

Chapter 2. Alternatives

2.1 Introduction

This chapter describes and compares the alternatives considered by the responsible official for the draft forest plan. It includes a discussion of how the alternatives were developed, issues raised, descriptions and comparisons of the alternatives, and alternatives that were not considered in detail. Numbers such as acres, miles, and volumes are approximate due to the broad scale of the data used.

Chapter 2 is intended to present the alternatives in comparative form, providing a clear basis for choice among options by the decision maker. The information used to compare alternatives is summarized from Chapter 3, "Affected Environment and Environmental Consequences". It contains the detailed scientific basis used to measure the potential environmental consequences of each of the alternatives.

2.1.1 Changes between draft and final

Changes between the draft and final EIS were incorporated based on public and internal comments. All the changes are within the range of effects disclosed in the draft EIS (DEIS). For specific changes, please see each resource section. Overarching changes include the following:

- Alternative F includes a blend of features from alternatives presented in the DEIS; see the detailed description of alternatives below. Analysis for alternative F was added to all sections of the FEIS.
- Numerous minor technical corrections were made throughout the EIS. Additional analysis or explanation was also provided as needed in response to public comments.
- More recent best available scientific information, including but not limited to updated data sources, map products, modeling results, and literature references were added where appropriate.
- Numerous plan components were reworded, modified, or re-organized in the 2020 Forest Plan to improve clarity.

2.2 Alternative development

As discussed in chapter 1, this forest plan revision effort is based on the requirements of the 2012 Planning Rule, findings of the forest assessment, changes in conditions and demands since the 1986 Forest Plans, and public concerns. A list of significant issues was identified during the public involvement period, and some of these issues drove the development of alternatives. Some additional items, such as the WSRs eligibility study and the wilderness inventory and evaluation, are addressed in the revision because they are required by planning regulations (i.e., 36 CFR § 219.17(3)(b)(1)).

The Council on Environmental Quality regulations, with respect to the National Environmental Policy Act (NEPA) procedures and specifically the aspect related to alternative development (36 CFR 40 § 1502.14), are fundamental to the process. This section of the CFR reads as follows:

This section is the heart of the EIS. Based on the information and analysis presented in the sections on the affected environment (§ 1502.15) and the environmental consequences (§ 1502.16), it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public. In this section agencies shall:

- h. Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
- i. Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

- j. Include reasonable alternatives not within the jurisdiction of the lead agency.
- k. Include the alternative of no action.
- l. Identify the agency's preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
- m. Include appropriate mitigation measures not already included in the proposed action or alternatives.

All reasonable alternatives to the proposed action must meet the purpose and need for change and address one or more of the significant issues. Not all possible alternatives were carried into detailed study, because the list of options would have been prohibitively large. Instead, the responsible official identified those alternatives that met the criteria and created a reasonable range of outputs, direction, costs, management requirements, and effects from which to choose.

Alternatives represent a range of possible management options. Information presented here and in Chapter 3 provide the basis from which to evaluate the comparative merits of the alternatives. Each alternative emphasizes specific land and resource uses and de-emphasizes other uses in response to the significant issues.

Alternative A is the no-action alternative, which reflects the 1986 Forest Plans, as amended to date, and accounts for current laws, regulations, and terms and conditions from biological opinions (BOs). Alternative B was released for public review and comment as the proposed action. Development of alternatives C, D, and E was driven by issues identified during scoping. Alternative F was developed based on comments received during the DEIS comment period.

2.3 Public involvement

The HLC NF began public participation activities prior to the development of the Assessment of the HLC NF. The Forest contracted with the Center for Natural Resources and Environmental Policy at the University of Montana to develop an extensive public engagement process. The Center facilitated numerous public and interagency meetings to bring together information for the HLC NF to consider in preparing the assessment, developing the proposed action, and developing alternatives to the proposed action. There were four rounds of public meetings. The first set of meetings introduced the concepts of forest plan revision to the public. The next meetings discussed the Need to Change, Desired Conditions, and Forest Resource Management (including recommended wilderness and timber suitability). Public input was taken throughout the process. The dialogue and recommendations from this public involvement process were used to help develop the draft proposed action.

In addition to postal mail and email, public meeting information was announced via the forest plan revision website (www.fs.usda.gov/goto/hlc/forestplanrevision). The website also included means for the public to comment (using electronic or printed comment forms, a mapping tool, subscribing to the website, and/or submitting comments via an electronic database) and posted meeting results and other information. Updates were posted and mailed periodically.

The notice of intent for the proposed action to prepare an EIS was published in the Federal Register on December 1, 2016. The notice of intent asked for public comment on the proposal for a 120-day period. The agency held nine public meetings to provide opportunities to better understand the proposed action so that meaningful public comments could be provided by the end of the scoping period. Using the comments from the public, other agencies, tribes, and organizations, the Forest's interdisciplinary team developed a list of issues to address through changes to the proposed action, development of alternatives, or in analysis of impacts of the proposed action. During the 120-day comment period, over 1100 comment letters were received, which contained over 5,000 individual comments. The majority of comments (80%) pertained to recommended wilderness areas and motorized/mechanized uses within them. Other emphasis

issues included: timber production, wildlife (primarily related to grizzly bear, lynx, and elk habitat security), livestock grazing, motor vehicle access, weeds, and the Continental Divide National Scenic Trail.

2.4 Government agency involvement

The 2012 Planning Rule (36 CFR § 219.4(b)) requires the review of the planning and land use policies of other Federal agencies, state and local governments, and Indian tribes. As part of that outreach effort, a number of discussions with representatives from those agencies were initiated, and ongoing dialogue continues. In addition, the Center for Natural Resources and Environmental Policy at the University of Montana organized and facilitated intergovernmental meetings. These meetings enabled the Forest to learn about upcoming plans and projects from other agencies, as well as being able to evaluate whether those planning documents were or were not consistent with the proposed HLC NF plan. These meetings provided agencies an opportunity to exchange updates and information.

The Forest reviewed other agency planning documents that are within or in close proximity to the HLC NF for consistency. Management of public lands adjacent to the HLC NF was considered in the formulation of alternatives and in the analysis of cumulative effects of those alternatives. Land management plans were reviewed for consistency with the forest plan. The draft forest plan is consistent with the majority of these plans. Discrepancies, if any, are described in the cumulative effects sections for specific resources. For example, county wildfire protections plans emphasize protection of values at risk; while the draft plan integrates these values with other resource objectives. While certain components may not be fully consistent, the HLC NF will continue to work with these entities to address the impacts and benefits from forest management.

2.4.1 Federal

Management concerns across boundaries were considered when working with other federal agencies, as well as with adjacent NFs. Land management plans for NFS lands within or in close proximity to the HLC NF that were considered during the analysis include the following:

- Custer Gallatin NF Plan,
- Beaverhead-Deerlodge NF Plan,
- Flathead NF Plan,
- Lolo NF Plan

Other plans considered included: Bureau of Reclamation Canyon Ferry Shoreline Management Plan, Bureau of Reclamation Canyon Ferry Reservoir Resource Management Plan, Bureau of Land Management (BLM) Butte Resource Management Plan, BLM Missoula Resource Management Plan, BLM Lewistown Resource Management Plan, National Park Service Glacier National Park General Management Plan, National Park Service Glacier National Park Bear Management Plan, Natural Resources Conservation Service Montana Soil Health Strategy, Natural Resources Conservation Service Montana Sage Grouse Initiative, and the Montana Army National Guard Integrated Natural Resources Management Plan for the Limestone Hills Training Area.

2.4.2 Tribal

The forest supervisor and members of the planning team met with tribal representatives from the Blackfeet Nation during development of the draft forest plan. As a result, specific tribal comments were considered in this FEIS and 2020 Forest Plan.

Several resource management plans for the Blackfeet Nation were identified. The Wildland Fire Management Plan for Blackfeet Nation (2018) was considered in the FEIS. Several other plans were

identified but were not made available for review at the time of the FEIS: Blackfeet Agriculture Resource Management Plan, and the Blackfeet Bison Restoration and Conservation Plan.

