV use. Compared to Alternative D (No Action), these alternatives would have similar impacts to woodland resources.

#### **4.22.2.8.4. ALTERNATIVE C**

Alternative C would not allow for improvement or development of up to 800 miles of motorized trails within the VPA. Indirect long-term beneficial and adverse impacts would be the reverse of those described for the Proposed RMP: there would be less potential for soil erosion caused by trails, but the ability to access woodland resources for resource management and/or harvesting of woodland products also would be reduced, which would have long-term adverse access-related impacts on woodland resource management.

Developing trails (400 miles of mechanized [non motorized]) along the Green River and other riparian areas, under Alternative C, would have direct adverse impacts on cottonwood habitat and the relict stands, as described under the Proposed RMP.

Under Alternative C, new, permitted roads and trails would be obliterated and/or reclaimed after serving their useful purposes. The impacts would be similar to those described under the Proposed RMP and therefore would provide more beneficial impacts to woodland resources than Alternative D (No Action).

#### **4.22.2.8.5. ALTERNATIVE D (NO ACTION)**

This alternative would develop approximately 55 miles of trails along riparian corridors, with adverse impacts to woodland resources similar to those described for Alternatives A and C, but on a smaller scale.

Alternatives D (No Action) would not propose obliteration or reclamation of permitted roads and trails. The impacts would be similar to those described for Alternative B.

#### **4.22.2.8.6. ALTERNATIVE E**

Alternative E would have similar impacts as Alternative C, except there would be less potential for adverse soil erosion impacts to woodland resources caused by trails because 57 miles of OHV travel routes would be closed to protect non-WSA lands with wilderness characteristics. These travel route closures would also adversely reduce woodland harvesting and salvage opportunities in the long term because these closures could potentially restrict or prevent access to areas where harvesting would be permitted.

In summary, the Proposed RMP and Alternative A would have the greatest beneficial protection-related impacts on woodland resources, followed by Alternatives C and E. Alternatives B and D would have the least beneficial impacts on the resource.

#### **4.22.2.9. IMPACTS OF VEGETATION DECISIONS ON WOODLAND RESOURCES**

##### **4.22.2.9.1. PROPOSED RMP, AND ALTERNATIVES A, B, C AND E**

Vegetation decisions to use prescribed fire treatments on 156,425 acres per decade for the Proposed RMP and all of the action alternatives would have impacts similar to those described under Fire Management and in subsection 4.20.1. The Proposed RMP and these alternatives would provide approximately three times the beneficial impacts to woodland resources, through fire treatments and vegetation manipulation, when compared to Alternative D (No Action).

##### **4.22.2.9.2. ALTERNATIVE D (NO ACTION)**

The impacts of prescribed burning and vegetation manipulation (described in subsection 4.20.1) for Alternative D (No Action) would be similar to the action alternatives, but less in scope than the other alternatives.

#### **4.22.2.10. IMPACTS OF VISUAL DECISIONS ON WOODLAND RESOURCES**

##### **4.22.2.10.1. PROPOSED RMP**

Under the Proposed RMP, the impacts of VRM Class I and Class II designations in the VPA on woodland resources would be both adverse and beneficial. Direct, long-term beneficial impacts would result from the preservation of biodiversity in woodland areas; direct, long-term adverse impacts would result from the limitations on woodland treatments for disease, infestations, and excessive fuel loading in designated VRM Class I and VRM Class II areas so that scenic quality is preserved and the VRM class objectives are met. In particular, the limitation would be on prescribed burning or other fire management treatments in these areas where burning or other treatment impacts would exceed surface disturbance-caused visual contrast limits for the VRM class objectives. The VRM Class III and Class IV designations would impose fewer restrictions on woodland resources, which would be beneficial in reducing fuel loads and subsequently reducing the risks of wildland fire. The impacts from the Proposed RMP would be the same as Alternative D (No Action), but greater in scope, as 122,915 more acres within the VPA would be designated at VRM Classes I and II under Proposed RMP when compared to Alternative D (No Action).

