



United States
Department of
Agriculture

Forest
Service

October 2015



Helena and Lewis & Clark National Forests

Preliminary Need to Change



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Lead Agency: USDA Forest Service

Responsible Official: William Avey – Forest Supervisor
2880 Skyway Dr.
Helena, MT 59602
406-449-5201

For Information Contact: Erin Swiader – Forest Plan Revision Planning Team Leader
2880 Skyway Dr.
Helena, MT 59602
406-449-5201

Email comments or questions to: hlcplanrevision@fs.fed.us

Documents are posted at: <http://www.fs.usda.gov/goto/hlc/forestplanrevision>

Abstract: The Helena and Lewis and Clark National Forests (HLC NFs) have identified the preliminary need to change the Forest Plan in accordance with the 2012 National Forest System land management planning rule adopted by the U.S. Department of Agriculture. The assessment (completed March 2015) evaluated existing information about relevant ecological, economic, and social conditions, trends, and sustainability and their relationship to the land management plan within the context of the broader landscape. The assessment informed the following preliminary identification of need for change that will then be reflected in the revision of the forest plan.

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Introduction

The National Forest Management Act of 1976 requires each national forest to develop a land and resource management plan (commonly referred to as a forest plan) and amend or revise the plan every 10 to 15 years. The Helena and Lewis & Clark National Forest Plans were approved in 1986 and forest personnel are in the early stages of revising their forest plans into one plan under the guidance of the 2012 planning rule. Planning and revision for a national forest plan is an iterative process that includes three phases:

1. Assessment (36 CFR 219.6).
2. Developing, amending, or revising a forest plan (§§ 219.7 and 219.13), which includes evaluating the effects of the proposed action and any alternatives.
3. Monitoring (§ 219.12).

The following indicates the steps involved to complete Phases 1 and 2 and where we are in the plan revision process:

- Assessment: Completed March 2015
- Preliminary Need to Change: Fall 2015
- Proposed Action and Scoping: Spring 2016
- Draft Environmental Impact Statement: Spring 2017
- Final Environmental Impact Statement/ Proposed Record of Decision: Winter 2017
- Objection Period: Spring 2018
- Record of Decision signed: Summer 2018

The assessment is available at <http://www.fs.usda.gov/goto/hlc/forestplanrevision>. Preparation of this assessment included evaluating the best available scientific information (BASI), forest plan amendments, and annual monitoring reports. Additionally, outcomes from public meetings and other outreach efforts were considered. All these sources provided valuable information about changes that are needed to the existing forest plan. The need to revise the Helena and Lewis & Clark forest plans is driven by the changing conditions identified in the assessment, the changing public values associated with the Helena and Lewis & Clark National Forests (HLC NFs), and the requirements outlined in the 2012 Planning Rule and associated directives.

This document identifies the need to change the forest plan and is the transition from the assessment to the forest plan development phase. It identifies the strategic current plan direction that needs to be revised (added, modified, deleted) to address the conditions, trends, and risks evident from the assessment analysis.

The need to change the plan helps define the proposed action, purpose and need, and decision framework for the environmental analysis related to the planning process (See FSH 1909.12, ch. 40 and FSH 1909.15, ch. 10, sec. 11.2). The need to change will become part of the purpose and need in the environmental analysis documents for plan revision.

Preliminary Need to Change

The need to change is a process for determining what plan direction should be changed or added to the existing Helena and Lewis & Clark National Forest plans that have been in effect since 1986, as amended.

Moreover, it establishes the framework for the development of plan components and other plan content, including the monitoring program. In this way, the framework builds on information gathered and developed during each phase of the planning process and supports adaptive management for informed and efficient planning. From this information, the Helena and Lewis & Clark National Forests have compiled broad “need to change” items that are expected to be addressed in revised plan components.

Required Plan Components

Forest plans provide guidance for projects and activities. There are requirements for what content must be in forest plans and there are specific terms that are used. Plan components are the core elements of plans. All projects and activities should be consistent with plan components. Required plan components include desired condition, objectives, standards, guidelines, and suitability of lands and where these plan components apply. The set of plan components must meet the requirements set forth for sustainability (§ 219.8), plant and animal diversity (§ 219.9), multiple use (§ 219.10), and timber (§ 219.11).

Desired Conditions

A desired condition (DC) is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but not include completion dates (36 CFR 219.7(e)(1)(i)). Desired conditions are not commitments or final decisions approving projects and activities. The desired condition for some resources may currently exist, or for other resources may only be achievable over a long time period.

The plan presents three types of desired conditions as follows:

- Forestwide desired conditions apply across the landscape, but may be applicable to specific areas as designated on a map.
- Management area (MA) desired conditions are indications of what future conditions would typically be desired in each MA. They help clarify the general suitability of various parts of the forest for different activities and management practices. These desired conditions help us clarify what outcomes might be expected in land areas with different general suitability descriptions.
- Geographic area (GA) desired conditions are specific to an area or place, such as a river basin or valley, and reflect community values and local conditions within the area. They do not substitute for or repeat forestwide desired conditions. These desired conditions allow us to focus on specific circumstances in specific geographic locations. The HLC NFs are divided into ten GAs.

Objectives

An objective (OBJ) is a concise, measurable, and time-specific statement of a desired rate of progress toward a desired condition or conditions. Objectives should be based on reasonably foreseeable budgets (36 CFR 219.7(e)(1)(ii)). Objectives describe the focus of management in the plan area within the plan period. Objectives will occur over the life of the forest plan, considered to be over the first 15 years of plan implementation, unless otherwise specified. Objectives can be forestwide or specific to MAs or GAs.

It is important to recognize that objectives were developed considering historic and expected budget allocations, as well as professional experience with implementing various resource programs and activities. It is possible that objectives could either exceed or not meet a target based upon a number of factors including budget and staffing increases/decreases, increased/decreased planning efficiencies, unanticipated resource constraints, etc.

Standards

A standard (STD) is a mandatory constraint on project and activity decision-making, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements (36 CFR 219.7(e)(1)(iii)). Standards may be developed for forestwide application or specific to an MA or GA.

Guidelines

A guideline (GDL) is a constraint on project and activity decision-making that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements (36 CFR 219.7(e)(1)(iv)). A guideline may be forestwide or specific to an MA or a GA.

Suitability of lands

Specific lands within a plan area will be identified as suitable for various multiple uses or activities based on the desired conditions applicable to those lands. The plan will also identify lands within the plan area as not suitable for uses that are not compatible with desired conditions for those lands. The suitability of lands need not be identified for every use or activity. Suitability identifications may be made after consideration of historic uses and of issues that have arisen in the planning process. Every plan must identify those lands that are not suitable for timber production (§ 219.11). (36 CFR 219.7(e)(1)(v)).

Public Involvement

The Responsible Official will involve the public in the development of the need to change the plan by giving the public the opportunity to comment on a preliminary need to change before documenting the need to change the plan as part of the purpose and need in the environmental analysis documents for the plan development, plan revision, or plan amendment.

