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Proposal to Revise the Land Management Plan for the Ashley National Forest

Forest Service Intermountain Region May 2019

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Proposal to Revise the Land Management Plan for the Ashley National Forest

Daggett, Duchesne, and Uintah Counties in Utah and Sweetwater County in Wyoming

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Chapter 1. Introduction

This document is our proposal for revising the Ashley National Forest Land Management Plan. What follows is an initial proposal that provides a starting point for public feedback and engagement as we enter the first formal public comment period (often referred to as "scoping") of our environmental analysis process.

About the Land Management Plan

This document (referred to primarily as the "proposed forest plan") is a proposed revision of the 1986 Ashley National Forest Land and Resource Management Plan. The revision is being conducted under the legal framework of the National Forest Management Act and the National Forest System Land Management Planning regulations, commonly referred to as the 2012 Planning Rule.[1]

The forest plan serves as a guide for management of the Ashley National Forest during the next 15 to 20 years.[2] Forest plans are prescriptive documents that set desired conditions, objectives, standards, and guidelines for managing resources. This proposed plan:

- Is strategic in nature. It does not include project and activity decisions. Those decisions are made later, only after more detailed analysis and further public involvement.
- Is adaptive in that new knowledge and information can be analyzed and the forest plan can be amended, if appropriate, at any time.
- Honors the continuing validity of private, statutory, or pre-existing rights.

The forest plan also provides guidance for working with Tribal, Federal, State, and County governments to coordinate an "all lands approach" that considers the role of Ashley National Forest land management within the broader landscape.

The forest plan revision process began with an assessment of the ecological, social, and economic conditions and trends of the Ashley National Forest in 2017. Using the best available scientific information and input from agencies, local governments, Tribes, and the public, the assessment helped the forest planning team determine what plan components and other information needed revision.

All supporting documentation for the development of this proposed plan can be found in the planning record at the Ashley National Forest headquarters office.

Regulatory Direction for Forest Planning

The National Forest Management Act and its implementing regulations direct the Forest Service to revise land management plans at least every 10 to 15 years:

- When conditions or demands in the areas covered by the plan have changed significantly

[1] Refer to 36 CFR 219

[2] May be revised sooner if needed because of important changed conditions.

- When changes in agency policies, goals, or objectives would have a significant effect on national forest-level programs; or
- When monitoring and evaluation indicate a revision is necessary

A forest plan guides and constrains the actions of Forest Service personnel, not the public. Any constraint on the public can only be imposed by law and regulation, or through an order issued by a Forest Service responsible official. In addition to forest plans, management of National Forest System lands is guided and constrained by other laws, regulations, policies, executive orders, and procedures in the Forest Service directives system (manuals and handbooks). These are generally not repeated in forest plans.

Once a forest plan is approved, any substantive changes to plan components would require an amendment with appropriate analysis required by the National Environmental Policy Act. Minor changes to other forest plan content (such as updates to maps or data or correcting typographical errors) may be made using an administrative correction process. The public is notified of all administrative corrections to a forest plan.

Plan Structure

This chapter provides an overview of the Ashley National Forest, its distinctive roles and contributions, and the legal framework and process that guide forest planning.

Chapters 2 and 3 provide management direction in the form of plan components. Plan components that apply forestwide are located in chapter 2. Plan components that apply to specific parcels of land, such as management areas and designated areas, are consolidated under the respective areas they apply to in chapter 3. Plan components include desired conditions, goals, objectives, standards, guidelines, and suitability of lands. See the next section for definitions of plan components.

Chapter 4 describes the plan monitoring program that forms the basis for continuous improvement and provides information for adaptive management of the plan area. The purpose of monitoring in an adaptive management framework is to facilitate learning to support decisions on necessary changes to the plan. The plan monitoring program consists of a set of monitoring questions and associated indicators to evaluate whether plan components are effective and appropriate, and whether management is effective in maintaining or achieving progress toward desired conditions and objectives for the plan area. Chapter 4 is followed by a glossary and references.

An appendix includes the following sections: appendix A (priority watersheds); appendix B (management approaches); appendix C (timber suitability); and appendix D (maps).