##### **4.22.2.10.2. ALTERNATIVE A**

The impacts on woodlands from Alternative A visual resource decisions would be the same as discussed above under the Proposed RMP, but increased in scope. This is because more area would be protected from long term scenic quality degradation: a total of 357,909 acres would be designated for scenic protection as VRM Class I and II under this alternative.

**4.22.2.10.3. ALTERNATIVE B**

The impacts of Alternative B would be similar to Proposed RMP, but to a lesser degree, as fewer acres would be managed under VRM I and VRM II surface disturbance and visual contrast restrictions (a total of 166,794 acres), which is approximately the number of acres designated under Alternative D (No Action).

**4.22.2.10.4. ALTERNATIVE C**

The impacts would be the same as discussed under the Proposed RMP, except that Alternative C would designate more acres as VRM I and VRM II, which would have greater protection-related direct and indirect effects on woodland resources than the other alternatives, and larger-scale, long-term restrictions on woodland resource access than the other alternatives (except for Alternative E) (see Table 4.19.3 in Visual Resources). This alternative would designate 508,441 acres for scenic quality protection under VRM Classes I and II. This alternative would have more adverse impacts on woodland resources, by restricting woodland fire treatments, than Alternative D (No Action). Alternative D (No Action) would designate 166,772 acres under VRM Class I and II (a difference of 341,669 acres).

**4.22.2.10.5. ALTERNATIVE D (NO ACTION)**

Under Alternative D (No Action), the impacts of VRM Class I and Class II designations in the VPA on woodland resources would be both adverse and beneficial, with the same impacts as described under the Proposed RMP. This alternative would designate the least number of acres under VRM I and II (166,772 acres), thereby providing the least visual resource protection to woodland resources, but also having the least number of acres restricted by VRM surface disturbance limitations under VRM Class I and II objectives. More acres within the VPA could be treated for fire and fuel load reductions, which would have beneficial impacts on woodland resources by reducing wildland fire risks.

**4.22.2.10.6. ALTERNATIVE E**

The impacts would be the same as Proposed RMP, except that Alternative E would designate more acres as VRM Classes I and II than the Proposed RMP and the other action alternatives. This would have greater beneficial, protection-related direct and indirect effects on woodland resources than the Proposed RMP and the other alternatives, and larger-scale, long-term, adverse restrictions on woodland resource access and harvesting opportunities. This alternative would also have more adverse impacts on woodland resources, by prohibiting woodland harvesting in non-WSA lands with wilderness characteristics (managed as VRM I, with prohibitions on OHV travel within these areas). Compared to Alternative D (No Action), Alternative E would have more beneficial and more adverse impacts on woodland resources, as discussed above, because Alternative E would designate a combined 594,210 acres as VRM Class I and Class II, 427,438 more acres than the Alternative D (No Action).

In summary, Alternative E would have the highest number of VPA woodland acres designated for protection under VRM Classes I and II objectives, followed by Alternative C, then

Alternative A and the Proposed RMP. Alternatives B and D (No Action) would provide the least VRM protection to woodland resources.

#### **4.22.2.11. IMPACTS OF WOODLANDS DECISIONS ON WOODLAND RESOURCES**

##### **4.22.2.11.1. PROPOSED RMP**

Under the Proposed RMP, 546,152 acres within the VPA would be open to treatments or be available for harvesting. The purpose would be to maintain and restore woodlands and forest ecosystems to a condition in which biodiversity is preserved, insects and diseases are controlled to normal levels, relict stands are maintained, fuel loading is reduced, historical fire regimes are restored, and multiple use and sustained yield are allowed through treatments. Approximately 13,606 acres (within WSAs) and 67,559 acres of woodlands within non-WSA lands with wilderness characteristics would be off-limits to woodland harvesting; however, the 13,606 acres of WSAs and the proposed 106,178 acres of non-WSA lands with wilderness characteristics would still be available for fuels reduction treatments. The impacts on woodland resources from these management decisions would be both directly and indirectly adverse and beneficial: OHV use during treatments and woodcutting to access treatment areas and to remove cut wood would cause direct short-term surface disturbances, indirectly cause soil erosion, and indirectly create conditions that support the introduction and spread of noxious weeds. Beneficial long-term impacts would result from these management decisions and are described in subsection 4.20.1. The Proposed RMP would have more beneficial impacts to woodland resources than Alternative D (No Action) because 257,852 more acres of forest and woodlands within the VPA would be available for harvesting or treatments than under Alternative D (No Action).