When developing or revising a plan, the Responsible Official will invite public input on a preliminary need to change the plan (36 CFR 219.7(c)(2)(i)) so that:

- Public comments are used to improve the need to change the plan.
- The topics and concerns considered can be broadened or reduced as needed.
- The need to change the plan may support retaining existing plan direction as plan components as well as developing new plan components as appropriate.

This Need to Change document reflects contributions from numerous public participation processes, such as collaborative work sessions, input received via email, public workshops, phone calls, and meetings. The HLC NFs will use the findings from this Need to Change document to inform the revision process.

Public workshops about the preliminary need to change occurred in August and September of 2015. The notes from those conversations have been posted to the following website <http://www.fs.usda.gov/goto/hlc/forestplanrevision>.

Need to Change Themes from Public Workshops

Ten public workshops were held in communities near the HLC NFs in August and September 2015. The purpose of the workshops was to solicit citizen input on current forest resource conditions, the challenges facing these resources, and what “needs to change” from the 1986 forest plans during the plan revision process currently underway. The viewpoints from the public were diverse; the team did not hear one united

message from the public. A detailed summary of the workshops can be found on the HLC NF plan revision website. Some main points from the public include:

- a desire to increase the amount of fuel reduction and/or timber harvest work that occurs on NFS lands, with many emphasizing a concern for areas impacted by the recent mountain pine beetle outbreak as well as areas where the amount of trees and shrubs present appears to have increased relative to the historic condition. Conversely, other perspectives included a desire to limit vegetation management activities with an emphasis on allowing disturbance processes to play their natural role.
- frustration with what they felt was limited access to the forests
- a desire to design vegetation treatments to meet other resource objectives rather than maximizing timber productivity or economic return. Other participants indicated a desire to increase the emphasis of utilization of timber as a crop on NFS lands.
- a divergence of viewpoints were heard regarding fire management, including the desire to increase the natural role of fire on the landscape as well as the perspective that more fires should be suppressed and the use of prescribed fire limited.
- a widespread theme across all geographic areas that the new plan needs to better address noxious weed management, including an increase in the acres treated.
- a desire to maintain grazing as a multiple use on NFS lands, with an increased focus on adaptive management.
- the issue of Forest Service budget and ability to meet management expectations was brought up numerous times.
- an emphasis on working with local agencies and landowners to develop resource management solutions across boundaries and leveraging help from the public to achieve objectives.
- a desire for the new plan to be flexible, adaptive and forward-looking.
- many comments about road decommissioning; the primary concerns were: the closure of popular or needed routes without adequate notification, the variability of decommissioning practices across the plan area, and incidences of noxious weeds spreading along decommissioned routes.
- a desire for flexibility in management of wildlife and habitats, and place-based management addressing specific issues and needs in specific areas, rather than creating forestwide standards and guidelines
- a need to resolve real or perceived conflicts between wildlife/habitat plan components and other resource goals, objectives, or plan components, such as timber harvest, grazing management, travel management, recreation opportunities, and others.

Process for Determining the Need to Change

As the HLC NFs planning team develops information to revise the forest management plan, they intend to:

- respond to public input about the future of the HLC NFs
- revise the 1986 existing plan to meet managers' needs
- consider the best available scientific information, and
- comply with laws, regulations, and policies.

Using the assessment information, identified public concerns, and the requirements for a land management plan as specified in the 2012 Planning Rule and its associated directives, the interdisciplinary team identified the following “need to change” plan components. These components are generally interrelated and new plan components will need to be developed to better address the 2012 planning rule requirements.

Need to Change Topics

In addition to the needs identified below, it is expected that other need to change items will be identified as the planning process continues. Not all changes must be addressed now. With the 2012 Planning Rule and an adaptive approach, other changes can be accomplished as needed. All management direction will be examined and modified as necessary to ensure its compliance with the requirements of the 2012 Planning Rule.

Topics are arranged in the same order as they were in the Assessment. However, *Chapter One, Introduction* in the Assessment will be replaced by *1. Overarching Needs throughout the Plan* in this document.

1. Overarching Needs throughout the Plan

Over the last thirty years, the environmental and political landscapes of the HLC NFs have changed in ways that were not foreseen or addressed in the planning efforts conducted in 1986. Broad changes which impact the context of forest planning include legal frameworks, policy, science, and social values. In addition to the resource-specific components addressed in subsequent sections, there are numerous overarching aspects that contribute to the need to change the plan. These include the need to:

- 1.1 create one forest plan that applies to both forests. In 2013 the Regional Forester decided to combine the programs of the Helena and Lewis & Clark National Forests. While the ecological conditions within the two forests are similar, the components within each current plan are not consistent, including the delineations and descriptions of management areas.
- 1.2 revise the plans to be consistent with the 2012 Planning Rule and associated directives. Required components of forest plans have been changed with this rule.
- 1.3 revise the plans to be consistent with new laws, policy, and regulation that have been adopted since 1986.
- 1.4 revise the plans to be consistent with the best available science and the most current understanding of ecosystem process and function.
- 1.5 address the potential influences of climate change.
- 1.6 develop plan components that are integrated across resources and are placed in the appropriate spatial and temporal context.
- 1.7 identify conflicts between existing resource area laws, regulations, and/or policies throughout the HLC NFs planning area.
- 1.8 develop a new sustainable monitoring plan based on the best available science that is designed to facilitate adaptive management as appropriate for all resources.
- 1.9 include a section discussing management common to all resources.

2. Terrestrial Ecosystems

Terrestrial Vegetation

Under terrestrial vegetation, there is a need to:

- 2.1 update components related to desired vegetation conditions based on current data, best available scientific information and modeling techniques. Adjust plan components related to specific vegetation conditions (e.g. old growth, snags, etc.) to be consistent across the planning area. An enhanced consideration of the influence of natural disturbance processes and future climates on sustainability and resiliency is warranted.
- 2.2 adjust components as appropriate based on the most current understanding of the natural range of variation (NRV) to ensure the plan provides for ecological sustainability. The 2012 planning rule requires that forest planning take into consideration the natural NRV for key ecosystem characteristics (KECs) that represent ecosystem structure, composition, and function.
- 2.3 update plan components to follow the 2012 Planning Rule associated directives (2015) which require the identification of plant species of conservation concern (SCC) and focal species for monitoring. There is a need to update plan components appropriate for these species based on the latest data and best available science.
- 2.4 include components that address whitebark pine as appropriate. Whitebark pine has been listed as a Region 1 sensitive species and a candidate species for listing under the Endangered Species Act.
- 2.5 reflect best available science and policy related to wildfires and prescribed fires in plan components. Components should better inform wildfire and suppression objectives and strategies. Plan components should provide guidance both within wilderness and nonwilderness areas, drawing upon existing guidebooks and management plans as appropriate.
- 2.6 include components relative to appropriate fire management responses and strategies based on an understanding of the natural role of fire as informed by the NRV and expected future conditions. Consider utilizing descriptions of environmental conditions and desired outcomes rather than geographic delineations to describe guidelines related to fire as a management tool.
- 2.7 provide clarity as to how the wildland urban interface as defined in the Healthy Forest Restoration Act is applied, and take this into consideration when developing plan components.
- 2.8 ensure that plan components reflect the best available science and policy regarding hazard and risk to forest insects and diseases, as informed by the NRV and expected future conditions. Consider that it may be appropriate to reflect the potential effects of non-native insects and diseases.
- 2.9 reflect an understanding of natural patch sizes informed by the NRV in plan components, including those related to maximum size openings allowed in regeneration harvests. Components should provide guidance for defining openings. Components should reflect an enhanced understanding of dynamic landscape patterns and processes that influence ecosystem resilience.
- 2.10 include plan components providing direction on the future development of an adaptive and systematic approach to noxious weed management. It is recommended this be accomplished through the future development of a forest strategic weed management plan that incorporates best available science and be criteria based in order to allow the plan to adapt to new science as it is developed over time. Plan components should identify criteria categories that guide the forest on how to prioritize areas and species for noxious weed survey, inventory, and treatment, and select management activities on a site specific basis.
- 2.11 incorporate target noxious weed species by reference only. The plan should refer to the Montana State Noxious weed list. This list is likely to change over time. Incorporating by reference with

disclosure of potential changes will ensure use of the plan in the future is still relevant due to the fact that the State Noxious Weed list will be updated as needed by the State.