Forest Plan Components

Forest plan components provide a strategic and practical framework for managing the plan area. The components apply to the resources and issues of the plan area and they reflect the plan area’s distinctive roles and contributions. Forestwide plan components are found in chapter 2 of this document. Plan components can apply forestwide or be specific to management areas or other designated areas.

There is no requirement that every topic have plan components, and not every type of plan component is included for every topic. The following description of plan components comes from the 2012 Planning Rule at 36 CFR 219.7(e).

- A **desired condition** is a description of specific social, economic, and/or ecological characteristics of the Ashley National Forest, 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, but not include completion dates. The forest intends to move toward these proposed forest-wide desired conditions over the next 15 or more years, although they may take many decades to achieve.
- An **objective** 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. Objectives will occur over the life of the forest plan, considered to be over the first 15 years of plan implementation, unless otherwise specified.
- A **standard** is a mandatory constraint on project and activity decision making. A standard is established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements.
- A **guideline** 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.
- **Goals** are optional plan content. Goals are broad statements of intent, usually related to process or interaction with the public. Goals are expressed in broad, general terms, and also do not include completion dates. Goals may be used to describe overall desired conditions of the Ashley National Forest that are also dependent on conditions beyond Forest Service authority.

The forest plan contains a specific coding system to identify desired conditions, goals, objectives, standards, and guidelines and where they apply using a pattern like this: AA-BB-CCC. The series of letters before the first dash references the level of direction (for example, FW = forestwide and DA = designated area). The middle series of letters reference plan components (for example, DC for desired condition, OB for objectives, GL for guidelines, ST for standard, and GO for goals). The resource area is the third series of letters (such as WTR for watershed and SO for soil). Then a unique number for the specific component follows (using the numerical order starting with 01 for each resource area).

For example, forestwide direction for desired condition number 01 associated with watersheds would be identified as FW-DC-WTR-01. For the designated area of Flaming Gorge National Recreation Area, direction would be labeled as DA-DC-FGNRA-01.

Suitability of Uses: Another required plan component is identifying lands that are suitable or not suitable for various multiple uses or activities, based on the desired conditions applicable to those lands. The suitability of lands need not be identified for every use or activity but every plan must identify those lands that are not suitable for timber production (see appendix C). Suitability identifications may be made after consideration of historic uses and of issues that have arisen in the planning process.

Other Plan Content

Other content in the forest plan are not plan components. Such content provides additional information about priorities, monitoring, or management approaches (appendix B) for the Ashley National Forest. They are not requirements or commitments of resources or actions.

The other plan content required to be in the forest plan are the priority watersheds (appendix A), proposed and possible management actions, monitoring program (chapter 4), and distinctive roles and contributions within the broader landscape (chapter 1). Besides including examples as well as narratives and descriptions for background information, the forest plan identifies management approaches.

Management Approaches: Management approaches are not plan components, but are used to describe principal strategies and program priorities the responsible official intends to use to carry out projects and activities developed under the plan. Management approaches can convey a sense of priority and focus among objectives and the likely management emphasis. They should relate to desired conditions and may indicate the future course or direction of change, recognizing budget trends, program demands, and accomplishments. Management approaches may discuss potential processes such as analysis, assessment, inventory, project planning, or monitoring. Management approaches are listed in appendix B.

There is reference to management approaches in a few places of this document, which are designed to move toward applicable desired conditions, or not foreclose the opportunity to maintain or achieve the desired conditions over the long term. Management approaches may have short-term negative effects in order to achieve desired conditions over the long term.

What the Forest Plan Does Not Cover

It's important to note that forest plans set broad direction—they do not generally include site-specific direction for where future projects will occur or how many permits will be issued. Forest plans also do not affect treaty rights or other valid existing rights established by statute. Therefore, you will not find the following in this proposed forest plan.