2.4.3 State

Several Montana State agencies are affected by, or affect, FS management. The Forest coordinated information formally and informally with state agencies during all phases of the process. These offices provided formal comments during the public comment period and other public involvement stages.

The following plans were considered during the analysis: Montana Statewide Forest Resource Strategy, Montana State Parks and Recreation Strategic Plan, Montana State Parks 2014-2018 Statewide Comprehensive Outdoor Recreation Plan, Montana's Statewide Wildlife Action Plan, and the Montana Fish and Wildlife Conservation and Management Plans.

2.4.4 County/city

Beginning with initiation of the planning process, local government officials from the counties within HLC NF lands were regularly updated. FS representatives attended county meetings to provide updates and answer questions. County plans were considered and evaluated for consistency during the planning process. The HLC NF is committed to working with all local counties to better address the impacts and benefits from management of the HLC NF.

The following plans were considered during the analysis: County Community Wildfire Protection Plans, Broadwater County Growth Policy Plan, Cascade County Growth Policy Update, Choteau County Growth Policy Plan, Jefferson County Growth Policy Plan, Judith Basin County Growth Policy, Lewis and Clark County Growth Policy Plan, Meagher County Growth Policy Plan, Pondera County Growth Policy Plan, Powell County Growth Policy Plan, Teton County Growth Policy Plan, and the City of Helena Montana Parks, Recreation, and Open Space Plan.

2.5 Forest Service planning

FS planning takes place at different organizational levels and geographic scales. Planning occurs at three levels—national strategic planning, NFS unit planning, and project or activity planning. The Chief of the FS is responsible for national planning, such as preparation of the FS strategic plan that established goals, objectives, performance measures, and strategies for management of the NFS. NFS unit planning results in the development, amendment, or revision of a land management plan, such as the HLC NF forest plan. The supervisor of the NF is the responsible official for the development and approval of a plan, plan amendment, or plan revision for lands under the responsibility of the supervisor. The forest supervisor or district ranger is the responsible official for project and activity planning (§ 219.2).

2.5.1 National strategic planning

The USDA FS Strategic Plan: Fiscal Year 2015-2020 contains four outcome-oriented goals for the FS, each with strategic objectives. The strategic plan can be accessed online (www.fs.fed.us/strategicplan). The first two goals and related objectives are directly related to the current planning effort:

1. Sustain our Nation's forests and grasslands
 - Foster resilient, adaptive ecosystems to mitigate climate change
 - Mitigate wildfire risk
 - Conserve open space
2. Deliver benefits to the public
 - Provide abundant clean water

- Strengthen communities
- Connect people to the outdoors

The FS continues to use the results of the 2010 Resources Planning Act Assessment ([U.S. Department of Agriculture, Forest Service, 2012b](#)), a report on the status and projected future trends of the nation's renewable resources on all forests and rangelands, as required by the 1974 Forest and Rangeland Renewable Resources Planning Act. The assessment includes analyses of forests, rangelands, wildlife and fish, biodiversity, water, outdoor recreation, wilderness, urban forests, and the effects of climate change on these resources. The assessment provides a snapshot of current U.S. forest and rangeland conditions (all ownerships), identifies drivers of change for natural resource conditions, and projects the effects of those drivers on resource conditions 50 years into the future. This assessment uses a set of future scenarios that influence the resource projections, allowing the exploration of a range of possible futures for U.S. renewable natural resources. Alternative future scenarios were used to analyze the effects of human and environmental influences on U.S. forests and rangelands, including population growth, domestic and global economic growth, land use change, and climate change.

In addition, the USDA strategic plan for fiscal year 2014-2018 has specific goals that also align with the 2012 Planning Rule, including (1) assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving; and (2) ensure our NFs and private working lands are conserved, restored, and made more resilient to climate change while enhancing our water resources. The USDA strategic plan can be accessed on the USDA's Web site (www.usda.gov).

2.5.2 National Forest System unit planning

The NFMA of 1976 (Pub. L. 94-588) amended the Forest and Rangeland Renewable Resources Planning Act of 1974. The NFMA requires the preparation of an integrated land management plan by an interdisciplinary team for each unit of the NFS (national forests and grasslands). The public must be involved in preparing and revising forest plans. Forest plans must provide for multiple use and sustained yield of products and services and include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. The forest plan does not authorize site-specific prohibitions or activities; rather, it establishes broad direction, similar to zoning in a community.

The 2012 Planning Rule for land management planning for the NFS sets forth process and content requirements to guide the development, amendment, and revision of land management plans to maintain and restore NFS land and water ecosystems while providing for ecosystem services (the benefits people obtain from the NFS planning area) and multiple uses ([U.S. Department of Agriculture, Forest Service, 2012b](#)). The final planning directives, effective January 30, 2015, are the key set of agency guidance documents that direct implementation of the 2012 Planning Rule ([U.S. Department of Agriculture, Forest Service, Northern Region, 2015](#)).

2.5.3 Project or activity planning

Project and activity consistency with the forest plan (§ 219.15) will be achieved through (1) application to existing authorizations and approved projects or activities, (2) application to projects or activities authorized after the plan decision, (3) resolving inconsistency, (4) determining consistency, and (5) consistency of resource plans within the planning area with the land management plan. Refer to pages 10-11 of the 2020 Forest Plan for additional information about project and activity consistency. Previously approved and ongoing projects and activities are not required to meet the direction of the 2020 Forest Plan and will remain consistent with the direction in the 1986 Forest Plans, as amended.

The forest plan direction will apply to all projects and or activities that have a decision made on or after the effective date of the final ROD. Projects and activities authorized after approval of the forest plan will

be consistent with applicable plan components in the forest plan. A project or activity approval document will describe how the project or activity is consistent with the applicable plan components.

Any resource plans developed by the Forest that apply to the resources or land areas within the planning area will be consistent with the plan components. Resource plans developed prior to the plan decision will be evaluated for consistency with the plan and amended if necessary.

When a proposed project or activity would not be consistent with the applicable plan components, the responsible official shall take one of the following steps, subject to valid existing rights (36 CFR § 219.15(c)):

- modify the proposed project or activity to make it consistent with the applicable plan components,
- reject the proposal or terminate the project or activity,
- amend the plan so that the project or activity will be consistent with the plan, as amended, or
- amend the plan contemporaneously with the approval of the project or activity so that the project or activity will be consistent with the plan, as amended. This amendment may be limited to apply only to the project or activity.

The forest supervisor or district ranger is the responsible official for project and activity planning. In order for prohibitions or activities that take place on the ground, project or activity decisions will need to be made following appropriate procedures (e.g., site-specific analysis in compliance with National Environmental Policy Act).

2.6 Issues

Issues serve to highlight effects or unintended consequences that may occur from the proposed action or alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the decision maker and public to understand. Issues were identified through scoping. Significant issues were defined as those directly or indirectly caused by implementing the proposed action, involve potentially significant effects, and could be meaningfully and reasonably evaluated and addressed within the programmatic scope of a Forest Plan. Some issues are best resolved at finer scales (subsequent NEPA analysis) where the site-specific details of a specific action and resources it affects can be meaningfully evaluated and weighed. Conversely, some issues have already been considered through broader programmatic NEPA analysis [e.g. the Northern Rockies Lynx Management Direction (NRLMD) FEIS]. In these cases, the issues focus on evaluating the effects unique to and commensurate with the decisions being considered here.

Alternatives were developed around those significant issues that involved unresolved conflicts concerning alternative uses of available resources (40 CFR 1500.2(e)). The HLC NF identified the following significant issues during scoping that drove alternative development.

2.6.1 Issues that drove alternatives

Recommended wilderness and undeveloped areas

The allocation of recommended wilderness areas (RWAs) was a primary issue for most of the public commenters. The range of public comments regarding RWAs was vast. On one end of the spectrum, commenters asked the Forest to consider all existing inventoried roadless areas (IRAs) for RWAs. At the other end of the spectrum, commenters desired no RWAs. Many commenters recommended the consideration of additions or deletions to specific areas that were identified in the proposed action. Commenters also provided recommendations on areas they wished to remain undeveloped where primitive recreation opportunities are provided.