- 2.12 include plan components on the management of rangeland ecosystems with a discussion on desired conditions in relation to site potential. Criteria on how to determine site potential should be included to guide future efforts in a manner that allows the plan to adapt to new science as it is developed. For example, the Natural Resource Conservation Service (NRCS) is currently in the process of updating soil surveys and correlating soil types to ecological sites. Ecological sites and associated ecological site descriptions currently constitute the best available science in regards to determining site potential and selecting reference conditions (i.e. desired conditions) and associated desired plant communities. However, ecological sites may be superseded over time.
- 2.13 revise existing plan components that discuss management of rangeland vegetation communities.
- 2.14 provide criteria on rangeland restoration techniques in relation to seed mix/plant species selection based on site specific information. Plan components should emphasize the use of native plant material but should also include criteria on the acceptable use of non-native species.
- 2.15 include plan components discussing restoration of areas affected by United States Forest Service (USFS) authorized disturbance activities (i.e., fuels treatments and timber sales), including criteria to determine when reseeded is necessary.

Terrestrial Wildlife

Under terrestrial wildlife, there is a need to:

- 2.16 ensure that plan components designed to maintain or restore the integrity and diversity of ecosystems will maintain the diversity of wildlife species (“coarse filter” approach), or develop species-specific components that will do so (“fine filter” approach), per the 2012 Planning Rule and the 2015 Directives.
- 2.17 use the most current understanding of the NRV for wildlife habitats to consider plan components that will “maintain the diversity of plant and animal communities and the persistence of native species in the plan area” per the 2012 Planning Rule.
- 2.18 remove reference to and use of management indicator species (MIS) per the 2012 Rule, which eliminates the use of MIS because the concept is not supported by current science.
- 2.19 identify potential plant and/or animal focal species or other monitoring measures to indicate the health of ecosystems and their components (coarse filter) or specific habitats (fine filter) as needed.
- 2.20 identify wildlife species of conservation concern (SCC), per the 2012 Planning Rule and 2015 Directives, and consider whether plan components are needed to maintain or contribute to maintaining populations of these species.
- 2.21 update plan components addressing species listed as threatened, endangered, or candidate for listing under the federal Endangered Species Act. Species have been delisted, and others have been listed or proposed for listing since the existing forest plans were written. There is a need to revise plan components to allow flexibility for changes in species’ listing status while supporting recovery plans, conservation strategies, or other management plans pertaining to federally listed, candidate, and proposed species occurring within the plan area.
- 2.22 use NRV and other BASI to identify areas with potential to sustain Canada lynx habitat, and incorporate components from the Northern Rockies Lynx Management Direction (NRLMD) that was amended to the existing forest plans in 2007 to those areas; conversely identify areas where application of the NRLMD may not be appropriate.

- 2.23 incorporate components of the Northern Continental Divide Ecosystem (NCDE) Grizzly Bear Amendment into the Forest Plan. The NCDE grizzly bear population has met recovery goals, but management components are needed to ensure that a recovered grizzly bear population is maintained. These management components must be incorporated into land and resource management plans in order to provide adequate regulatory mechanisms for management of grizzly bears and habitat before the grizzly bear can be delisted. The five national forests of the NCDE are incorporating components of the interagency Draft NCDE Grizzly Bear Conservation Strategy into their forest plans, thus satisfying this requirement on National Forest system lands.
- 2.24 remove direction to use specific wildlife management techniques, documents, handbooks, plans, working groups, etc., many or all of which are outdated. Include components that promote participation in cooperative science and management efforts while maintaining flexibility to account for inevitable changes in such efforts. Promote use of new science as it becomes available.
- 2.25 evaluate existing components regarding wildlife and roads/motorized travel in light of new and recent travel plan decisions. Some travel plans have amended the existing forest plans to better address wildlife habitat concerns, and there is a need to consider these issues in revising the Forest Plan. Consider the role of access in wildlife and habitat management as it pertains to potential fragmentation, disturbance, or access for hunting and meeting big game population objectives.
- 2.26 use updated science and information regarding big game habitats, extent and use of seasonal ranges, state management concerns and objectives, etc. to revise plan components for management of big game and their habitats.
- 2.27 use updated science and information regarding elk management on NFS lands. The existing forest plans were developed when the primary issues facing elk populations on NFS lands appeared to be impacts of extensive clearcutting combined with access provided by logging roads. Since that time, different issues have emerged, and there has been recognition of different management concerns occurring in different landscapes. Revise plan components to reflect these changes and differences, and consider more place-based plan components.
- 2.28 consider landscape-level issues in establishing wildlife management components, including isolation of island ranges, function of adjoining non-NFS lands in supporting wildlife, and management direction on adjoining public and private lands.
- 2.29 use the latest information, science, and tools and work with state and other agencies regarding management of potential conflicts between management of domestic sheep and bighorn sheep. Consider recent multi-agency guidelines for managing risk of contact between domestic sheep and bighorn sheep on public lands.
- 2.30 allow for flexibility in wildlife habitat management components to consider natural disturbances, climate change, and changing management issues both on and off NFS lands. Consider increasing flexibility for adapting wildlife habitat management based on different landscapes or areas.
- 2.31 ensure consistency in applying plan components to MA direction for wildlife and habitats as MAs are revised. Evaluate MAs to ensure they adequately capture landscapes or habitats appropriate to wildlife-related objectives.
- 2.32 consider allowing flexibility in applying wildlife-related plan components in areas with specific statutory, regulatory, or public safety limitations or issues, such as in utility corridors, utility and transportation rights-of-way, wildland urban interface (WUI), and others.
- 2.33 consolidate plan components and ensure that updated or new components are both accessible and understandable for effective implementation. Currently, plan components regarding wildlife populations and habitats are scattered throughout the existing forest plans and are frequently repetitive, redundant, or contradictory.