- **Direction about Specific Roads and Trails:** Determinations about which roads and trails will be opened or closed to specific types of motorized and nonmotorized uses are not addressed at the forest plan level. However, the forest plan may provide context and guidance for future travel management decisions.
- **Authorizations for Oil and Gas Leases:** This proposed forest plan will not evaluate or make determinations about the suitability or availability of lands for future oil and gas leasing.
- **Designation of Wilderness or Wild and Scenic Rivers:** The formal designation of wilderness and wild and scenic rivers does not occur during plan revision, as these acts can only be performed by Congress. The plan may include a preliminary administrative recommendation of areas for wilderness designation or a determination of rivers or river segments that are eligible or suitable for wild and scenic river designation. Such forest plan recommendations or determinations do not guarantee either recommendation to Congress nor formal designation by Congress, but they do influence forest plan guidance of how to manage the recommended areas in the interim.
- **Changes to Designated Roadless Areas:** The boundaries of inventoried roadless areas, defined by the 2001 Roadless Area Conservation Rule, cannot be changed at the national forest level. The Roadless Rule can only be modified through a national rulemaking process or Congressional action.
- **Numbers and Types of Permits:** Determining the number of livestock permitted to graze or the types and numbers of other types of permits is managed at the site-specific project level. However, the forest plan will establish desired conditions and other guidance in which permitted activities will need to be consistent.

- **Existing Water Rights:** The National Forest Management Act does not authorize bypass flow or water right transfer requirements, but rather directs the Forest Service to prepare management plans that provide for multiple uses and sustained yield of forest resources in accordance with the Multiple-Use Sustained-Yield Act of 1960. The Act specifies that the national forests shall be managed for outdoor recreation, range, timber, watershed, and wildlife and fish purposes, and contains no grant of authority for bypass flow requirements to the Forest Service. The National Forest Management Act does not contain any other specific directives governing Forest Service management of water resources. The forest plan establishes desired conditions and other guidance for watershed management; however, it does not address administration of water rights.

Overview of the Ashley National Forest

The Ashley National Forest encompasses about 1.4 million acres in northeastern Utah and southwestern Wyoming (**Error! Reference source not found.**). The national forest is located in three major areas: the northern and southern slopes of the Uinta Mountains, the Wyoming Basin, and the Tavaputs Plateau. Elevations range from 5,500 feet on the Green River below Little Hole near Dutch John, to 13,528 feet at the summit of Kings Peak (the highest point in Utah). About 70 percent of the Ashley National Forest falls within the Uinta Mountains. The Uinta is the largest east-west trending mountain range in the lower 48 states. Together with the Tavaputs Plateau, the Uinta provides a unique ecological transition zone, connecting the northern and southern Rocky Mountains. Nationally designated areas include the High Uintas Wilderness and the Flaming Gorge National Recreation Area.

Lands within the Ashley National Forest support a diverse range of vegetation, wildlife, geology, uses, and activities. A single day's drive takes visitors through life zones ranging from high desert vegetation to shrub-steppe, to aspen zones, extensive conifer forests, and high alpine ecosystems. The Uinta Mountains have a large lodgepole pine belt that is unique in Utah, as well as nearly 300 square miles of alpine habitat. The diversity of fish and wildlife species mirrors this range and variety of ecosystems and habitats.

Geology and geomorphology are also diverse and dramatic, including broad glacial basins above tree line, steep river canyons at lower elevations, and highly dissected plateau lands in the Tavaputs Plateau portion of the Ashley National Forest. The Sheep Creek Geological Area promotes viewing and studying geology. The area attracts students, researchers, and tourists.

The Ashley National Forest is generally considered a rural national forest with many traditional uses. Typical uses and activities include land and water-based recreation, livestock grazing, commercial timber harvest, oil and gas production, hard rock mining, firewood gathering, hunting, fishing, viewing scenery and wildlife, and visiting historic sites. Visitors can enjoy a variety of recreation settings, ranging from primitive to highly developed sites. Several historic guard stations are available for public rental, providing both recreational and educational experiences for national forest visitors. Historic and prehistoric cultures have used this area extensively, resulting in abundant cultural resources that span all elevations. Local Native American Tribes value the lands within the Ashley for hunting and gathering activities, ceremonial and traditional uses, and ancestral connections.

