

4.20 WOODLANDS AND TIMBER RESOURCES

4.20.1 Impacts Common to All Alternatives

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, oil shale, tar sands, Gilsonite, and phosphate would be allowed under all of the alternatives. 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 all of the alternatives. Prescriptive fire treatments would be applied under all of the alternatives. 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 catastrophic, stand-destroying 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), in the Lears Canyon relic vegetation area (1,377 acres), and in the Lower Green River ACEC (17,063 acres) for Alternative A, B, and C. Under Alternative D, the designated acres for these areas would be different than the action alternatives: Green River Scenic Corridor in Browns Park (19,400 acres), relict vegetations areas including Lears Canyon (3,600 acres), and in the Lower Green River ACEC (7,900 acres). These protective measures would have direct long-term protection-related beneficial impacts on woodland and forest resources.

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 lead to noxious weed spread and soil erosion.

Socioeconomically, the impacts of the alternatives would have the greatest economic benefits under Alternative B, the second highest under Alternatives A and D – No Action, and the least economic benefit under Alternative C. Under 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 Alternative C, and to a lesser extent under Alternatives A and D – No Action, would impair commercial woodcutting.

The impacts of grazing would have similar impacts for 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 all of the alternatives. These areas include SRMAs, ACECs, and the identification of stretches along rivers recommended for designation into the 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 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.

Cultural, wildlife, paleontology, wild horses, and hazardous materials management actions for the alternatives would have minor or negligible effects on woodland resources and therefore will not be analyzed further.

4.20.2 Alternative Impacts

4.20.2.1 Impacts of Fire Management Decisions on Woodland Resources

4.20.2.1.1 Alternatives A, B, and C

Alternatives A, B, and C would have direct beneficial and adverse affects 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, these alternatives provide approximately three times the beneficial impacts to woodland resources from prescribed fire. Short-term adverse indirect effects from fire treatments would include increased soil erosion and soil loss from steep slopes. Off highway vehicle 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.

4.20.2.1.2 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. The impacts would be similar to those for Alternative A, B, and C, but on a smaller scale.

4.20.2.2 Impacts of Lands and Realty Decisions on Woodland Resources

4.20.2.2.1 Alternatives A, B, and C

The impacts of locatable mineral withdrawal for all alternatives on woodland resources are described under Impacts Common to All Alternatives. Alternatives A, B, and C would have additional long-term beneficial protection-related impacts on woodland resources by pursuing locatable mineral withdrawals along the White River (9,218 acres) and the Book Cliffs Natural Area (401 acres). These alternatives would provide more beneficial resource-protection and use impacts for woodland resources than Alternative D – No Action.

4.20.2.2.2 Alternative D – No Action

Alternative D – No Action would provide the lowest degree of beneficial protection-related impacts on woodland resources, based on the number of acres protected, including developed and potential recreation sites (5,000 acres) as eligible for mineral withdrawal, as well as the areas described under Impacts Common to All Alternatives.

4.20.2.3 Impacts of Minerals/Energy Decisions on Woodland Resources

4.20.2.3.1 Alternative A

The impacts of mineral exploration and development are described under Impacts Common to All Alternatives. Under Alternative A, approximately 18,971 acres of woodlands could be directly and adversely affected within the BLM administered areas of the VPA by short-term and long-term minerals impacts from oil and gas development. This alternative would impact approximately 759 more acres than Alternative D – No Action.

4.20.2.3.2 Alternative B

Under Alternative B, approximately 19,033 acres could be adversely affected in the short-term and long term by minerals development. This alternative would impact approximately 821 acres more than Alternative D – No Action.

4.20.2.3.3 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.

4.20.2.3.4 Alternative D – No Action

The Alternative D – No Action alternative, under current management actions, 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.

Based on the number of acres potentially disturbed by oil and gas minerals activities, and compared to Alternative D, Alternative B would have the most long-term adverse impacts on woodland resources, followed by Alternatives A and D. Alternative C would have the least adverse impacts on woodland resources. As discussed under Impacts Common To All Alternatives, the adverse impacts to woodland resources would be caused primarily by the loss of resource production and availability of woodland products during the life of minerals projects. Direct, long-term beneficial impacts to woodlands management would include well pads, support facilities, and access roads created by developing minerals areas.

4.20.2.4 Impacts of Recreation Decisions on Woodland Resources

4.20.2.4.1 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 up to ½ mile from center- line of the river 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 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) would have direct long-term beneficial impacts on woodland resources by restricting OHV use to designated trails and managing recreational woodcutting. This alternative would provide more protection for woodland resources than Alternative D – No Action.