- 2.34 update components regarding coordination with other agencies. Remove direction for specific interagency actions and time frames that may not be currently feasible, appropriate, or effective. Promote coordination with state and other agencies regarding wildlife management goals, objectives, and concerns.
- 2.35 provide implementable and sustainable guidance to better integrate management and monitoring of wildlife habitats with other resource areas including recreation, range management and livestock grazing, timber, minerals, fuels and fire management, and others.
- 2.36 consider whether management components are needed to address invasive terrestrial wildlife species; consider components to promote coordination with state and federal agencies that have oversight of such species.
- 2.37 update or revise plan components regarding public information and education. Consider promoting coordination with other information and education efforts by NF and other agencies. Assess need for information and education plan components related to wildlife safety (i.e. safety in bear and lion country) and adherence to wildlife-related laws (e.g. food storage orders).
- 2.38 consider wildlife-related goals or objectives for Designated Areas (e.g. Elkhorn Mountains, Sun River Game Preserve) and assess the need for area-specific plan components to meet those goals and objectives.

3. Watershed, Aquatic, Soil, and Air

Under watershed, aquatic, soil, and air, there is a need to:

- 3.1 resolve the discrepancies between the soil, water, and fisheries plan components in the current HLC NFs plans.
- 3.2 update components related to desired levels of coarse woody debris according to the best available science; consider providing a flexible range which could vary by ecosystem type and management objective as appropriate.
- 3.3 consider basing plan components for water, soil and aquatic ecosystems on specific watershed and habitat objectives. Build in flexibility for changing conditions, especially for things resulting from climate change, wildfire, or insect and disease outbreaks. Emphasize the need to consider impacts at the watershed scale.
- 3.4 include plan components that update the existing riparian and water quality guidance (including wetlands, GDEs, and special areas); ideally it should be a stand-alone topic, not just part of vegetation or range. The revised plan components need to be clearer than the existing guidance and resolve any discrepancies between the existing forest plans. Consider providing guidance relative to impaired riparian areas.
- 3.5 include plan components that will comply with agency direction on groundwater resources.
- 3.6 include plan components that address the protection of aquatic habitat both east and west of the continental divide. Consider identifying key watersheds for fisheries, possibly as a MA. This concept is being used on other forests and could be applicable here.
- 3.7 include plan components to address issues with non-native fish, both existing and introduced. The current Forest Plans don't address these issues to the needed extent, especially with the changing conditions, newer science and information, and the threats of climate change.
- 3.8 include plan components to address aquatic invasive species, including mitigation and prevention.

- 3.9 include plan components that provide guidance for improving existing water resource and fisheries monitoring requirements. The current language is vague and varies between the two existing plans.
- 3.10 include plan components that continue and encourage ongoing coordination with local, state, and federal agencies in the Plan area, such as the coordination and cooperation under existing Memorandums of Understanding (MOUs) and agreements with MTFWP, Montana Department of Environmental Quality (MTDEQ), and United States Fish and Wildlife Service (USFWS).
- 3.11 update the soil quality standards for rangeland health.
- 3.12 include soil functioning in plan components.
- 3.13 include plan components that provide tools to help ensure that soil impacts from mining activities are minimized and restore impacted areas. Approval of any new mining proposals should include measures that minimize impacts to soil, water, and aquatic resources, and ensure appropriate restoration to predisturbance conditions. Plan components should also address areas where soil and water function are impaired by past mining activities.
- 3.14 include plan components that reference to the National and State Best Management Practices (BMPs).
- 3.15 remove requirements for specific analysis and monitoring methods, models, and protocols that are in the current plan components. In the current plans, methodologies are required that are no longer the best available science. It would be preferable for this to be adaptive to current science.

4. Climate Change and Carbon Stocks

Under climate change and carbon stocks, there is a need to:

- 4.1 consider the potential influences of climate change and the impacts to carbon stocks in forest planning, per the 2012 Planning Rule and Directives.
- 4.2 include plan components that would address the effects of climate change on resources and provide methods to adapt.

5. Social, Cultural, and Economic Conditions

Under social, cultural, and economic conditions, there is a need to:

- 5.1 have plan components that contribute to social and economic sustainability, integrated with components that provide for ecosystem services, multiple uses, ecological sustainability, and species diversity.
- 5.2 contribute to people and communities' capability to benefit from a range of social and economic benefits for present and future generations, including the capability to support the network of relationships, traditions, culture, and activities that connect people to the land and to one another.
- 5.3 highlight the unique qualities of the Forests and the ability to provide ecosystem services and multiple uses by characterizing the roles and contributions of the area.

6. Multiple Uses and Ecosystem Services

Multiple use is defined by the Multiple-Use Sustained-Yield Act (MUSY) of 1960 (16 U.S.C. 528–531) as follows:

...the management of the various renewable surface resources of the NFS so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

In practice, multiple uses largely fall under the broader umbrella of ecosystem services (benefits people obtain from ecosystems). The multiple use mandate under the MUSY Act of 1960 (16 U.S.C. 528–531) and the National Forest Management Act (NFMA) of 1976 (16 U.S.C. 1600 et seq.) require land management plans to address multiple uses.

The 2012 planning rule defines ecosystem services as “the benefits people obtain from ecosystems.” Healthy forest ecosystems are life-supporting systems that provide a full suite of goods and services (ecosystem services) that are vital to human health and wellbeing.

While not all resources are represented under this *Multiple Use* heading, there may be multiple use information under their respective headings in other locations in the document. Here, you will find specific multiple use information for range, watershed, timber, fish and wildlife, and energy and minerals.

Multiple Uses

Under multiple uses, there is a need to:

Range

- 6.1 provide overarching criteria-based guidance related to the determination of areas that are suitable and capable for livestock grazing. Consider designing these components so that future adjustments in livestock forage allocation and land areas considered suitable for grazing and capable of providing forage for livestock grazing may be made through future Allotment Management Plans (AMPs) and/or through permit administration.
- 6.2 provide direction on conducting carrying capacity analysis through future AMPs. Direction should include reference to ecological forage allocations and describe the circumstances when carrying capacity analysis should be conducted during future AMPs.
- 6.3 consider including plan components on the use of targeted grazing to address contemporary vegetation management challenges (e.g. controlling invasive exotic weeds, reducing fire risk, and chemical free control of noxious weeds).
- 6.4 consider including plan components designed to minimize intermingling of and conflicts between domestic and wild animals (e.g. bighorn sheep, predators, elk, etc.).
- 6.5 refine and update existing plan components to be relevant and consistent across both forests and include criteria-based direction on developing management tools through future AMPs and/or through permit administration to be based on desired conditions, site-specific needs, and potential.
- 6.6 consider including plan components discussing the temporary or seasonal closure of allotments, or modifications to livestock grazing practices during emergency situations (e.g. drought, insect epidemic, fire, etc.) to protect rangeland health.

- 6.7 consider including plan components that provide guidance related to recovery periods and other grazing restrictions to address resource conditions to restore the condition and/or maintain the sustainability of vegetation communities and associated forage for livestock grazing.

Watershed

- 6.8 update plan components for municipal watershed management.
- 6.9 include plan components to address impaired streams across the planning area. Current direction is vague and lacks specific direction for management of these streams.
- 6.10 include plan components to protect watersheds that are important drinking water sources.