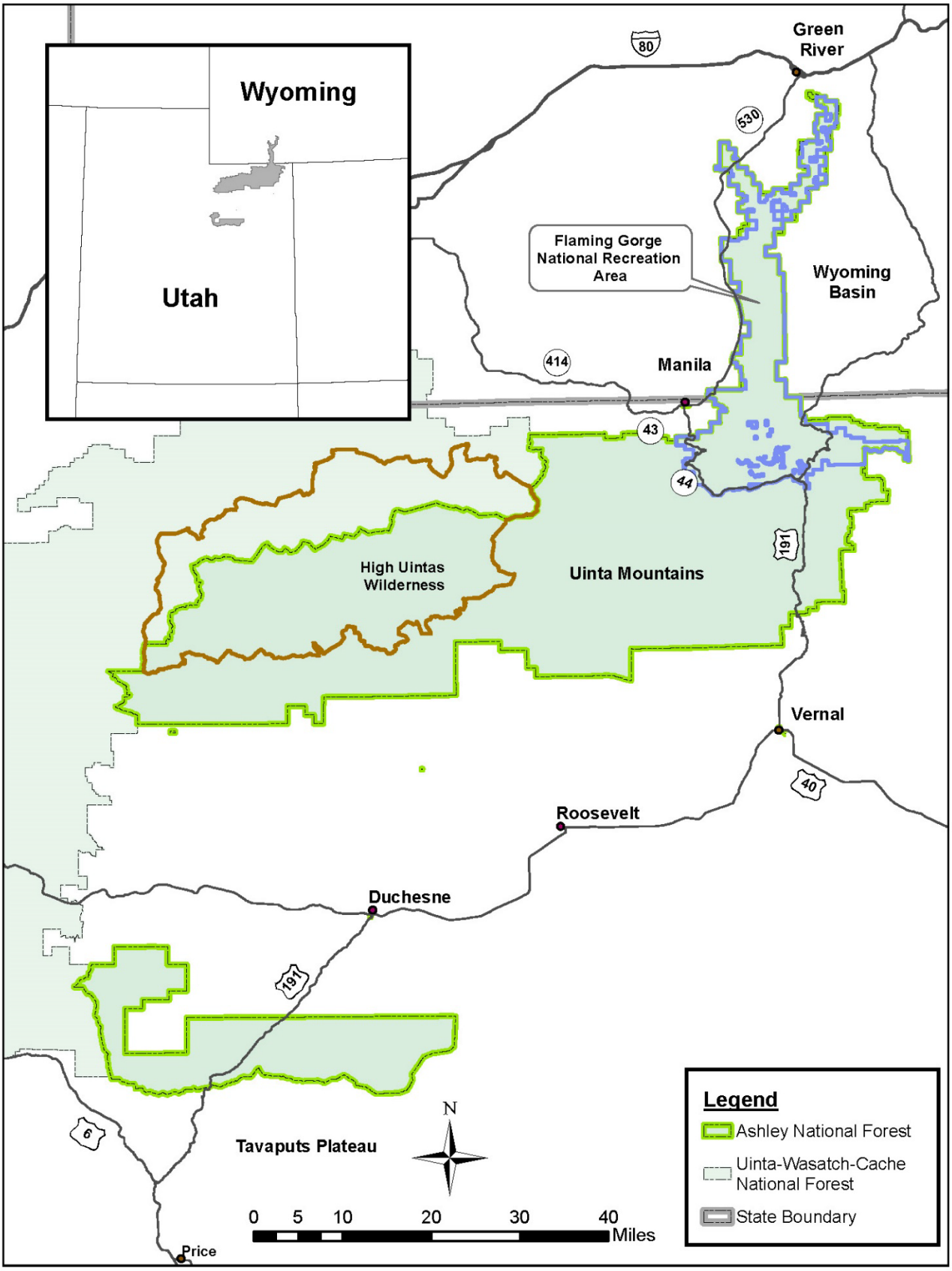

Figure 1. Location of the Ashley National Forest

Visitors to the Ashley come from all over the nation, but information about visitor use indicates that the great majority of visitors are from northern Utah and southern Wyoming. Large towns in Utah located closest to the Ashley National Forest are Vernal, Duchesne, Roosevelt, and Manila. In Wyoming, Green River and Rock Springs are closest to the northern end of the Ashley, where the Green River leads to the Flaming Gorge National Recreation Area. The Ashley National Forest falls predominantly within four counties on the northern border of Utah and southern border of Wyoming: Daggett, Duchesne, and Uintah Counties in Utah, and Sweetwater County in Wyoming. A small portion of the Ashley also lies within Utah, Wasatch, and Summit Counties in Utah. In addition, Uinta County, Wyoming, is in close proximity to the Ashley. These communities and counties are connected in one way or another to the various ecosystem and economic benefits the Ashley National Forest provides.