##### **4.22.2.11.2. ALTERNATIVE A**

Under Alternative A, management actions on up to 552,152 acres of BLM administered land within the VPA would have the same impacts as discussed under the Proposed RMP because the management decisions are similar.

##### **4.22.2.11.3. ALTERNATIVE B**

The beneficial and adverse impacts of woodland and forest treatment and non-removal of WSA vegetation would be similar to those described for Proposed RMP. Up to 554,108 acres of forest and woodlands would have treatments or be harvested, and approximately 13,606 acres (within WSAs) would not have vegetation removal, but would still be available for fuels reduction treatments. Compared to Alternative D, this alternative would have more beneficial impacts because 265,808 more acres of forest and woodlands would be available for treatments or harvesting under Alternative D (No Action).

##### **4.22.2.11.4. ALTERNATIVE C**

Alternative C would have the same impacts as discussed under the Proposed RMP, with the same number of acres open to forest and woodland management as Alternative A (552,152 acres) to achieve various management goals, and 13,606 acres (within WSAs) off-limits to vegetation

removal. This alternative would provide more benefits to woodland resources than Alternative D (No Action), with the same impacts as the Proposed RMP because the acreages of affected woodlands are similar.

#### **4.22.2.11.5. ALTERNATIVE D (NO ACTION)**

Alternative D (No Action) would allow up to 288,300 acres of woodlands and forest to be treated or harvested. Approximately 13,606 acres (within WSAs) would be off-limits to vegetation removal, but would still be available for fuels reduction treatments. The impacts to the resource would be similar to those described for the Proposed RMP, but on a smaller scale. Woodland product salvaging, ecosystem restoration, disease control, fuel load reductions, and relict stand preservation management actions are unspecified under this alternative.

#### **4.22.2.11.6. ALTERNATIVE E**

Alternative E would manage approximately 131,809 acres of woodlands (within the 277,596 acres of non-WSA lands with wilderness characteristics) with private and commercial harvesting and salvage prohibitions that would have long term, adverse impacts on woodland harvesting and gathering opportunities. Under this alternative, up to 421,133 acres would be available for harvesting or treatments. The impacts on woodland resources would be beneficial in the long term from maintenance of woodland productivity and preservation of the resource through harvesting and/or treatments. This alternative would have more benefits to woodland resources than Alternative D (No Action), with similar impacts as discussed under the Proposed RMP.

#### **4.22.2.12. SUMMARY**

##### **4.22.2.12.1. PROPOSED RMP**

The Proposed RMP would have a highly beneficial impact to woodland resources (more than Alternatives B and E, and the No Action) by:

- Allowing up to 546,152 acres of forest and woodland harvesting or treatments
- Maintaining and restoring woodlands biodiversity, forest and land health, historical fire regimes, and multiple use and sustained yield
- Allowing prescribed burning on 156,425 acres per decade
- Closing 106,178 acres of non-WSA lands with wilderness characteristics to woodland harvesting, while allowing vegetation treatments and fuel load reductions to reduce wildland fire risks.