Timber

- 6.11 determine the suitability of lands in the planning area for timber production as required by the 2012 Planning Rule and associated directives. Vegetation conditions and the role of timber harvest in meeting ecosystem management and social/economic objectives have changed since 1986. The determination of suitability should be consistent across the planning area; be based on the best available data; and consider site-specific suitability determinations that have been made. Lands designated as Inventoried Roadless Areas (IRAs) should no longer be considered suitable due to the restrictions described in the Roadless Area Conservation Rule (RACR).
- 6.12 develop plan components related to tree improvement activities and areas. Tree improvement is a critical component of managing the timber resource that warrants unique guidance.
- 6.13 develop plan components for lands suitable for timber production and for lands where timber harvest is appropriate for purposes other than timber production. Terminology should be defined clearly and consistently across the planning area.
- 6.14 ensure that appropriate silviculture practices and stocking guides are described consistently across the planning area and are based on the best available science regarding vegetation management. Plan components should integrate timber stand improvement needs with other resource objectives.
- 6.15 re-evaluate and update plan components related to economics and timber sale feasibility requirements given the potential use of timber harvest to meet multiple resource and ecosystem management objectives.
- 6.16 update timber production estimates and associated components to be based on the best available vegetation data and timber modeling tools, and to provide the information for the new terminology required by the 2015 directives. The new timber harvest level estimates required include the sustained yield limit (SYL); projected timber sale quantity (PTSQ); and the projected wood sale quantity (PWSQ).

Fish and Wildlife

- 6.17 evaluate the objectives for management of hunted or trapped wildlife populations and for hunting experiences.
- 6.18 evaluate the objectives for management of fisheries for fishing experiences.

Energy and Minerals

- 6.19 include plan components for management of the areas of mineralization and recurring mineral activity across the planning area. Minerals, as a commodity, including common varieties, need to be addressed similarly to the range and timber across the planning area. See Renewable and Nonrenewable Energy, Mineral Resources, and Geology.

Ecosystem Services

Under ecosystem services there is a need to consider providing guidance in the following ecosystem services areas: wood for fuel, clean air, cultural and historical resources, aesthetics, inspirational and non-use values, research and education, and regulating services (such as flood protection and erosion control). Many of these topics are discussed in their respective resource sections.

7. Recreation Settings, Opportunities, Access, and Scenery

Under recreation settings, opportunities, access, and scenery, there is a need to:

Sustainable Recreation

- 7.1 address sustainable recreation as defined in the 2012 Planning Rule. This would include the integration of recreation settings, opportunities, access, and scenery. In addition to integrating plan direction among the various recreation programs (e.g. developed, dispersed, trails, etc.), plan components need to be integrated with other resource values, both biophysical and cultural.
- 7.2 include maps and detailed descriptions of desired recreation opportunity spectrum (ROS) settings and scenic integrity objectives (SIOs) that have been integrated with other resource values and will serve as the framework to ensure sustainable and compatible access, facilities, services, development scale and activities.
- 7.3 provide an integrative approach with adaptive management strategies for the management of a diverse recreation program that includes a wide range of developed recreation, dispersed recreation, and recreation special uses opportunities within desired ROS settings.

Developed Recreation

- 7.4 address basic infrastructure requirements for future design criteria to accommodate modern recreation vehicles at developed recreation sites, where appropriate. Campgrounds that were constructed in the 1970's and 1980's strain to accommodate recreation vehicles that are now much larger than were originally designed for. Modification to developed recreation sites will need to tie directly to the desired ROS settings.
- 7.5 provide a recreation program that integrates accessibility standards that meet the Americans with Disabilities Act.
- 7.6 integrate lookout and cabin rentals into the developed recreation program. Recognize the cultural and historic aspects that these facilities provide.
- 7.7 provide for adaptive management strategies related to the treatment of vegetation at developed sites. Ecological processes, such as fires and insects and diseases, can change vegetative conditions that can influence recreation use and elevate health and safety concerns.

Dispersed Recreation

- 7.8 provide guidance and adaptive management strategies for the management of dispersed recreation in the revised forest plan. Tie dispersed recreation activities to ROS settings and be specific about what kind of activity can and should occur in each ROS category. Dispersed recreation use (both camping and day use) accounts for the largest number of recreation users in the HLC NFs.
- 7.9 recognize recreation aviation as a dispersed recreation opportunity within the planning area. Tie this recreation opportunity to desired ROS settings.

Trails

- 7.10 develop adaptive management strategies for a sustainable trail system that balances available federal funding with infrastructure and the capacity to oversee partnerships and volunteers. The trail system in the HLC NFs provides an inherent value to the public that is recognized by many.
- 7.11 provide guidance and adaptive management strategies for the management of vegetation along forest trails system, especially as it relates to issues of health and safety of forest trail users.

Recreation Information, Interpretation, and Education

- 7.12 provide an integrative approach to the management of interpretation and education across the forests.

Recreation Special Uses

- 7.13 provide guidance and adaptive management strategies for management of the recreation special uses program. Providing recreation opportunities through special use permits continues to be an important component of the recreation program. However, a balance between the existing recreation opportunities, resource capacity and impacts, and the pressure to provide additional recreation special uses needs to be addressed.
- 7.14 provide guidance and direction for the outfitter and guide special use program in the HLC NFs planning area.
- 7.15 provide guidance and direction for the recreation residence program in the HLC NFs planning area. This should address issues concerning historic buildings, lieu lots, and overall administration of recreation residence permits.
- 7.16 provide guidance and direction for recreation lodges and resorts within the HLC NFs planning area. This should address issues concerning historic buildings and administration of these permits.
- 7.17 provide guidance and direction for the management of commercial ski areas with long-term permits within the HLC NFs. This guidance and direction should address historic buildings and allow permit holders the flexibility to address issues related to infrastructure and vegetation.

Emerging Technologies

- 7.18 recognize and provide adaptive management strategies for addressing new and emerging technologies that may affect recreation opportunities or ROS settings as they emerge. Advances in technology have greatly impacted the recreation resource in the past 20 years. There is a need to provide the continuation of a variety of recreation opportunities within the HLC NFs planning area that are sensitive to social issues and protect natural and cultural resources.

Scenic Resources

- 7.19 Integrate the scenery management system (SMS) concepts, terminology, and processes.
- 7.20 develop plan guidance to ensure the desired scenic character is achieved and guidance for future management actions is established.

8. Designated Areas

Under designated areas, there is a need to:

Wilderness

- 8.1 reference existing wilderness management plans that have been completed in the HLC NFs planning area.

8.2 recognize that there are other designations within wilderness boundaries that may affect wilderness management.

Recommended Wilderness Areas

8.3 conduct a wilderness evaluation to determine recommended wilderness areas to be included in the revised forest plan. A requirement of the 2012 Planning Rule is the inventory and evaluation of lands that may be suitable for inclusion in the National Wilderness Preservation System.

Inventoried Roadless Areas (IRAs) and the Roadless Area Conservation Rule

8.4 ensure that plan components are consistent with the Roadless Area Conservation Rule (RACR) (36 CFR Part 294 Subpart B) which directs the management of Inventoried Roadless Areas (IRAs) because this rule was not in affect at the time the current plans were developed. The forest plan cannot modify RACR direction. Prohibitions stated in RACR preclude IRAs from being considered for inclusion in the suitable timber base. IRA designation would also have a bearing on other plan components, including desired conditions and management area guidance.