Measurement indicators: number of RWAs, acres of RWAs, and acres of additional undeveloped areas (represented by primitive recreation opportunities).

Motorized and mechanized means of transportation in recommended wilderness areas

In addition to the issue of the amount and location of RWAs, whether motorized recreation uses and mechanized means of transportation are suitable within RWAs was also a primary concern of many public comments. Comments included those in favor of motorized recreation uses and mechanized means of transportation are suitable within RWAs, as well as those that feel these uses would be suitable within RWAs until these areas are formally designated by Congress. The motor vehicle and mountain bike communities were most vocal on this issue. Some motorized users do not want to see further restrictions on motorized access. The mountain bike community was concerned about the potential loss of access to areas that they currently use.

Increasing population, with resulting increasing demands and pressures on public lands, may potentially have impact on recommended wilderness areas. These changes may lead to increased demands for recreational use, including motorized and mechanized means of transportation in recommended wilderness areas. This pressure elevates the importance of protecting wilderness characteristics by prohibiting uses within these areas, specifically motorized recreation uses and mechanized means of transportation.

To address these public concerns, alternatives were created that analyzed the effects of the suitability of allowing, as well as not allowing, motorized recreation uses and mechanized means of transportation on wilderness characteristics within RWAs.

To address additional concerns about wildlife habitat in the core of the Elkhorns wildlife management unit, one alternative analyzed closing the core of the Elkhorns to mechanized means of transportation (mountain bikes).

Measurement indicators: miles of trail no longer available to mechanized means of transportation, miles of road no longer open for motorized access, acres of motorized over-snow use no longer available, and miles of motorized trail no longer available.

Timber harvest and timber production

Timber harvest and production was raised as an issue by many public commenters. This topic includes the identification of lands suitable for timber production, estimated volume outputs of timber, and timber harvest conducted both for timber production and for other purposes. The comments included requests to increase the amount of lands suitable for timber production, increase timber volume offered from NFS lands, and/or increase the number of acres treated with harvest. Conversely, other commenters requested that few or no lands be suitable for timber production, and/or that less timber harvest occurs on NFS lands.

Measurement indicators: acres suitable for timber production, acres unsuitable for timber production where harvest may occur for other purposes, volume for projected timber sale quantity (PTSQ) and projected wood sale quantity (PWSQ), acres of projected harvest.

2.6.2 Issues that did not drive alternatives

Other issues were raised both internally and externally. While they did not drive the development of alternatives, they are important elements of the analysis in the FEIS. Some issues include forest plan components that vary by alternative, to allow the analysis to display the effects of different approaches.

These issues include but are not limited to:

- Water supply and quality
- Riparian area conditions
- Spread and control of invasive plants (weeds)
- Impacts of livestock grazing on various resources, including its importance to local communities
- Air quality
- Role and effects of large fires on the landscape
- Role of fire management, including fire suppression, the identification of high value resources, fire suppression, and wildland urban interface (WUI) considerations
- Climate change and carbon storage
- Natural range of variation (NRV) of vegetation conditions
- Role of vegetation management actions (timber harvest, fuel reduction, restoration, revegetation, salvage)
- Specific vegetation components (old growth, snags, coarse woody debris, large trees)
- Condition of specific plant species or types (whitebark pine, aspen, sagebrush, nonforested plant communities, spruce/fir)
- At-risk (threatened, endangered, and species of conservation concern) plant and animal species
- Wildlife species diversity and viability of species, including specific wildlife species
- Distribution of certain wildlife species and availability for hunting, trapping, viewing and other human uses
- Recreation opportunities
- Recreation special uses
- Recreation access
- Aviation recreation access in primitive and semi-primitive nonmotorized ROS settings
- Scenic integrity objectives (SIOs)
- Designated areas and designated uses
- Management of the Badger Two Medicine area
- Habitat connectivity
- Elk habitat security
- Economic contributions of agriculture

2.7 Alternatives

The range of alternatives developed and presented is based on a preliminary evaluation of the information gathered from public and internal comments and the purpose and need for the project. While all alternatives provide a wide range of ecosystem services and multiple uses, some give slightly greater emphasis to selected resources based on the theme of the alternative and response to revision topics.

The action alternatives were developed based on the Forest's assessment ([2015](#)), the need for change, desired conditions, implementation and monitoring of the current forest plan, public meetings, and comments received during the public involvement period, interagency meetings, and meetings with tribal partners. The alternatives represent a range of possible management options from which to choose. Each alternative emphasizes specific land and resource uses and de-emphasizes other uses in response to the revision topics. Some components may vary between alternatives to address the issues identified during scoping; see the description of the alternatives for specific details. Plan direction for desired conditions, standards, and guidelines remains constant for all action alternatives, with the exceptions noted.

In addition to the no-action alternative (A) and the proposed action that was released for public scoping in 2016 (B), three additional alternatives (C, D, and E) were developed based on the issues identified during the scoping period. Alternative F, the preferred alternative, was developed based on comments received on the Draft Forest Plan/Draft EIS. The alternatives represent a range of possible management options from which to choose. Each alternative emphasizes specific land and resource uses and de-emphasizes other uses in response to the revision topics. Some components may vary between alternatives to address the issues identified during scoping; see the description of the alternatives for specific details. Plan direction for desired conditions, standards, and guidelines remains constant for all action alternatives, with the exceptions noted. The general theme and intent of each alternative is summarized below. The Plan contains the plan components for the preferred alternative only.

Given the extensive public engagement and environmental review recently completed for the forests' travel management decisions, all action alternatives would be generally consistent with the current travel plans, which are primarily reflected by motorized versus nonmotorized ROS settings. To respond to the issues, ROS settings would be adjusted by alternative where the shift remains consistent with the travel plans.

2.7.1 Elements common to all alternatives

All alternatives in this document adhere to the principles of multiple use and the sustained yield of goods and services required by the CFR (36 CFR § 219.1 (b)). All the alternatives are designed to:

- meet law, regulation, and policy;
- contribute to ecological, social, and economic sustainability;
- meet the purpose and need for change and address one or more significant issues;
- provide integrated direction as included in the forestwide desired conditions, objectives, standards, guidelines, and sustainability;
- provide sustainable levels of products and services; and
- comply with existing travel plans, except in RWAs and other limited locations.

In addition, the following would be the same for all alternatives:

- Existing developed recreation sites and recreation residence special use permits would be allowed; alternatives do not make decisions to remove or create developed recreation sites.
- Management direction for and location of utility and road rights-of-way, easements, and communication sites would remain constant.
- National Wilderness Preservation System lands and plan components would remain constant.
- Oil and gas leasing decisions would not be made.
- Eligible WSRs would remain constant.
- Recent and updated multi-region management direction for Canada lynx; and new management direction for grizzly bear would be incorporated.
- Mechanized means of transportation would be suitable in all areas except those designated as wilderness or recommended wilderness.
- The Elkhorns Wildlife Management Unit designation would be retained.

2.7.2 Elements common to all action alternatives

All action alternatives (B, C, D, E, and F) are designed to be consistent with the 2012 Planning Rule and associated directives and emphasize adaptive management and the use of best available scientific information. In addition, all action alternatives would include the creation of the Missouri River and Smith River corridors as special emphasis areas.