Distinctive Roles and Contributions of the Ashley National Forest

Although the Ashley National Forest provides a wide range of national forest resources and uses as described above, there are some that stand out more than others. The assessment process in 2017 helped to define the distinctive roles and contributions the Ashley National Forest provides within the broader landscape.

Recreation

The recreational opportunities and scenic vistas on the Ashley National Forest are highly diverse and some of the Ashley's greatest assets. Population increases in Wyoming and Utah have had a corresponding effect on increased recreation, which represents an important socio-economic value to the surrounding communities. The High Uintas Wilderness, which is the largest wilderness area in Utah, and Flaming Gorge National Recreation Area are nationally designated areas that are especially popular destinations.

Water Resources

Protecting water quantity and quality, the timing of flows, and national forest watersheds are critical to sustaining ecosystem functions of the Ashley National Forest. With the arid lands, agriculture, and other uses of lands surrounding the national forest, the Ashley is critical to providing downstream water resources and groundwater for local communities, visitors, and aquatic and terrestrial plants and animals (including species of conservation concern and numerous valued sport fish species). Groundwater resources on the Ashley include seeps, springs and wetlands, as well as numerous natural caves and underground drainage systems. These unique geologic systems contribute to overall biodiversity, endemic species, and rare habitats. Groundwater and surface water flows are also managed for and can be affected by domestic water use, irrigation, livestock developments and other forest management practices.

Terrestrial and Aquatic Ecosystems

The diverse ecosystems of the Ashley National Forest are a key component to supporting and maintaining the social and economic values derived from the national forest. Functioning and resilient terrestrial and aquatic ecosystems contribute to healthy forests and rangelands, abundant fish and wildlife, healthy watersheds and abundant water supplies, beautiful landscapes, and a variety of other ecosystem services.

Social and Economic Values and Contributions

Local communities and tribes have historic and ancestral connections to the lands that comprise the Ashley National Forest. Historic sites, archaeological artifacts, and lands that are important to local Indian Tribes provide communities and cultures with a strong connection to these national forest lands. Many places on the Ashley National Forest are important to the Ute Tribe for hunting and gathering activities, and ceremonial and traditional uses. Livestock grazing and ranching has occurred in and around the Ashley National Forest since the mid- to late 1800s and is still a primary livelihood. Timber and woodland products are a traditional commodity of the Ashley and are useful byproducts of forest restoration and fuel (vegetation) reduction projects.

Communities that are close to National Forest System lands tend to be some of the greatest beneficiaries of the ecosystem services the land provides. The economy of the communities surrounding the Ashley National Forest, historically based on agriculture and solid minerals mining, has now diversified. Oil and natural gas and other forms of energy extraction and tourism are major industries associated with the Ashley National Forest. Mining (which includes oil and gas extraction) is the largest employment sector in the socioeconomic planning area (Daggett, Duchesne, Sweetwater, Uintah, and Utah counties), while agriculture and forest products (including timber) represent small portions of the economy. Livestock grazing has been an important part of the local economy and culture for more than a century and plays an important role in the economics and lifestyle of the local communities. Although timber and fuelwood collection have been a traditional use on the Ashley, the economic contribution has not been as significant as other national forest uses.

Chapter 2. Forestwide Direction

The following plan direction is applicable to all areas of the Ashley National Forest.

Ecological Sustainability and Diversity of Plant and Animal Communities

Air Quality

Air quality is one of the many resources the Forest Service monitors and protects on National Forest System lands. Clean air is an important resource. This is not only because clean air provides life to nearly all living organisms, but also because it contributes to clean water and healthy fisheries, soils, and ecosystems. Clean air also helps boost economies through tourism and recreation (providing clear vistas and fresh air). Air pollutants can deposit onto landscapes or exist in the air at levels that negatively affect water quality and ecosystem function (examples are algal blooms, mercury build-up in fish tissues, ozone, and pollutant damage to plants).