Rocky Mountain Front Conservation Management Area

8.5 incorporate the direction from the National Defense Authorization Act of 2014 regarding the Rocky Mountain Front Conservation Management Area.

Elkhorns Wildlife Management Unit

8.6 update guidelines for the Elkhorns Wildlife Management Unit based on integration with other resource values, both biophysical and cultural.

Wild and Scenic Rivers

8.7 conduct a Wild and Scenic Rivers eligibility study for all free flowing, named streams within the HLC NFs planning area. Include this new inventory in the revised forest plan. A requirement of the 2012 Planning Rule is the identification of eligible rivers and streams for inclusion into the National Wild and Scenic Rivers System.

Tenderfoot Experimental Forest

8.8 clarify roles, responsibilities, guidance, and authorities within the Tenderfoot Experimental Forest.

National Trails System

8.9 ensure plan components are consistent with national direction for the management of the Continental Divide National Scenic Trail (CDNST), the Lewis and Clark National Historic Trail (LCNHT), and other national recreation trails (NRTs). Since the 1986 plans, additions have been made to the National Recreation Trails system that affects land management and planning on the HLC NFs. There is a need to provide adequate corridor mapping and associated management direction/plan components for these corridors.

Nationally Significant Caves

8.10 provide guidance for cave and karst management within the HLC NFs planning area. This direction needs to be integrated with other resource values, including biophysical, cultural, and social values and should address recreation use, health, and safety as well as biological concerns.

Research Natural Areas

8.11 review available data and determine possible additions to the research natural area program.

8.12 ensure plan components reflect the latest guidance from the Rocky Mountain Research Station for the Research Natural Areas.

Special Areas

- 8.13 review the HLC NFs planning area to determine if there are areas which could receive special emphasis and be designated as special areas. These areas might include areas which have special recreational, geologic, scenic, historic, botanical, or zoological value.
- 8.14 consider special corridors, such as rivers, national trails, byways, etc., for special area designation.

Kings Hill Scenic Byway

- 8.15 provide guidance for the Kings Hill scenic byway which was officially designated in 1989.

9. Renewable and Nonrenewable Energy, Mineral Resources, and Geology

Under renewable and nonrenewable energy, mineral resources, and geology, there is a need to:

- 9.1 include plan components that address mineral activities and authorities. Also include plan components that allow for mineral entries and withdrawals.
- 9.2 include plan components to address mine reclamation areas, hazardous mine openings and waste repository sites to protect fragile soils, composite caps, drain systems, and provide for public safety, etc.
- 9.3 update the plan components related to the management on areas available for leasable minerals.
- 9.4 include plan components to address the Federal and State Superfund Designated sites within the plan area at the watershed scale. This is not addressed in the current Forest Plans.
- 9.5 provide for consistent cave management direction. The Lewis & Clark NF has adopted cave management direction as a forest plan amendment, but the Helena NF has not.
- 9.6 include plan components that specify monitoring items for energy and minerals.
- 9.7 provide management guidance, footprint reduction plans, and reclamation standards for mineral material pits that exist on the Little Belt, Snowies, Castles, Crazies, and Highwood GAs.
- 9.8 include plan components that address the need to improve areas with water quality impairment related to hard rock mining.
- 9.9 include plan components to provide direction for management of geothermal and wind energy areas.
- 9.10 develop plan components to address facilities associated with Federal Energy Regulatory Commission (FERC) sites within the HLC NFs planning area.
- 9.11 include plan components for paleo resource management.
- 9.12 ensure plan components adequately address geologic hazards.

10. Infrastructure

Under infrastructure, there is a need to:

- 10.1 consider including plan components that provide guidance on how, where, and if new infrastructure can be built and how to reduce or decommission old or unneeded infrastructure.

10.2 consider including plan components that would enable the FS to shift of the burden of infrastructure to the entity benefitting from it. As an example, roads to special use facilities could be paid for by the permittee or dams for private irrigation could be permitted to and maintenance could be paid for by the water users.

National Forest System Roads, Trails, and Airstrips

10.3 include plan components that require the adherence to current travel management plans across the Forests, and to state that management of roads/trails/airstrips is governed by the individual travel plans.

10.4 add plain language that states that the motorized vehicle use maps (MVUM), or latest official forest document if MVUM use is changed, will be the document of record governing public use on motorized roads, trails, and airstrips.

10.5 consider including language that partnerships whenever possible will continue to be developed to assist with road, trail and airstrip (structures and tread where appropriate) construction and maintenance.

10.6 consider including in plan components motorized-mixed use that is allowed on roads that have received a motorized-mixed use analysis.

Stream Crossings

10.7 include plan components that provide guidance to update, as feasible, bridges and culverts at stream crossings across the forests to allow for aquatic organism passage (AOP) and improve crossings that are not meeting BMPs or to address potential for transmission of aquatic invasive species (i.e. at stream ford crossings).

Administrative Facilities

10.8 include plan components that allow for the management of sustainable administration facilities within budget constraints.

Recreation Facilities

10.9 include plan components that provide guidance to help address the backlog of maintenance identified on recreation facilities. Encourage efforts to identify partnerships to help leverage limited funding.

Dams

10.10 include plan components that provide guidance to help address maintenance needs on dams with significant deficiencies noted on some of the structures.

Aviation

10.11 consider including plan components that address management of current and future recreational landing strips in the planning area.

Cemeteries

10.12 include plan components to address management of cemeteries on FS lands.

11. Cultural and Historical Resources and Uses

Under cultural and historical resources and uses, there is a need to:

- 11.1 provide direction and guidance to address the heritage aspect of recreation residences, historic recreation and administrative buildings and facilities, and historic buildings utilized by special use permit holders.
- 11.2 provide guidance and direction that address landscape level cultural properties such as traditional cultural districts, archeological districts, mining districts, etc.
- 11.3 provide guidance on addressing traditional cultural values for other resources such as animal and fish species, plants, minerals and water.

12. Land Status and Ownership, Land Uses, and Access Patterns

Under land status and ownership, land uses, and access patterns, there is a need to:

Land Special Uses

- 12.1 identify existing locations on the ground for all designated communication sites.
- 12.2 provide guidance on how, where, and if new communication sites should be considered.
- 12.3 identify all lands suitable for utility right-of-way (ROW) corridors within the HLC NFs planning area.
- 12.4 provide guidance for the suitability of lands to support special uses. Consider other land management direction in determining which lands might be most suitable for new or expansion of existing special uses.
- 12.5 consider clear language that establishes the development and maintenance responsibility of permit holders.
- 12.6 remove all language related to subdividing of private lands adjacent to FS lands.
- 12.7 provide guidance and direction that allows for basic permitted operations for all special use permits, including ski area permits, utilities corridors, and transportation corridors. This would allow for flexibility for permit operations and maintenance.
- 12.8 consider components that provide guidance for the acquisition of reciprocal ROWs for access proposals.
- 12.9 identify authorities and delegation of authorities for special uses within the revised forest plan.