2.7.3 *Alternative A – no action*

Alternative A, the no-action alternative, reflects current management practices under the 1986 Forest Plans, as amended and implemented, and provides the basis for comparing alternatives to current management and levels of output. Alternative A does not address some of the elements associated with the 2012 Planning Rule, such as timber suitability or riparian management zones (RMZs). The Council on Environmental Quality regulations (40 CFR 1502.14d) requires that a “no action” alternative be analyzed in every EIS. This does not mean that nothing would occur under alternative A. The current conditions as described by each resource in chapter 3 would continue. Under this alternative, current management plans would continue to guide management of the planning area, and ongoing work or work previously planned and approved would occur under that guidance. Laws and regulations that have been adopted since the 1986 plans are analyzed as part of the no-action alternative (for example, the designation of IRAs). With respect to the identified issues, the alternative is described as follows:

- There would be three recommended wilderness areas (Big Log, Mount Baldy, and Electric Peak; total of 34,265 acres).
- There would be no changes to existing travel plans.
- Mechanized means of transportation would be suitable in all areas, except designated wilderness.
- Lands suitable for timber production would be based on the 1986 Forest Plans as amended and implemented, and in accordance with current regulation and policy. When consistent with other plan components, harvest for purposes other than timber production could occur on a subset of unsuitable lands.
- Specific, prescriptive standards for elk habitat security would be included that would differ between the former Helena National Forest lands and the former Lewis and Clark National Forest lands.
- Eligible Wild and Scenic Rivers would be included.
- The Elkhorns Wildlife Management Unit designation would be maintained.
- None of the other special emphasis areas identified in one or more of the action alternatives would be included (e.g., Missouri River Corridor, Smith River Corridor, South Hills Recreation Area; Poe-Manley proposed research natural area; Green Timber Basin-Beaver Creek botanical area; or Grandview Recreation Area).

2.7.4 *Alternative B*

Alternative B, which was scoped as the proposed action, represents a mix of RWAs and lands identified as suitable for timber production. The balance of opportunities available for primitive recreation and nonmotorized recreation experiences versus less primitive and more motorized recreation experiences would be generally consistent with current travel plans, except in the case of RWAs. With respect to the identified issues, the alternative is described as follows:

- There would be nine (9) RWAs: Big Log, Mount Baldy, Electric Peak (previously known as Blackfoot Meadows), Deep Creek, Big Snowies, Silver King, Red Mountain, Arrastra Creek, and Nevada Mountain). This represents a total of 213,076 acres.
- Motorized recreation uses and mechanized means of transportation would not be suitable within RWAs.
- All lands that are not withdrawn from timber suitability due to legal or technical factors would be suitable for timber production except for: areas with primitive and semi-primitive nonmotorized ROS; RWAs; and the Elkhorns GA, South Hills Recreation Area, Badger Two Medicine area, Highwoods GA, Snowies GA, and Dry Range. When consistent with other plan components, harvest for purposes other than timber production could occur on other lands not suitable for production.

- Plan components that address elk habitat security would be included that are based on the best available scientific information and allow flexibility based on specific area needs and characteristics.
- The South Hills Recreation Area would be included.
- The Poe-Manley proposed research natural area would not be included.
- The Green Timber Basin-Beaver Creek botanical area would not be designated.
- The Grandview Recreation Area would not be designated.

2.7.5 Alternative C

Alternative C is a modified proposed action, which also represents a mix of RWAs and lands identified as suitable for timber production. The balance of opportunities available for primitive recreation and nonmotorized recreation experiences versus less primitive and more motorized recreation experiences would be generally consistent with current travel plans, except in the case of RWAs. In the Divide and Elkhorn GAs some changes to the ROS would be included. This is proposed for areas where desired future management would require changes to the travel plans. With respect to the identified issues, the alternative is described as follows:

- There would be nine (9) RWAs; the same as listed for alternative B.
- Motorized recreation uses and mechanized means of transportation would be suitable within RWAs.
- Approximately 19,000 acres of Recreation settings in the Elkhorns Geographic Area would shift from semi-primitive motorized to semi-primitive non-motorized recreation opportunities.
- An area within the Elkhorns “core” would be identified where mechanized means of transportation would not be suitable.
- Timber suitability determinations would be the same as described for alternative B.
- Plan components that specifically address management of elk habitat security or displacement of elk during hunting season are not included.
- The South Hills Recreation Area would be included.
- The Poe-Manley proposed research natural area would not be included.
- The Green Timber Basin-Beaver Creek botanical area would not be designated.
- The Grandview Recreation Area would not be designated.

2.7.6 Alternative D

Alternative D was developed to address comments and themes of limiting human influences on the landscape. This alternative would be responsive to commenters who desire more undeveloped recreation areas and includes the greatest amount of RWAs and the least amount of lands suitable for timber production. RWAs and primitive or semi-primitive nonmotorized ROS areas were selected where consistent with current travel plans, with emphasis given to areas where decreased human presence would enhance connectivity for wildlife. With respect to the identified issues, the alternative is described as follows:

- There would be sixteen (16) RWAs, a total of 474,589 acres. These would include the nine areas listed for alternatives B and C in addition to the following seven areas: Camas Creek; Wapiti Peak; Loco Mountain; Colorado Mountain; Tenderfoot Creek; Big Horn Thunder; and Middle Fork Judith. RWAs were identified with consideration given to maintaining or enhancing potential habitat connectivity for large, wide-ranging wildlife species within and among GAs. Alternative D includes additions to the original Blackfoot Meadows and Nevada Mountain RWAs.
- Motorized recreation uses and mechanized means of transportation would not be suitable within RWAs.

- Additional primitive ROS areas would be identified in the Elkhorns, Highwoods, and Badger Two Medicine areas of the Rocky Mountain Range to provide additional undeveloped areas.
- In addition to the exclusions from alternative B, lands would not be suitable for timber production within additional RWAs, or where the ROS settings are modified to be primitive or semi-primitive nonmotorized. When consistent with other plan components, harvest for purposes other than timber production could occur on lands not suitable for production.
- Plan components that specifically address management of elk habitat security or displacement of elk during hunting season are not included.
- The South Hills Recreation Area would be included.
- The Poe-Manley proposed research natural area would be included in the Elkhorns GA (4,505 acres).
- The Green Timber Basin-Beaver Creek botanical area would not be designated.
- The Grandview Recreation Area would not be designated.

2.7.7 Alternative E

Alternative E was developed to address comments and themes of increasing timber production from NFS lands. All lands that may be suited would be included as suitable for timber production, except for the Badger Two Medicine area and the Elkhorns GA. The recreation opportunities spectrum classes that are the most compatible with harvest activities would be selected where consistent with current travel plans. No RWAs would be included. With respect to the identified issues, the alternative is described as follows:

- There would be no RWAs.
- There would be no changes to suitability to motorized and mechanized means of transportation relative to the existing condition.
- Mechanized means of transportation would be suitable anywhere except designated wilderness.
- All lands that are not withdrawn from timber suitability due to legal or technical factors would be suitable for timber production except for those lands within the Elkhorns GA and the Badger Two Medicine area. When consistent with other plan components, harvest for purposes other than timber production could occur on a subset of unsuitable lands.
- Plan components that address elk habitat security would be included that are based on the best available scientific information and allow flexibility based on specific area needs and characteristics.
- The South Hills Recreation Area would not be included.
- The Poe-Manley proposed research natural area would be not included.
- The Green Timber Basin-Beaver Creek botanical area would not be designated.
- The Grandview Recreation Area would not be designated.

2.7.8 Alternative F

Alternative F, which is the preferred alternative, represents a mix of RWAs and lands identified as suitable for timber production. The balance of opportunities available for primitive recreation and semiprimitive nonmotorized recreation experiences versus less primitive and more motorized recreation experiences would be generally consistent with current travel plans, except in the case of RWAs. With respect to the identified issues and other key features, the alternative is described as follows:

- There would be seven (7) RWAs: Big Log, Mount Baldy, Electric Peak, Big Snowies, Silver King, Red Mountain, and Nevada Mountain, a total of 153,325 acres.
- Motorized recreation uses and mechanized means of transportation would not be suitable within RWAs.