4.20.2.4.2 Alternative B

Under Alternative B, unspecified or minimal management oversight of recreational use would have direct, major, adverse impacts on woodland resources. Off highway vehicle use would be limited to designated trails, reducing unmanaged access to woodland areas. The White River, Blue Mountain, and Book Cliffs SRMAs would not be designated under this alternative. However, Alternative B would continue to manage the existing Browns Park (18,474 acres) and Nine Mile Canyon (44,181 acres), Pelican Lake (1,020 acres), and Red Mountain-Dry Fork (24,285 acres) as SRMAs, which would have direct beneficial protection-related impacts on woodland resources. The impacts under this alternative would be similar to current management under Alternative D – No Action.

4.20.2.4.3 Alternative C

Alternative C would manage 47,130 acres along the White River as an SRMA and 69 acres in Fantasy Canyon, with the same designated SRMA acreages for other areas as described under Alternative A. The impacts would be similar to those for Alternative A, except that Wolf Point and Bitter Creek drainages, and the head of Sweetwater Canyon would be closed to mineral leasing. This alternative would provide more protection for woodland resources than Alternative D – No Action.

4.20.2.4.4 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 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 fire. There would be no 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. Alternative C would provide the most protection to woodland resources, followed by Alternative A. Alternatives B and D – No Action would provide the least protection to woodland resources.

4.20.2.5 Impacts of Soils/Watershed/Riparian Decisions on Woodland Resources

4.20.2.5.1 Alternatives A, B, and C

Under Alternatives A, B, and C, managing the browse in riparian areas for woody species would have direct long-term beneficial effects 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 percent (under Alternative C), erosion control measures on 21-40 percent slopes (under Alternative A) and greater than 20 percent 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. These alternatives would provide more protection of woodland resources than Alternative D – No Action.

4.20.2.5.2 Alternative D – No Action

Alternative D – No Action would allow grazing within riparian areas without regard for woody riparian species, and only deny surface disturbances to minerals-related activities on slopes greater than 40 percent. 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.

Alternative C would provide the most protection to woodland resources, followed by Alternatives A and then B. Alternative D – No Action would provide the least riparian and soils-related protection to woodland resources.

4.20.2.6 Impacts of Special Designations Decisions on Woodland Resources

The ACECs currently designated under the Diamond Mountain RMP would be re-designated under the proposed Vernal RMP, in which management would include comprehensive integrated activity plans under all of the action alternatives. The Red Mountain-Dry Fork ACEC would include maintenance and development of OHV and non-OHV trails, which would have direct, beneficial, long-term protection-related impacts on woodland resources. The 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 Wild and Scenic River System would have direct, long-term beneficial effects on woodland resources by protecting riparian woodland habitats.

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).

4.20.2.6.1 Alternative A

Alternative A would designate Bitter Creek (71,000 acres), Lower Green River (10,170 acres), Coyote Basin (87,743 acres), and the White River corridor (17,810 acres) as ACECs, limiting OHV use to designated trails and having long-term beneficial, protection-related impacts to woodland resources. The Lower Green River ACEC would be expanded to include both sides of the river, protecting high value scenic resources and riparian ecosystems, managing this area as VRM II and not allowing surface disturbing activities, with long-term beneficial impacts on woodland resources.

Alternative A would identify segments of the White River as suitable for designation into the Wild and Scenic River System, with beneficial long-term impacts on riparian woodland resources.

This alternative provides more long-term, beneficial protection-related impacts on woodland resources than Alternative D – No Action, which would only identify the Upper and Lower Green rivers as suitable for consideration as Wild and Scenic. Under alternative A, approximately 348,016 acres (182,072 more acres than Alternative D) would be designated or maintained as ACECs when compared to Alternative D (an 209 % increase over current management). The long-term beneficial impacts of special designation areas on woodland resources would be to protect the resource from or limit disturbances caused by oil and gas development, overgrazing, recreation, and OHV use.

4.20.2.6.2 Alternative B

Alternative B would not designate the Bitter Creek, Middle Green River, Lower Green River, White River, Four Mile Wash, or Main Canyon as ACECs, which would not provide long-term beneficial protection of riparian woodlands in these areas. However, in Coyote Basin, 47,659 acres would be designated as an ACEC, which would have beneficial protection-related impacts on woodland resources.

This alternative would maintain current special designation management within the BLM administered areas of the VPA, identical to Alternative D, with the exceptions of designating 8,470 acres along the Lower Green River and 47,659 acres in Coyote Basin. Alternative B would recommend designation of the Lower and Upper Green River as suitable for consideration as Wild and Scenic, which would provide management and have impacts similar to Alternative D – No Action. Under this alternative, 205,133 acres (39,189 more acres than Alternative D) would be designated or maintained as ACECs when compared to Alternative D, a 123% increase over current management.