The Forest Service must comply with Federal and State air quality laws and standards, including the Clean Air Act. Under the 1970 Clean Air Act, national ambient air quality standards (NAAQS) are established to protect human health and welfare, including the environment. All Federal, State, and private entities must comply with these national standards wherever the public has access. Smoke from wildfires is considered a natural part of the landscape and background condition; therefore, states can demonstrate to the Environmental Protection Agency (EPA) that national ambient air quality standard violations from wildfire smoke are beyond their control.

The 1977 Clean Air Act amendments direct Federal land managers to “preserve, protect, and enhance the air quality” in mandatory Class I national parks and wilderness areas. The Ashley National Forest does not manage any Class I areas, though it may consult with other Federal land agencies about national forest management activities that could affect air quality in their Class 1 areas. The High Uintas Wilderness, managed in part by the Ashley National Forest, is designated as a Class II area. The Wilderness Act mandates that wilderness areas, regardless of Clean Air Act designation, are to be managed to preserve and protect wilderness character (including air quality) and natural wilderness conditions.

The Ashley National Forest generally experiences clear visibility. Periodically, in summer months, smoke and visibility impacts can occur from wildfires in the region. Similar to other locations in the West, there is evidence of increasing levels of airborne nitrogen compounds (including nitrates and ammonium) deposited in high elevation lakes. Water sample analyses have traced the majority of nitrates in these lakes to agricultural sources in the wider intermountain region.

Adjacent to the Ashley National Forest, in the Uinta Basin, wintertime conditions (of persistent snow cover, sunny days, high atmospheric pressure, and temperature inversion) can stall dispersion of pollutants impacting air quality. The EPA has designated portions of the Uinta Basin in marginal nonattainment status for elevated levels of wintertime ozone to be all lands in Duchesne and Uintah Counties below a contiguous external perimeter of 6,250 feet in elevation. The nonattainment area includes some boundary portions of the Ashley National Forest along the foothills of the Uinta Mountains. As a Federal agency, the

Forest Service is required to document that management actions taken, permitted, or funded in nonattainment areas will not cause or contribute to violations of air quality (ozone) standards or conflict with approved state or federal implementation plans for reducing ozone levels.

Forest Service air quality policy directs coordination of National Forest activities with State and Federal air quality control efforts. This is done by managing and/or mitigating the sources of air pollution created by Forest Service activities, such as prescribed burning, the construction and use of roads, oil and gas activities, and the operation of various facilities.

Desired Conditions (FW-DC-AQ)

01 Ambient air quality across the Ashley National Forest complies with Federal and State standards, and State air quality management plans.

02 The overall air quality supports human and ecosystem health, visibility, recreation, multiple-use and wilderness values—recognizing that short-term smoke impacts may periodically occur from wildland fire events on the Ashley National Forest.

03 Annual deposition of air pollutants is below published critical loads or levels for targeted resources on the Ashley National Forest.

04 Smoke emissions from wildland fires on the Ashley National Forest resemble the pattern, degree, and frequency of historical fire regimes.

Guideline (FW-GL-AQ)

01 Forest Service management actions should not cause or contribute to exceeding ambient air quality standards or reductions in visibility that could impede States' demonstrations of reasonable progress toward air quality goals. To this end, forest management decisions and actions, subject to State and Federal air quality rules and permitting, should consider and incorporate best available control technology on new projects and best available retrofit technology on existing projects under new review.

Soils

Soils are unconsolidated mineral and organic materials that support plants, making them the basis of terrestrial ecosystems. Soils contain carbon, air, and water, and are habitat for many organisms. These organisms range from bacteria, fungi and algae microorganisms, to multicellular plants and animals. A view of the soil profile provides a look back in time and a history of the area. The layers of the soil reveal hundreds to thousands of years of influences that climate (temperature and precipitation), vegetation, and living organisms have had on the soil parent materials. The soil also indicates impacts from more recent influences - including fires, floods, earth movements, and human activities. Since the Ashley has a diverse range of soil-forming factors, the soils are also variable. All of the soils of the world are classified into 12 Soil Orders, and eight of those Orders are found on the Ashley National Forest.