- Additional primitive ROS areas would be identified in the Elkhorns GA, the Tenderfoot and Deep Creek areas of the Little Belt Mountain GA, and the Badger Two Medicine areas of the Rocky Mountain Range GA to provide additional undeveloped areas outside of RWAs.
- All lands that are not withdrawn from timber suitability due to legal or technical factors would be suitable for timber production except for: areas with primitive and semi-primitive nonmotorized ROS; RWAs; and the Elkhorns GA, South Hills Recreation Area, Badger Two Medicine area, Highwoods GA, Snowies GA, and Dry Range. When consistent with other plan components, harvest for purposes other than timber production could occur on other lands not suitable for production.
- Plan components that address the potential for displacement of elk during the hunting season would be included that are based on the best available scientific information and allow flexibility based on specific area needs and characteristics.
- The South Hills Recreation Area would be included.
- The Poe-Manley proposed research natural area would be included in the Elkhorns GA, with a smaller delineation than the area included in Alternative D (1,578 acres).
- The Green Timber Basin-Beaver Creek botanical area would be designated in the Rocky Mountain Range Geographic Area to protect and emphasize a unique ecological habitat that supports over 10 separate orchid populations.
- The Grandview Recreation Area would be designated in the west end of the Big Snowies Geographic Area to allow for continued existing semiprimitive motorized uses (primarily snowmobiles) in the winter. It would also provide a primitive recreation opportunity for mechanized means of transportation on the existing trail system surrounding the Crystal Lake Campground Complex.

2.7.9 Alternatives considered, but not given detailed study

The Council on Environmental Quality requires federal agencies to briefly discuss the reasons for eliminating any alternatives that were not developed in detail (40 CFR 1502.14 (a)). Public comments received during scoping provided suggestions for alternative methods for achieving the purpose and need for action. Some of these alternatives were outside the scope of the purpose and need for action, duplicative of the alternatives considered in detail, or determined to be components that would cause unnecessary harm. The alternatives provided by the public (in bold) and the subsequent agency rationale as to why they were not given further detailed study are described below.

To maintain a diversity of wildlife species while also achieving multiple uses, half of each watershed at low to mid elevations should be designated for wildlife habitat, and the other half for timber production. The commenters suggested that this would provide a balanced approach for management on the HLC NF which would be easily implemented, monitored, and understood by the public. However, it would not be appropriate to bisect all watersheds in this manner, because it would not provide for ecological and economic sustainability or be consistent with the laws, regulation, and policies that guide forest plan revision. For example, the opportunities to manage some watersheds are limited or precluded by land designations beyond the scope of forest planning, such as designated wilderness areas – in these watersheds, no lands would be appropriate for timber management. Further, providing a mosaic of areas designated for wildlife habitats tied to half of each watershed would not necessarily be sufficient to provide for the ecosystem components and linkages required by all species.

Conservation management areas should be established in the Upper Blackfoot GA. A collaborative group proposed that conservation management areas be established in specific portions of the Upper Blackfoot GA, whose main purpose is to maintain the recreational, scenic, cultural, and other values of these areas while protecting existing uses. The group is currently in the process of developing a more detailed proposal regarding its recommended management of this GA. It is beyond the scope of the Forest Plan to establish conservation management areas, although other emphasis areas could be established.

The potential for conservation management areas was not examined in further detail, because the group was not yet prepared to offer specific recommendations, and the suite of plan components that would apply in the Upper Blackfoot GA and the specific areas recommended for conservation management areas would be consistent with the broad goals suggested in the comment.

Desired vegetation conditions should be altered to reflect future shifts due to climate change, using concepts such as “achievable conditions” and/or a “plan B” suite of desired conditions that reflect anticipated species range shifts. Several commenters expressed concern with the use of the natural range of variation (NRV) as a basis for desired future vegetation conditions. The comments suggested using the concept of “achievable” future conditions and/or a more specific scenario planning approach to quantify desired conditions that reflect anticipated future species range shifts. While the analysis does incorporate the potential effects of climate change, specific alternate scenarios were not included with respect to vegetation desired conditions. The use of the NRV as a basis for desired conditions is described in the 2012 planning rule; it is well-grounded in the best available scientific information as well and represents a lower level of uncertainty than modeling of the potential site-specific vegetation responses to climate change in the future. Projected species range shifts are based on broad climate envelope models, and the timing, location, and degree of shifts at the scale of a national forest are highly uncertain. Refer to appendix H for a more detailed discussion on the development and rationale for the desired vegetation conditions used for the HLC NF.

The Badger-Two Medicine area should be co-managed with the Blackfeet Nation; bison should be introduced; and mountain bikes should not be allowed. Establishing co-management in this area is beyond the scope of Forest Plan revision. Similarly, the Forest Service does not directly manage or direct the potential re-introduction of species such as the bison. Rather, the 2020 plan endeavors to provide for the full suite of habitat conditions that would support native wildlife species, including bison. Therefore, implementation of the Plan would result in adequate habitat conditions should the decision be made by the appropriate agencies to reintroduce this species to certain areas within the HLC NF. The 2020 plan does not expressly eliminate uses such as mountain bikes in the Badger-Two Medicine area, although future travel plans or closure orders could occur as needed to meet plan components that describe the desired conditions in the area.

Old growth and snag guidelines should not apply in lands suitable for timber production. The reason that snags and old growth have guidelines in the 2020 Forest Plan is to ensure that there is an appropriate abundance and distribution of these features across the landscape because they are rare and/or of particular importance for wildlife habitat and other ecosystem functions. However, there was interest to analyze an alternative with no old growth or snag guidelines applying in lands suitable for timber production. The rationale for this suggestion was that the lands suitable for timber production represent a small proportion of the landscape, and of that harvest occurs on only a portion; therefore, adequate old growth and snags should be available in unmanaged areas. Excluding these components would be responsive to desires to maximize timber production. For snags, there are also safety concerns related to requiring retention of snags in areas where people are conducting management activities.

A brief analysis was done to evaluate the potential for an alternative that did not include guidelines for snags and old growth in lands suitable for timber production. Although lands suitable for timber production make less than 15% of the HLC NF (depending on alternative), approximately one-third of the old growth and one-quarter of the large and very large snags that exist on the HLC NF occur on those lands. This is not a static condition but demonstrates that lands suitable for timber production provide a substantial proportion of the old growth and large snag resources on the HLC NF, by virtue of the successional processes that occur in productive forests.

As a worst case scenario, it could be assumed that without guidelines, any old growth treated with harvest in lands suitable for timber production would no longer be old growth, and most if not all large/very large snags would be cut. This potential loss would be ameliorated by two factors: first, not all lands suitable

for timber production would be harvested. Based on modeled projections, harvest activities would impact 19 to 23 percent of the lands suitable for timber production over a 50-year horizon, which equates to 3 to 4 percent of all lands on the HLC NF, depending on alternative. Second, not all areas harvested would be old growth or have snags. Therefore, the actual loss of these resources would be something less than the total harvested amounts. The level of this loss would vary by GA based on the amount and distribution of lands suitable for timber production. It is impossible to project the precise outcomes from harvest on lands suitable for timber production to old growth and snags.

Although it seems likely that the effects would occur on a small proportion of the HLC NF, the alternative to exclude old growth and snag guidelines in lands suitable for timber production was not analyzed in further detail for the following reasons:

- To some degree, there would be less old growth and fewer large snags in lands suitable for timber production in an alternative without guidelines for these features. This would indicate a movement away from the NRV, and possibly result in slower movement toward desired conditions.
- Not all vegetation types are represented equally in areas that are unsuitable for timber production, and therefore limiting old growth and snags to those areas may result in underrepresenting those features in some vegetation types.
- Stochastic disturbances like fire can also limit the abundance and distribution of old growth and snags. An alternative that relies on providing these habitat features in lands unsuitable for timber production would be flawed if that happens to be where catastrophic fire occurs.
- The spatial distribution of snags and old growth is a key factor in assessing habitat to support wildlife viability and diversity. The potential impacts to wildlife from a reduction of old growth and/or snags in lands suitable for timber production would depend on the distribution of lands suitable for timber production in a given landscape, actual locations of harvest treatments, the current distribution of snags and old growth, and the habitat needs of each species. Without guidelines to ensure retention of these features across the landscape, the likelihood that habitat in the planning area would support the natural diversity of native wildlife species is less certain.

All IRAs, and/or all areas in the wilderness inventory, should be recommended wilderness. Not all these areas contain the wilderness characteristics required of RWAs. Detailed rationale is documented in appendix E.