4.20.2.6.3 Alternative C

Alternative C would affect woodland resources by designating Bitter Creek (68,834 acres), middle Green River (6,768 acres), the White River corridor (47,130 acres), Main Canyon

(100,915 acres), and Four Mile Wash (50,280 acres) as ACECs. Also, 124,161 acres would be designated in the Coyote Basin-Shiner-Kennedy Wash areas as an ACEC. Alternative D – No Action would not designate these areas as ACECs.

Alternative C would designate 81,168 acres in Nine Mile Canyon as an ACEC to protect cultural values. This is 36,987 acres more than currently designated under the No Action Alternative. Also, the Lower Green River ACEC would be expanded to include both sides of the river with 10,170 acres protecting high value scenic resources and riparian ecosystems, managing this area as VRM II and not allowing surface disturbing activities. In total, approximately 681,310 acres (515,366 more acres than Alternative D) would be designated or maintained under this alternative as ACECs when compared to Alternative D (a 410% increase over current management).

In addition to the Upper and Lower Green Rivers, Alternative C would recommend segments of the White River (approximately 44 miles), Green River (approximately 22 miles), Nine Mile Creek (approximately 13 miles), Nine Mile Creek (approximately 6 miles), the Middle Green River (36 miles), and Evacuation Creek, Bitter Creek, and Argyle Creek as suitable for consideration as Wild and Scenic. 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.

4.20.2.6.4 Alternative D – No Action

Management actions under Alternative D 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.

Special Designation decisions would have the most long-term beneficial impacts under Alternative C, followed by Alternatives A and B, based on the number of woodland acres protected under ACEC integrated activity plans, and actions to control and enhance woodland resources. Alternative D would have the least beneficial impacts on woodland resources by either not designating areas for protection or by not specifying management actions to protect woodland resources.

4.20.2.7 Impacts of Travel/Roads/Trails Decisions on Woodland Resources

4.20.2.7.1 Alternative A

Alternative A 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.

Developing trails (400 miles of mechanized [non motorized]) along the Green River and in other riparian areas, under Alternative A, 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.

Under Alternative A, 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.

Alternative A would not allow OHV use for off-trail big game retrieval. 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, this alternative provides more protection for woodland resources, but not as much protection as Alternative C.

4.20.2.7.2 Alternative B

Alternative B proposes OHV use for big game retrieval off of designated routes, 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.

4.20.2.7.3 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 Alternative A: 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 Alternative A.

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 Alternative A and therefore would provide more beneficial impacts to woodland resources than Alternative D – No Action.

4.20.2.7.4 Alternative D – No Action

Alternative D would continue to manage the Red Mountain trail as motorized, which would have long-term adverse impacts on woodland resources from OHVs as described under Impacts Common to All Alternatives. 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 lesser scale.

Alternatives D would not propose obliteration or reclamation of permitted roads and trails. The impacts would be similar to those described for Alternative B. In general, Alternatives A and C would have the greatest beneficial protection-related impacts on woodland resources, while Alternatives B and D would have the least beneficial impacts on the resource.

4.20.2.8 Impacts of Vegetation Decisions on Woodland Resources

4.20.2.8.1 Alternatives A, B, and C

Allowing prescribed fire on 156,425 acres per decade for Alternatives A, B, and C would have impacts similar to those described under Fire Management and Impacts Common to All Alternatives. 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.

4.20.2.8.2 Alternative D – No Action

The impacts of prescribed burning and vegetation manipulation (described under Impacts Common to All Alternatives) for Alternative D – No Action would be similar to the action alternatives, but less in scope than the other alternatives.

4.20.2.9 Impacts of Visual Decisions on Woodland Resources

4.20.2.9.1 Alternatives A

For Alternative A, 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 VRM I and VRM II areas. 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 Alternative A would be the same as Alternative D – No Action, but greater in scope, as approximately 180% more BLM administered land within the VPA would be designated at VRM I and II under Alternative A when compared to Alternative D (see Table 4.20.1).

4.20.2.9.2 Alternative B

The impacts of Alternative B would be similar to Alternative A, but with fewer acres managed under VRM I and VRM II surface disturbance and visual contrast restrictions. Under this alternative, 286, 801 acres would be managed as VRM I and VRM II, which is approximately the number of acres designated under Alternative D – No Action.