Soils help determine what plant communities can be supported and soils are important for maintaining healthy watersheds. Soils store, purify and transmit water, and store and cycle nutrients and carbon. Interactions between plants and soil are continual. Soils of high quality are capable of supporting productive native plant communities. Likewise, productive plant communities sustain soils by providing cover, root support, plant litter and coarse woody

materials, and the organic matter and root exudates that sustain soil structure, porosity and microorganisms.

Guidance to protect soils comes from the National Forest Management Act of 1976 that mandates the productive capacity of forested areas be protected on Federal lands. The Clean Water Act also provides regulations with the goal of limiting nonpoint source pollution into watersheds, and regional direction requires maintaining soil quality and hydrologic function.

Soil quality and sustainability on the Ashley National Forest can be degraded by invasive plant species, climate change, recreational impacts, oil and gas development, mining activities, past or current overgrazing, and other land-disturbance activities. The Ashley National Forest can protect soils for current and future generations by focusing on sustaining native vegetation and preventing erosion. Management that maintains healthy plant communities also reduces invasive plant species and supports resilient soils by providing cover, roots, and organic additions to the soil surface. Management to reduce and prevent soil erosion is needed because soils are a non-renewable resource due to the length of time needed for them to form. Soil erosion can be reduced by minimizing all forms of soil disturbance (compaction, puddling, displacement, severely burned soil) and by maintaining effective ground cover on the soil surface.

Desired Conditions (FW-DC-SO)

01 Soil quality and productivity is sustained or improving, allowing soil resources to maintain key ecological functions. Soil biological, chemical and physical processes cycle nutrients and carbon—sustaining the biological diversity and productivity of vegetation communities and providing habitat for small to large organisms. Soils contribute to the health of watersheds by serving as a filter to degrade, immobilize, and detoxify undesirable organic and inorganic materials. Soils store water within watersheds and provide for desirable water storage and release.

02 Organic materials (coarse woody debris, plant litter) are sufficient to maintain soil surface organic horizons (including duff and humus in forest stands), facilitate moisture retention, prevent accelerated erosion. The materials can also sustain soil nutrient, carbon, organic matter and microbial population properties.

03 Where natural site conditions allow, biological soil crusts are present or encouraged to reestablish and to improve nutrient cycling and stabilize soils (including areas of desert-shrub, rangelands, sagebrush, and alpine ecosystems).

04 Effective ground cover prevents or minimizes sheet, rill, and gully erosion. Accelerated soil erosion is minimal, short-term (due to precipitation events or soil disturbance), or due to inherent erosiveness of parent materials.

05 Previously managed areas that have incurred detrimental soil disturbance recover through natural processes and restoration activities.

Objective (FW-OB-SO)

01 Complete an updated soil inventory of the Ashley National Forest Uinta Mountain Range that meets the National Cooperative Soil Survey and Forest Service standards for integrated inventory by the end of the planning period (2035). This objective can be achieved using recent Natural Resources Conservation Service (NRCS) mapping data

and soil pedon data collected on the Ashley to represent key ecological types and units. This objective is to provide the necessary soil condition and limitation interpretations to meet or move toward desired conditions, and to correlate with adjacent NRCS inventory.

Guidelines (FW-GL-SO)

01 For vegetation management activities that include use of ground-based equipment, the cumulative management activities in an activity area should not result in detrimental soil disturbance (see glossary) on more than 15 percent of the area following completion of activities. In an activity area where the preexisting conditions of detrimental disturbance exceed 15 percent of the activity area, management activities should include mitigation and post-project restoration so the activity area is moving toward establishment of a cumulative 15 percent or less detrimentally disturbed soils. Recognizing different forms of soil disturbance require varying time frames to be remediated. Areas that have restoration that provides for soil stability and adequate ground cover are considered to be improving soil quality.

02 Areas occupied by landings, temporary roads and main skid trails within timber projects and timber sales should establish in post-project reclamation a minimum of 60 percent effective ground cover for distances needed (project-specific) to protect soil resources from erosion and prevent recreational use. Effective ground cover for this purpose is any combination of downed wood, slash, litter, surface rock and understory vegetation and is separate from the direction for the overall forest ecosystem to maintain 85 percent or more of the potential ground cover in terrestrial vegetation management (see FW-DC-TV 07).