Fire, both planned and unplanned, should be eliminated or very limited on the landscape. All fires should be suppressed, and prescribed fire should not occur, especially in the Rocky Mountain Range GA. It is not FS policy nor best available scientific information to eliminate all planned and unplanned fire from the landscape. The effects of potential fire on the landscape are analyzed in the FEIS. Within wilderness areas, the FS is mandated to allow natural processes to occur. This alternative would be contrary to the wilderness act.

The management emphasis of the Elkhorns should be modified to no longer be a Wildlife Management Unit; to be suitable for timber production; and/or the Elkhorns Core should be recommended wilderness. The Elkhorns was a wilderness study area identified in 1976 by the Montana Wilderness Study Act. The Final Report on the Elkhorn Wilderness Study Area ([U.S. Department of Agriculture, Forest Service., 1981](#)) recommended that the area not be recommended as wilderness, but rather be managed to emphasize high wildlife values. This recommendation was accepted by the Chief of the FS, and as a result the Agriculture Secretary at the time directed the FS to establish the Elkhorns as a special wildlife management unit (WMU) in the forest plan. President Reagan issued a Message to Congress concurring with this direction in 1982. As a result, the Helena Forest Plan in 1986 established the Elkhorns as a WMU and incorporated the recommendations for management found in the Final Report on the Elkhorn Wilderness Study Area ([U.S. Department of Agriculture, Forest Service., 1981](#)). The Elkhorns GA has been managed under this specific guidance since that time.

The Elkhorns core area was reviewed in the wilderness inventory and evaluation process and was found to have wilderness characteristics that would make it valuable as a RWA. The forested lands within it were also included in the consideration for lands that may be suitable for timber production. However, public scoping for the proposed action revealed that most people did not want to see the special emphasis on the Elkhorns change. There was a general sense that the FS should retain and not change the current direction for this area. Further, the rationale for the original recommendations from the Final Report on the Elkhorn Wilderness Study Area, as well as the direction from the Chief of the FS, Agriculture Secretary, and President in 1982 were determined to still be relevant today.

Because of this, the FS has chosen to carry the Elkhorns WMU designation forward in all alternatives with management similar to that specified in the 1986 Forest Plans. The primary management purpose for the area is to maintain habitat for viable populations of native species, particularly for species requiring seclusion. As such, RWA designation within the Elkhorns was not considered under any alternative. Further, although timber harvest may be compatible with management for wildlife habitat and may in fact be used to maintain or enhance some habitats, management for production of timber as either a primary or secondary purpose is not compatible with an emphasis on managing habitat for species that require seclusion from human disturbance.

Maximum timber production with no budget or resource constraints; include all lands that may be suited for timber production. The DEIS analysis includes potential timber outputs without budget constraints for analysis purposes. However, per the 2012 Planning Rule, the 2020 Forest Plan and alternatives must be based on the fiscal capability of the unit. Further, it would not be possible to remove all resource constraints and still meet applicable laws. The alternatives address a range of lands suitable for timber production, but lands within several key areas are not suitable for timber production in any alternative. Lands in the Elkhorns WMU are excluded to maintain the goals and objectives for that designation, timber production would not be a primary or secondary land use, although timber harvest could be used for other purposes. Lands within the Badger Two Medicine area are also excluded to be consistent with its designation as a Traditional Cultural District.

Consider an ecological/biocentric forest plan prepared by Alliance for the Wild Rockies. The commenters proposed that this alternative would be based on sound scientific principles and emphasize the “outstanding wild, natural, and appropriate recreational uses for this remarkable place.” Some elements of this public comment are included in the 2020 Forest Plan and/or the range of alternatives analyzed in detail. For example, extensive analysis was conducted using the best available scientific information to ensure that the allowable uses, such as timber harvest, would be conducted at sustainable levels. In addition, the desired conditions were developed with an emphasis on the natural processes that influence the vegetation on the HLC NF, as well as appropriate consideration of the impacts of climate change. The 2020 plan alternatives also recognize and support the important natural role wildfire, insects, and diseases on the landscape, and strives to conserve key ecosystem components such as old growth, snags, and downed woody material as well as connectivity for wildlife species. Further, the 2020 Forest Plan provides for carbon sequestration, protects soils and aquatic resources, protects the values of eligible wild and scenic rives, and is consistent with the Inventoried Roadless Area Conservation Rule. Other elements of the ecological/biocentric alternative are not addressed in detail but are not precluded by the existing alternatives, such as submitting technical corrections for inventoried roadless area boundaries when needed. Certain elements of this alternative are not addressed to the degree suggested by the commenters, because they are not consistent with the broader understanding of the public values, interests, and needs assigned to the HLC NF. This includes, most specifically, a reduction in the motorized uses on the landscape and protecting all IRAs as RWAs (although alternative D does reflect these interests to a large degree), and “curtailing” livestock grazing (although all alternatives include plan components to limit the potential adverse impacts of this activity).

In summary, this alternative was not analyzed in additional detail because by-in-large, most elements are addressed as appropriate, although not necessarily with the same guiding scientific information or specific methods (e.g., standards) as suggested by the commenters.

Eliminate IRAs and/or WSAs. It is under the authority of the Forest Service, but not specifically the HLC NF, to eliminate IRAs. As for the wilderness study areas (WSAs) on the HLC NF, they are governed by the terms of the Montana Wilderness Study Act (Public Law 95-150), which requires the Forest Service to protect and retain the wilderness character until Congress makes a final decision about the areas. Changes to the WSA designations, or modifications to their boundaries, can only be done through Congressional action, and are beyond the authority of the Forest Supervisor to adjust during land management plan revision. As such, these alternatives were not discussed in detail because they are outside the scope of this process.

Set limits on the number and kinds of outfitter and guide special use permits across the forest. During the scoping period for the DEIS, the public expressed concern that the 2020 Forest Plan does not set limits for number and kind of outfitter and guide special use permits. This alternative was not addressed in further detail because setting limits for the number and kinds of special use authorizations is not required by the 2012 Planning Rule. Plan components are in place that would inform decisions regarding such authorizations, including desired conditions for all resources.

2.7.10 Comparison of alternatives

Forestwide comparison of alternatives by issue

Table 2 displays the range of alternatives with respect to the issues that drove development of alternatives.

Table 2. Comparison of issues (and their measurement indicators) by alternative

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and undeveloped areas						
1) Number of RWAs	3	9	9	16	0	7
2) Acres of RWAs	34,265	213,076	213,076	474,589	0	153,325
3) Acres of additional Primitive ROS areas	0	0	0	175, 598	0	216,866
Motorized and mechanized means of transportation in recommended wilderness						
1) Miles of trail no longer suitable for mechanized means of transportation	0	204	59	328	0	135
2) Miles of road no longer suitable for motorized use	0	13	0	34	0	8
3) Acres no longer suitable for motorized over-snow use	0	24,404	25,349	79,194	0	8,046
4) Miles of trail no longer suitable for motorized use	0	0.1	0	60.1	0	0.1
Timber harvest						
1) Acres suitable for timber production	414,936	356,633	356,633	348,586	384,199	368,814
2) Acres unsuitable for timber production where harvest may occur	1,654,916	1,654,935	1,654,935	1,455,781	1,749,318	1,673,853
3) Projected timber sale quantity (PTSQ) Decade 1	4.70 mmcf (22 mmbf)	4.85 mmcf (23 mmbf)	4.85 mmcf (23 mmbf)	4.87 mmcf (23 mmbf)	6.7 mmcf (33 mmbf)	5.7 mmcf (27 mmbf)
4) Projected wood sale quantity (PWSQ) Decade 1	6.76 mmcf (26 mmbf)	6.92 mmcf (27 mmbf)	6.92 mmcf (27 mmbf)	6.95 mmcf (27 mmbf)	9.06 mmcf (38 mmbf)	7.91 mmcf (31 mmbf)
5) Projected average annual acres of timber harvest Decade 1	2,072 acres	2,176 acres	2,176 acres	2,101 acres	2,134 acres	2,279 acres

Recommended wilderness and Primitive ROS areas

The amount and location of RWAs encompassed some of the primary issues that drove the development of alternatives. Three areas are recommended as wilderness in alternative A, under the existing 1986 Forest Plans. In alternatives B and C, 9 areas are recommended which represent an area about 6 times greater than the total included in alternative A. Alternative D was designed to respond to public desires for more RWA to the greatest degree and includes 16 RWAs. In addition, several other areas were designated with a primitive ROS in this alternative, in

response to public comments requesting additional undeveloped areas. Alternative E does not recommend any wilderness or additional undeveloped areas and responds to public comments and desires to decrease the amount of RWAs and other undeveloped lands. In alternative F 7 RWAs are included, as well as several areas with a primitive ROS setting.