Land Adjustments

- 12.10 provide language that requires all land adjustment proposals consider reciprocal ROW acquisitions when feasible.
- 12.11 consider options for forest land consolidation when there are intermingled ownerships.
- 12.12 provide land acquisition guidance in the revised forest plan.

Access

- 12.13 identify unresolved access opportunities.

Acronyms

AMP – Allotment Management Plan
AOP – Aquatic Organism Passage
AUM – Animal Unit Month
BASI – Best Available Scientific Information
BMP – Best Management Practice
CDNST – Continental Divide National Scenic Trail
CFR – Code of Federal Regulations
COA – Condition of Approval
DC – Desired Condition
DEIS – Draft Environmental Impact Statement
ESA – Endangered Species Act
FEIS – Final Environmental Impact Statement
FLPMA – Federal Land Plan Management Act
FS – Forest Service
FP – Forest Plan
FSH – Forest Service Handbook
GA – Geographic Area
GDE – Groundwater Dependent Ecosystems
GDL – Guideline
HFRA-Healthy Forest Restoration Act
HLC NFs – Helena and Lewis & Clark National Forests
IDT – Interdisciplinary Team
IRA – Inventoried Roadless Area
KEC – Key Ecosystem Characteristic
LCNHT – Lewis and Clark National Historic Trail
MA – Management Area
MIS – Management Indicator Species
MTDEQ – Montana Department of Environmental Quality
MTFWP – Montana Department of Fish, Wildlife, and Parks
MUSY – Multiple Use Sustained Yield Act
MVUM – Motorized Vehicle Use Map
NCDE – Northern Continental Divide Ecosystem
NFS – National Forest System

NHPA – National Historic Preservation Act
NRCS – Natural Resource Conservation Service
NRV – Natural Range of Variability
OBJ – Objective
OHV – Off Highway Vehicle
PTSQ – Projected Timber Sale Quantity
PWSQ – Projected Wood Sale Quantity
RACR – Roadless Area Conservation Rule
ROS – Recreation Opportunity Spectrum
ROW – Right of Way
SCC – Species of Conservation Concern
SIO – Scenic Integrity Objective
STD – Standard
SYL – Sustained Yield Limit
USDA – United States Department of Agriculture
USFS – United States Forest Service
USFWS – United States Fish and Wildlife Service
WCF – Watershed Condition Framework

Glossary

allotment management plans (AMPs) – an operating plan for a grazing allotment on public land prepared and agreed to by the permittee and agency.

animal unit months (AUMs) – the amount of dry forage required by one mature cow of approximately 1,000 pounds or its equivalent, for one month, based on a forage allowance of 26 pounds per day.

best management practices (BMPs) - a practice or usually a combination of practices that are determined by a state or a designated planning agency to be the most effective and practicable means (including technological, economic, and institutional considerations) of controlling point and nonpoint sources pollutants at levels compatible with environmental quality goals—*note* BMPs were conceptualized in the 1972 US Federal Water Pollution Control Act.

carbon stocks - the amount or quantity contained in the inventory of a carbon pool.

coarse woody debris (CWD) - any piece(s) of dead woody material (e.g., dead boles, limbs, and large root masses) on the ground or in streams that is at least three inches in diameter.

connectivity - ecological conditions that exist at several spatial and temporal scales, providing landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long distance range shifts of species, such as in response to climate change (36 Code of Federal Regulations 219.19). Connectivity needs vary by species. For example, bull trout are able to move upstream to spawn as long as there is not a barrier to connectivity, such as a dam.

dispersed recreation - that portion of outdoor recreation use that occurs outside of developed sites in the unroaded and roaded forest environment i.e. hunting, backpacking, and berry picking.

ecosystem - a functional unit consisting of all the living organisms (plants, animals, and microbes) in a given area, and all the non-living physical and chemical factors of their environment, linked together through nutrient cycling and energy flow; an ecosystem can be of any size (a log, pond, field, forest, or the earth's biosphere) but it always functions as a whole unit; ecosystems are commonly described according to the major type of vegetation, for example, forest ecosystem, old-growth ecosystem, or range ecosystem; a spatially explicit, relatively homogeneous unit of the earth that includes all interacting organisms and elements of the abiotic environment within its boundaries; an ecosystem is commonly described in terms of its: (1) **composition**—the biological elements within the different levels of biological organization, from genes and species to communities and ecosystems; (2) **structure**—the organization and physical arrangement of biological elements such as, snags and down woody debris, vertical and horizontal distribution of vegetation, stream habitat complexity, landscape pattern, and connectivity; (3) **function**—ecological processes that sustain composition and structure, such as energy flow, nutrient cycling and retention, soil development and retention, predation and herbivory, and natural disturbances such as wind, fire, and floods; and (4) **connectivity** (See **connectivity**)

focal species - a small subset of species whose status permits inference to the integrity of the larger ecological system to which it belongs and provides meaningful information regarding the effectiveness of the plan in maintaining or restoring the ecological conditions to maintain the diversity of plant and animal communities in the plan area. Focal species would be commonly selected on the basis of their functional role in ecosystems.

groundwater dependent ecosystems (GDE) – communities of plants, animals, and other organisms whose extent and life processes are dependent on access to or discharge of groundwater.

inventoried roadless areas (IRAs) - areas identified in a set of inventoried roadless area maps, contained in Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000, which are held at the National headquarters office of the Forest Service, or any subsequent update or revision of those maps.

key ecosystem characteristic (KEC) – important specific elements of an ecosystem that sustain the long-term integrity of the ecosystem. KECs include dominant ecological characteristics of composition, structure, function, and connectivity of terrestrial, aquatic, and riparian ecosystems and may be stressors and possible effects of stressors. KECs provide a mechanism for assessing status of ecosystem conditions regarding ecological integrity. They are identified, selected, and assessed during the assessment phase, brought forward to help develop plan components, and may be useful when developing monitoring questions and indicators.

landscape – a defined area irrespective of ownership or other artificial boundaries, such as a spatial mosaic of terrestrial and aquatic ecosystems, landforms, and plant communities, repeated in similar form throughout such a defined area.

management indicator species (MIS) – a plant or animal which, by its presence in a certain location or situation, is believed to indicate the habitat conditions for many other species.

monitoring - a systematic process of collecting information to evaluate effects of actions or changes in conditions or relationships.

natural range of variability (NRV) - spatial and temporal variation in ecosystem characteristics under historic disturbance regimes during a reference period.

northern continental divide ecosystem (NCDE) – approximately 27,338,600 acres of public and private lands in northwestern and north-central Montana that was identified in the 1992 Grizzly Bear Recovery Plan as a Recovery Area for grizzly bears listed as Threatened under the Endangered Species Act.