##### **4.22.2.12.2. ALTERNATIVE A**

Alternative A would provide the second highest level of benefit to woodland resources by:

- Allowing forest and woodland harvesting or treatments on 552,152 acres (but less than Alternative C)

- Allowing prescribed burning on 156,425 acres per decade
- Maintaining and restoring woodlands biodiversity, forest and land health, historical fire regimes, and multiple use and sustained yield

#### **4.22.2.12.3. ALTERNATIVE B**

This alternative would provide more beneficial impacts to woodland resources than Alternative D (No Action), but less than the other action alternatives, by:

- Allowing forest and woodland harvesting and treatments on 554,108 acres (the largest area of all alternatives)
- Allowing prescribed burning on 156,425 acres per decade
- Managing forest and woodland resources for the greatest output of forest and woodland products through public harvesting

#### **4.22.2.12.4. ALTERNATIVE C**

This alternative would have the highest level of woodlands resource protection and benefits, as compared to Alternative D (No Action) and the other alternatives, by:

- Allowing forest and woodland harvesting and treatments on same acreage as Alternative A (522,152 acres)
- Allowing prescribed burning on 156,425 acres per decade
- Maintaining and restoring woodlands biodiversity, forest and land health, historical fire regimes, and multiple use and sustained yield
- Maintaining relict stands for biological and genetic diversity
- Providing the highest protection for steep slope disturbances

#### **4.22.2.12.5. ALTERNATIVE D (NO ACTION)**

This alternative would provide the least level of protection for and the least beneficial impacts to woodland resources by:

- Providing the least level of fire management or treatments for woodland resources (50,900 acres)
- Allowing forest and woodland harvesting and treatments within the smallest area (288,200 acres)
- Providing the least protection for riparian areas and steep slopes
- Providing the least protection or treatment to develop healthy, sustainable woodland and forest resources

**4.22.2.12.6. ALTERNATIVE E**

This alternative would provide a high level of woodlands resource protection and beneficial impacts by:

- Allowing forest and woodland harvesting and treatments on 421,133 acres (the least of the action alternatives)
- Allowing prescribed burning on 156,425 acres per decade
- Providing the highest protection for steep slope disturbances (the same as Alternative C)
- Closing 277,596 acres of non-WSA lands with wilderness characteristics to woodland harvesting while allowing fuel load reductions and prescribed burning to reduce wildland fire risks

**4.22.2.13. MITIGATION MEASURES**

After forest and woodland treatments (including prescribed fire, chemical and/or mechanical treatments, and fire suppression), noxious weed infestations would be treated and controlled to prevent their spread.

After forest and woodland treatments, disturbed areas would be reseeded, or replanted, where needed if natural regeneration or reestablishment of targeted species is difficult or time sensitive.

Off highway vehicle use disturbances after firewood sales and/or salvage would be mitigated to prevent soil erosion and additional surface disturbances from recreational OHV use, through road or trail closing. Off highway vehicle use would be monitored for compliance with OHV access and travel restrictions.

Avoiding unauthorized surface-disturbing activities within delineated riparian areas would mitigate impacts to woody riparian species from recreational activity within river corridors. Monitoring soil erosion and applying standard erosion control techniques to the area would mitigate impacts to soils after treatments.

**4.22.3. UNAVOIDABLE ADVERSE IMPACTS**

If the mitigation measures described were implemented, minerals exploration and development, trail construction, and woodland and vegetation treatments for fire management would cause short-term unavoidable adverse impacts on woodland resources, but no long-term unavoidable adverse impacts.

**4.22.4. SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY**

Short-term uses that would produce long-term losses of resource productivity would include failing to prevent noxious weed invasion after disturbances, which could alter successional patterns and fire regimes. This type of short-term disturbance would inhibit re-establishment of woodland resources in the long-term.

#### **4.22.5. IRREVERSIBLE AND IRRETRIEVABLE IMPACTS**

There are no management actions that would irreversibly remove woodland resources and prevent their possible restoration. However, noxious weed infestations indirectly resulting from fire treatments or wildfire would potentially become irretrievable impacts. Other irretrievable impacts would include: 1) prescribed fire, other fire treatments, and vegetation treatments that remove the resource until re-growth; 2) harvesting, thinning, or construction-related impacts that temporarily remove the resource during the life of a project; 3) uncontrolled wildfire-caused loss of woodland resources; and 4) OHV-caused disturbances that inhibit re-growth.