In all alternatives, including alternative E, there are additional lands that have an undeveloped character based on legal designations which do not vary by alternative (such as designated wilderness and IRAs).

Motorized recreation uses and mechanized means of transportation in RWAs

Whether or not continuation of existing motorized recreation uses and mechanized means of transportation is suitable within RWAs also varies by alternative in response to public comments. In alternatives A and C, these uses are suitable within RWAs. In alternatives B, D, and F these uses would not be suitable within RWAs. There are no RWAs in alternative E.

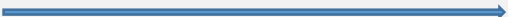
Timber harvest and timber production


Alternative A has the most lands suitable for timber production (14% of NFS lands on the HLC NF), in large part because riparian management zones are not established east of the continental divide. All of the action alternatives exclude riparian management zones from the lands suitable for timber production, although some harvest may occur. Of the action alternatives, Alternative E has the most lands suitable for timber production, followed closely by alternative F; both of these alternatives include roughly 13% of the NFS lands on the HLC NF as suitable for timber production. Alternative D has the least amount but is similar to alternatives B and C; with these alternatives, roughly 12% of the HLC NF is suitable for timber production. The lands suitable for timber production do not vary greatly across alternatives because the primary factors that drive this determination are not subject to change, including land allocations such as designated wilderness and IRAs. The RWAs identified in alternatives A, B, C, D, and F are almost exclusively in IRAs, and therefore would not be considered for timber production in any alternative. PTSQ and PWSQ are similar for alternatives A, B, C and D. These volumes are roughly 40% higher with alternative E, and 20% higher with alternative F as compared to these alternatives. Under alternative E the greatest volume would be produced because the types and locations of treatment would capitalize on stands with the highest volume available. Alternative F represents a blend of objectives to both produce timber volume and maximize attainment of desired conditions on the landscape. In Decade 1 of the planning period, all alternatives would result in a similar amount of harvest acres on the landscape.

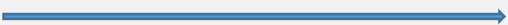
Forestwide comparison of alternatives by resource issue

Table 3 describes the range of alternatives with respect to the resource issues which did not drive alternatives. This table is arranged by resource area, with each alternative ranked from 1 to 6, with 1 being that alternative(s) that shows the greatest relative contributions to desired conditions to 6 being the lowest contribution. More information about the indicators can be found in chapter 3. Not all the resource indicators found in chapter 3 are included. In many cases the primary difference is between the no-action and action alternatives.

Table 3. Comparison of alternatives by resource area indicators

Resource Area	Indicator	Relative contribution toward meeting the indicator					
		Most  Least					
		1	2	3	4	5	6
Watersheds	Water Quality (movement toward desired conditions)	BCDF	E	A			
	Water Quantity (movement toward desired conditions)	ABCDEF					
	Overall movement toward desired conditions	BCDF	E	A			
Riparian	Riparian Desired Condition	BCDEF	A				
Fisheries and Aquatic Habitat	Aquatic Habitat (movement toward desired conditions)	BCDF	E	A			
Soils	Riparian (movement toward desired conditions)	BCDEF	A				
	Uplands (movement toward desired conditions)	D	BCF	A	E		
Air Quality	Acres per decade of wildfire and prescribed fire	ABCD	F	E			
Fire and Fuels Management	Flexibility for fire management	E	A	F	C	B	D
	Future vegetation treatments (prescribed fire)	ABCD	F	E			
	Future wildfires and fire regimes	ABCDEF					
Terrestrial Vegetation	Composition, structure, pattern, snags, old growth, and downed woody debris (movement toward desired conditions)	BCDEF	A				
Plant Species at risk	Species of conservation concern (movement toward desired habitat conditions)	D	F	BC	E	A	
	Whitebark pine (contribution to long-term persistence in the plan area)	BCDEF	A				
Terrestrial Wildlife Diversity	Overall movement toward desired habitat conditions	BCDEF	A				
Terrestrial Wildlife Species at risk	Grizzly bear and Canada lynx (contribution to recovery)	BCDEF	A				
	Wolverine (contribution to long-term persistence in the plan area)	ABCDEF					
	Species of conservation concern (movement toward desired habitat conditions)	BCDEF	A				
Elk	General habitat desired conditions	ABCDEF					
	Cover and/or habitat security	ABCDEF					
Recreation Settings	Plan Direction for recreation settings	BCDEF	A				
Recreation Opportunities	Plan direction for sustainable recreation opportunities	BCDEF	A				
Recreation Special Uses	Plan direction for recreation special uses	BCDEF	A				

Resource Area	Indicator	Relative contribution toward meeting the indicator					
		Most  Least					
		1	2	3	4	5	6
Recreation Access and Infrastructure	Plan Direction for roads (open and closed)	BCDEF	A				
	Plan Direction for trails (motorized, non-motorized, and groomed)	BCDEF	A				
	Plan Direction for motorized over-snow use	BCDEF	A				
	Plan Direction for Aviation access (airstrips)	BCDEF	A				
Infrastructure	Plan Direction for recreation buildings, administrative buildings, and bridges	BCDEF	A				
Scenery	Plan Direction for Scenery	BCDEF	A				
Recommended Wilderness	Plan Direction for recommended wilderness	BCDEF	A				
Designated Wilderness	Plan direction for designated Wilderness	ABCDEF					
Wilderness Study Areas	Plan direction for wilderness study areas	BCDEF	A				
Rocky Mountain Front Conservation Management Area	Plan direction included	BCDEF	A				
Inventoried Roadless Areas	Plan direction for inventoried roadless areas	BCDEF	A				
Eligible Wild and Scenic Rivers	Plan direction for eligible wild and scenic rivers	BCDEF	A				
National Recreation Trails	Plan direction included	BCDEF	A				
Continental Divide National Scenic Trail	Plan direction for the Continental Divide National Scenic Trail	BCDEF	A				
Lewis and Clark National Historic Trail	Plan direction for the Lewis and Clark National Historic Trail	BCDEF	A				
Lewis and Clark National Historic Trail Interpretive Center	Plan components providing direction for the Center	BCDEF	A				
Kings Hill scenic byway	Plan direction included	BCDEF	A				
Research Natural Areas	Acres established, proposed, candidate	D	F	ABCE			
	Plan direction included	BCDEF	A				
Smith River Corridor	Plan components that protect natural and cultural values	BCDEF	A				
Missouri River Corridor	Plan components that protect natural, cultural, and historic values	BCDEF	A				
South Hills Recreation Area	Plan direction included	BCDF	AE				

Resource Area	Indicator	Relative contribution toward meeting the indicator					
		Most  Least					
		1	2	3	4	5	6
Grandview Recreation Area	Inclusion of plan components for this area	F	ABCDE				
Green Timber Basin- Beaver Creek	Inclusion of plan components to protect the botanical values in this area	F	ABCDE				
Cultural, Historic and Tribal Resources	Protection of cultural and historical values	D	B	F	C	E	A
Livestock Grazing	Expected Rangeland Condition and trend	BCDEF	A				
	Acres suitable rangeland	ABCDEF					
	Number of permitted livestock head months	A	E	BCF	D		
Timber and Other Forest Products	Timber production (volume) – with a budget constraint	E	F	ABCD			
	Lands suitable for timber production	A	E	F	BC	D	
	Acres treated with harvest – with a budget constraint	BCD	F	E			
	Movement towards desired conditions – with a budget constraint	ABCD	F	E			
	Other forest products (commercial opportunities)	E	A	F	BC	D	
Minerals	Lands open to mineral entry, access and timing restrictions	E	A	F	C	B	D
Carbon	Carbon storage potential and guidance	BCDEF	A				
Social and Economic	Direct income and jobs	E	F	BCD	A		
	Fish and wildlife (including nonuse values)	D	BC	F	E	A	
	Grazing (including nonuse values)	C	A	E	BF	D	
	Infrastructure	BCDF	E	A			
	Other income and jobs	ABCDEF					
	Public information, interpretation, and education	BCDEF	A				
	Ecosystem integrity (including erosion control, flood protection, and nonuse values)	BCDF	E	A			
	Fire suppression (and mitigation)	BCDF	E	A			

Geographic area comparison of alternatives

Tables 4 through 13 display a comparison of the range of alternatives for each GA, in terms of significant issues as well as other resource indicators that vary by alternative and/or are key to understanding the unique effects to the GA.