NCDE grizzly bear conservation strategy – 2013 draft document outlining management direction for state, federal, and tribal lands in the NCDE to ensure maintenance of a viable grizzly bear population after the grizzly bear is removed from listing under the Endangered Species Act. The draft strategy was developed by state and federal agencies and tribes, and delineates zones in which the grizzly bear would be de-listed, and in which specific management actions would be taken. The strategy must be amended to state and federal land and resource management and similar plans to ensure adequate regulatory mechanisms for management of grizzly bears before the species can be proposed for delisting.

noxious weed - any exotic plant species established or that may be introduced in the area, which may render land unfit for agriculture, forestry, livestock, wildlife, or other beneficial uses.

old growth - ecosystems that are distinguished by old trees and related structural attributes. This is deliberately very generic, as the use of the term old growth and definitions for old growth vary substantially by ecological regions, forest types, local conditions, literature source, and a host of other factors. In the context of the Helena and Lewis and Clark National Forest ecosystem and the development of the revised Forest Plan, definitions for old growth are those provided within the document titled “Old Growth Forest Types of the Northern Region (Green et al. 1992 (errata corrected 12/11)).

patch - areas distinguished from their surroundings by environmental discontinuities, such as a patch of early seral/structural stage forest surrounded by mid-seral and late-seral structural stage forest.

plan (or land management plan) - a document, or set of documents, that provides management direction for an administrative unit of the National Forest System developed under the requirements of the 2012 planning rule or a prior planning rule.

projected timber sale quantity (PTSQ) – the estimated quantity of timber meeting applicable utilization standards that is expected to be sold during the plan period. As a subset of the projected wood sale quantity (PWSQ), the PTSQ includes volume from timber harvest for any purpose from all lands in the plan area based on expected harvests that would be consistent with plan components. The PTSQ is also based on the planning unit’s fiscal capability and organizational capacity. PTSQ is not a target nor a limitation on harvest, and is not an objective unless the responsible official chooses to make it an objective in the plan.

projected wood sale quantity (PWSQ) – the estimated quantity of timber and all other wood products that is expected to be sold from the plan area for the plan period. The PWSQ consists of the projected timber sale quantity (PTSQ) as well as other woody material such as fuelwood, firewood, or biomass that is also expected to be available for sale. The PWSQ includes volume from timber harvest for any purpose based on expected harvests that would be consistent with plan components. The PWSQ is also based on the planning unit’s fiscal capability and organizational capacity. PWSQ is not a target nor a limitation on harvest, and is not an objective unless the responsible official chooses to make it an objective in the plan.

recreation opportunity spectrum (ROS) - the social, managerial, and physical attributes of a place that, when combined, provide a distinct set of recreation opportunities. The Forest Service uses the recreation opportunity spectrum to define recreation settings and categorize them into six distinct classes: primitive, semi-primitive non-motorized, semi-primitive motorized, roaded natural, rural, and urban. (36CFR 219.19)

Primitive (P) - the Primitive recreational opportunity spectrum (ROS) setting is large, remote, wild, and predominately unmodified landscapes. There is no motorized activity and little probability of seeing other people. Primitive ROS settings are managed for quiet solitude away from roads, people, and development. There few, if any facilities or developments. Most of the primitive ROS settings coincide with designated wilderness boundaries.

Semi-Primitive Non-Motorized (SPNM) - Semi-Primitive Non Motorized ROS settings include areas of the forest managed for non-motorized use. Mountain bikes and other mechanized equipment are often present. Rustic facilities are present for the primary purpose of protecting the natural resources of the area. These settings are not as vast or remote as the primitive ROS settings, but offer opportunities for exploration, challenge, and self-reliance.

Semi-Primitive Motorized (SPM) - Semi-Primitive Motorized ROS settings areas of the forests are managed for backcountry motorized use on designated routes. Routes are designed for off highway vehicles (OHVs) and other high clearance vehicles. This setting offers visitors motorized opportunities for exploration, challenge, and self-reliance. Mountain bikes and other mechanized equipment are also sometimes present. Rustic facilities are present for the primary purpose of protecting the natural resources of the area or providing portals to adjacent areas of primitive, or semi-primitive, non-motorized areas.

Roaded Natural (RN) - This setting is managed as natural appearing with nodes and corridors of development that support higher concentrations of use, user comfort, and social interaction. The road system is well defined and can typically accommodate sedan travel. System roads also

provide easy access to adjacent in semi-primitive motorize, semi-primitive non-motorized and primitive areas.

Rural (R) - Settings represent the most developed recreation sites and modified natural settings Facilities are designed primarily for user comfort and convenience.

Urban (U) – Area is characterized by a substantially urbanized environment although the background may have natural appearing elements. Highly developed ski areas and resorts are examples of urban class on NFS lands.

regeneration method - a cutting method that regenerates a stand. Includes clearcut, seedtree and shelterwood cutting methods.

riparian areas – three-dimensional ecotones of interaction that include terrestrial and aquatic ecosystems that extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain to the water, laterally into the terrestrial ecosystem, and along the water course at variable widths.

scenery management system (SMS) - A system for establishing standards of measurement for assessing proposed and existing impacts to the scenic quality. Adopted by the Forest Service in 1994.

scenic integrity objective (SIOs) - scenic integrity objectives reflect the desired level of intactness of positive attributes (biophysical and cultural) identified in scenic character descriptions. SIOs are an integral component of the forest's recreation settings, opportunities, and experiences. (reference desired ROS classes and SIP suitability).

sensitive species - a term defined in the 1982 planning rule as those wildlife and plant species identified by the Regional Forester for which population viability is a concern because of significant current or predicted downward trends in (a) population numbers or density, or (b) habitat capability that would reduce a species' existing distribution.

snags - a standing dead tree usually greater than 5 feet in height and 6 inches in diameter at breast height.

soil productivity - the capacity of a soil to produce a specific crop such as fiber and forage, under defined levels of management. It is generally dependent on available soil moisture and nutrients, and the length of the growing season.

species of conservation concern (SCC) - a species, other than federally recognized threatened, endangered, proposed, or candidate species, that is known to occur in the plan area and for which the regional forester has determined that the best available scientific information indicates substantial concern about the species' capability to persist over the long-term in the plan area (36 Code of Federal Regulations 219.9).

sustained yield limit (SYL) – the amount of timber, meeting applicable utilization standards, “which can be removed from [a] forest annually in perpetuity on a sustained yield basis.” (NFMA at section 11, 16 USC 1611; 36 CFR 219.11(d)(6)). It is the volume that could be produced in perpetuity on lands that *may be suitable* for timber production. Calculation of the limit includes volume from lands that may be deemed not suitable for timber production after further analysis during the planning process. The calculation of the SYL is no limited by land management plan desired condition, other plan components, or the planning unit's fiscal capability and organizational capacity. The SYL is not a target but is a limitation on harvest, except when the plan allows for a departure.

sustainability - the capability to meet the needs of the present generation without compromising the ability of future generations to meet their needs. For purposes of this part, “ecological sustainability” refers to the capability of ecosystems to maintain ecological integrity; “economic sustainability” refers to the capability of society to produce and consume or otherwise benefit from goods and services including contributions to jobs and market and nonmarket benefits; and “social sustainability” refers to the capability of society to support the network of relationships, traditions, culture, and activities that connect people to the land and to one another, and support vibrant communities.

wilderness - any area of land designated by Congress as part of the National Wilderness Preservation System that was established in the Wilderness Act of 1964 (16 United States Code 1131-1136).

winter range - that part of the overall range of an animal where the majority of individuals are from the first heavy snowfall to spring green-up, or during a site-specific period of winter. In the Rocky Mountains, winter range areas tend to have a relatively low amount of snow cover.