4.20.2.9.3 Alternative C

The impacts would be the same as Alternative A, except that Alternative C would designate more acres as VRM I and VRM II than the other alternatives, 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 (see Table 4.20.1 below). This alternative would have more adverse impacts on woodland resources, by restricting woodland fire treatments, than Alternative D – No Action. Alternative C would designate 768,890 acres as VRM I and VRM II, a 268% increase compared to Alternative D.

4.20.2.9.4 Alternative D – No Action

For Alternative D – No Action, the impacts of VRM Class I and Class II designations in the resource area on woodland resources would be both adverse and beneficial, with the same impacts as described under Alternative A. This alternative would designate the least number of acres under VRM I and II, thereby providing the least visual resource protection to woodland resources, but also having the least number of acres of BLM administered land within the VPA restricted by VRM surface disturbance limitations under the VRM I and II Class objectives. More acres within the VPA could be treated for fire and fuel load reductions, which would have beneficial impacts on woodland resources

TABLE 4.20.1. VRM CLASS ACREAGES BY ALTERNATIVE				
	Alternative A	Alternative B	Alternative C	Alternative D – No Action
VRM I and II	513,644	286,801	768,890	286,457
VRM III and IV	1,960,356	2,187,198	1,705,511	2,187,543

As described in Table 4.20.1, Alternative C would have the highest number of VPA woodland acres designated for protection under VRM Class I and Class II, followed by Alternative A. Alternatives B and D – No Action would provide the least VRM protection to woodland resources.

4.20.2.10 Impacts of Woodlands Decisions on Woodland Resources

4.20.2.10.1 Alternative A

Under Alternative A, management actions on up to 552,663 acres of BLM administered land within the VPA would 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) would be off-limits to vegetation removal. The impacts on woodland resources from these management actions would be both directly adverse and beneficial: OHV use during treatments and woodcutting would cause short-term surface disturbances, soil erosion, and create conditions that support the introduction and spread of noxious weeds. Beneficial long-term impacts would result from these management actions and are described under Impacts Common to All Alternatives. This alternative would have more beneficial impacts to woodland resources than Alternative D – No Action.

4.20.2.10.2 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 Alternative A. 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. Compared to Alternative D, this alternative would have more beneficial impacts.

4.20.2.10.3 Alternative C

Alternative C would have similar impacts as Alternative A, with the same number of acres open to forest and woodland management (552,663 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 Alternative A.

4.20.2.10.4 Alternative D – No Action

Alternative D would allow up to 88,200 acres of forest and 200,100 acres of woodlands to be treated or harvested. Approximately 13,606 acres (within WSAs) would be off-limits to vegetation removal. The impacts to the resource would be similar to those described for Alternative A, 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.

4.20.2.11 Summary

4.20.2.11.1 Alternative A

This alternative would provide more beneficial impacts to woodland resources than Alternative B and D – No Action, but less than C by:

- Obliterating/closing, reseeding new permitted roads and trails after their utility has ended
- Maintaining and restoring woodlands biodiversity, forest and land health, historical fire regimes, and multiple use and sustained yield
- Establishing a high number of acres for special designation resource protection (SRMAs, ACECs, and identifying segments of river recommend for consideration as Wild and Scenic), but less than Alternative C
- Long-term disturbed acres for mineral development less than B, but not less than Alternatives C and D – No Action
- Designate a high number of acres under VRM I and II, but less than under Alternative C

4.20.2.11.2 Alternative B

This alternative would provide more beneficial impacts to woodland resources than Alternative D – No Action, but less than A and C, by:

- Allowing prescribed fire equal to Alternatives C and A (156,425 acres)
- Managing browse in riparian areas for woody species

- Establishing some areas for special designation (SRMAs, ACECs, but less than Alternatives C and A)

4.20.2.11.3 Alternative C

This alternative would provide the highest level of woodlands resource protection, as compared to Alternative D – No Action and the other alternatives, by:

- Numbers of acres of long-term mineral disturbances less than Alternatives A, B, and D
- Establishing the highest number of acres for special designation resource protection (SRMAs, ACECs, and identified segments of river suitable for consideration as Wild and Scenic)
- Providing the highest protection for steep slope disturbances
- Providing the highest protection from road and trail development
- Designating the most acres under VRM I and II (the most protective VRM Classes)

4.20.2.11.4 Alternative D – No Action

This alternative would provide the least level of protection for woodland resources by:

- Providing the least level of fire management or treatments for woodland resources
- Providing the least number of acres and resource protection for special designation areas (SRMAs, ACECs)
- Providing the least protection for riparian areas and steep slopes
- Providing the least protection or treatment to develop healthy, sustainable woodland and forest resources

4.20.3 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.

4.20.4 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.

4.20.5 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.

4.20.6 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.

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