Table 4. Comparison of alternatives for the Big Belts GA¹

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	2	2	3	0	2
2) Acres of RWAs	0	15,400	15,400	37,750	0	15,176
3) Acres of additional primitive ROS areas	0	0	0	0	0	0
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	18.6	0	34.8	0	18.6
2) Miles of road no longer suitable for motorized access	0	<0.1	<0.1	0.3	0	<0.1
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	0	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	0	0	0
Timber harvest						
1) Acres suitable for timber production	43,538	53,937	53,937	53,879	55,476	54,701
2) Acres unsuitable for timber production where harvest may occur	222,578	214,231	214,231	191,939	228,062	213,692
Missouri River Corridor (acres)	0	3,633	3,633	3,633	3,633	3,633

¹ The Smith River Corridor is also present in this GA; however, it is primarily located in the Little Belts GA. Refer to the acreages provided for that GA.

Table 5. Comparison of alternatives for the Castles GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	0	0	1	0	0
2) Acres of RWAs	0	0	0	30,606	0	0
3) Acres of additional primitive ROS areas	0	0	0	0	0	0
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	0	0	9.1	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	6.2	0	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	26,332	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	32.1	0	0
Timber harvest						
1) Acres suitable for timber production	17,743	15,084	15,084	14,601	15,084	15,084
2) Acres unsuitable for timber production where harvest may occur	51,966	54,625	54,625	24,502	54,625	54,625

Table 6. Comparison of alternatives for the Crazyes GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	0	0	1	0	0
2) Acres of RWAs	0	0	0	24,977	0	0
3) Acres of additional primitive ROS areas	0	0	0	0	0	0
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	0	0	22.9	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	0	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	4,754	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	0	0	0
Timber harvest						
1) Acres suitable for timber production	12,826	5,353	5,353	4,971	5,701	5,353
2) Acres unsuitable for timber production where harvest may occur	44,842	52,315	52,315	27,728	51,966	52,315

Table 7. Comparison of alternatives for the Divide GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
1) Number of RWAs	2	1	1	2	0	2
2) Acres of RWAs	16,657	18,296	18,296	41,089	0	18,239
3) Acres of additional primitive ROS areas	0	0	0	0	0	0
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	16.3	0	24.4	0	16.6
2) Miles of road no longer suitable for motorized access	0	0	0	0	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	11.1	0	6,348	0	11.1
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	2.4	0	0
Timber harvest						
1) Acres suitable for timber production	70,095	53,152	53,152	50,866	61,299	54,387
2) Acres unsuitable for timber production where harvest may occur	115,817	116,003	116,003	90,134	140,112	114,072
South Hills Recreation Area (acres)	0	50,180	50,180	50,180	0	50,180

Table 8. Comparison of alternatives for the Elkhorns GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	0	0	0	0	0
2) Acres of RWAs	0	0	0	0	0	0
3) Acres of additional primitive ROS areas	0	0	0	49,229	0	49,229
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	0	0	0	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	0	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	0	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	0	0	0
Timber harvest						
1) Acres suitable for timber production	0	0	0	0	0	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
2) Acres unsuitable for timber production where harvest may occur	161,251	161,251	161,251	156,745	161,251	159,673
Elkhorns Core Area, Acres where Mechanized Means of Transportation Unsuitable	0	0	49,229	0	0	0
Poe Manley proposed RNA (acres)	0	0	0	4,545	0	1,578

Table 9. Comparison of alternatives for the Highwoods GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	0	0	0	0	0
2) Acres of RWAs	0	0	0	0	0	0
3) Acres of additional primitive ROS areas	0	0	0	8,598	0	0
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	0	0	0	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	0	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	0	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	0	0	0
Timber harvest						
1) Acres suitable for timber production	1,170	0	0	0	741	0
2) Acres unsuitable for timber production where harvest may occur	42,291	42,291	42,291	42,291	41,545	42,291

Table 10. Comparison of alternatives for the Little Belts GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	1	1	4	0	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
2) Acres of RWAs	0	14,490	14,490	169,919	0	0
3) (a) Acres of additional primitive ROS areas	0	0	0	0	0	101,382
(b) Acres of additional primitive ROS areas in winter	0	0	0	0	0	98,208
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	12.8	0	114.6	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	10.7	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	13,178	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	21.6	0	0
Timber harvest						
1) Acres suitable for timber production	208,968	187,412	187,412	182,573	187,417	187,412
2) Acres unsuitable for timber production where harvest may occur	510,015	516,156	516,156	424,378	530,620	530,646
Smith River Corridor (acres)	0	3,330	3,330	3,330	3,330	3,330

Table 11. Comparison of alternatives for the Rocky Mountain Range GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	0	0	0	0	0
2) Acres of RWAs	0	0	0	0	0	0
3) Acres of additional primitive ROS areas	0	0	0	129,740	0	129,740
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	0	0	0	0	0
2) Miles of road no longer suitable for motorized access	0	0	0	0	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	0	0	0	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	0	0	0
Timber harvest						
1) Acres suitable for timber production	1,683	0	0	0	0	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
2) Acres unsuitable for timber production where harvest may occur	290,086	324,932	324,932	324,932	324,932	324,932
Green Timber Basin-Beaver Creek Botanical Area (acres)	0	0	0	0	0	2,942

Table 12. Comparison of alternatives for the Snowies GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	1	1	1	0	1
2) Acres of RWAs	0	95,299	95,299	95,299	0	66,894
3) Acres of additional primitive ROS areas	0	0	0	0	0	32,296
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	96.1	0	96.1	0	59.3
2) Miles of road no longer suitable for motorized access	0	11.8	0	11.8	0	6.2
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	13,148	0	13,148	0	0
4) Miles of motorized trail no longer suitable for motorized use	0	0.1	0	0.1	0	0.1
Timber harvest						
1) Acres suitable for timber production	16,028	0	0	0	14,425	9,531
2) Acres unsuitable for timber production where harvest may occur	13,289	22,241	22,241	22,244	14,892	14,084
Grandview Recreation Area (acres)	0	0	0	0	0	32,296

Table 13. Comparison of alternatives for the Upper Blackfoot GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Recommended wilderness and additional primitive ROS areas						
1) Number of RWAs	0	4	4	4	0	3
2) Acres of RWAs	0	69,591	69,591	74,948	0	53,016
3) Acres of additional primitive ROS areas	0	0	0	0	0	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E	Alternative F
Suitability of motorized and mechanized means of transportation in recommended wilderness areas						
1) Miles of trail no longer suitable for mechanized means of transportation	0	59.6	0	60.5	0	40.3
2) Miles of road no longer suitable for motorized access	0	1.7	0	1.9	0	0
3) Acres of motorized over-snow areas no longer suitable for motorized use	0	11,234	0	15,428	0	7,358
4) Miles of motorized trail no longer suitable for motorized use	0	0	0	3.4	0	0.1
Timber harvest						
1) Acres suitable for timber production	42,887	41,696	41,696	41,696	44,056	42,348
2) Acres unsuitable for timber production where harvest may occur	203,953	150,892	150,892	150,892	201,314	167,524

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