03 Vegetation management in conifer stands should retain coarse woody debris at the completion of management activities for soil ecological function and wildlife. Downed wood maintains soil carbon, organic matter, fertility, moisture, and supports multiple soil organisms. Coarse woody debris is important for feeding, denning, and cover needs of wildlife. Where available, post-treatment site conditions should leave various sizes of coarse woody debris (minimum of 3 inches in diameter) distributed over 40 percent or more of the project area, and should include logs up to 10 feet in length, with diameters that are representative of the conifer stand being treated. Coarse woody debris levels are expected to vary due to fuel hazard risk areas, the protection fire management area, and site-specific prescriptions for downed wood retention. Outside of these areas, general desired coarse woody debris levels are displayed in table 1.

Table 1. Desired coarse woody debris levels

Conifer Vegetation Type	Desirable Coarse Woody Debris (tons/acre)	Desirable Down Logs Number of Logs/10 acres (8-10 feet in length)	Desirable Down Log Size (d.b.h.)*
Ponderosa pine	2-5	30	12 inch
Lodgepole pine	5-10	50	8 inch
Douglas-fir	5-10	50	12 inch
Mixed conifer	10-15	50	12 inch
Engelmann spruce	10-15	50	12 inch

* d.b.h. = diameter at breast height. If size not available, use largest available on the site.

04 Ground-based mechanical equipment for vegetation management should not operate in areas where sustained grades exceed 40 percent in order to minimize the likelihood of soil displacement and erosion.

05 Incorporate design features or mitigation measures to reduce impacts of management actions (compaction, displacement, increased bare soil) on sensitive soils. Sensitive soils on the Ashley National Forest are recognized to include organic soils within fens, hydric soils (wet meadows), soils with seasonal high water tables, and soils formed from erosive parent materials. These materials include glacial moraine deposits, shales, and unconsolidated deposits of the Green River Formation.

Watershed, Aquatic, and Riparian Ecosystems

Watershed and Aquatic Ecosystems

Healthy watersheds and clean water are critical resources that sustain ecosystems on the Ashley National Forest and benefit downstream communities. Since the founding of the Forest Service under the Organic Act, protection of water resources has been recognized as one of the key roles for managing our national forests.

The Safe Drinking Water Act and the Federal Clean Water Act provide the regulatory foundation for water quality protection in the United States. The Safe Drinking Water Act establishes standards and requirements to protect public drinking water and its sources: rivers, lakes, springs, and groundwater wells. The objective of the Clean Water Act is to restore and maintain the chemical, physical and biological integrity of the nation’s waters. Through its various sections, the act uses a variety of regulatory and non-regulatory tools to control direct pollutant discharges from point sources and to manage runoff from nonpoint sources into waters of the United States. The act also gives States and Tribes the option of taking primary responsibility for water pollution control and setting water quality standards within their jurisdictions. The Forest Service, as an agency of the Federal government, is required to comply with all Federal, State, and Local requirements for water pollution control, in the same manner as any nongovernment entity.

Lands within the Ashley National Forest supply high quality water for a variety of ecological and socioeconomic benefits in the Upper Green River Basin. Streams, springs, lakes, fens, and other wetlands provide for biological diversity. Their presence and good condition are important for sustaining forest ecosystems. These waters also provide habitat for numerous aquatic species, including spawning and rearing habitat for native cutthroat trout and desired nonnative sportfish such as brook, brown, and rainbow trout. Precipitation and runoff from the national forest supply water for groundwater aquifers, public drinking sources, agriculture (irrigation and livestock), and power generation. Recreational opportunities, such as boating, fishing, and swimming, also bring revenue to the surrounding area, enrich lives, and provide jobs.

The Ashley National Forest contains an estimated 1,200 miles of perennial streams, and more than 24,000 acres of wetland and riparian habitat. The Ashley also contains more than 42,000 acres of aquatic habitat contained within the waters of Flaming Gorge Reservoir. The Ashley is well represented with groundwater-dependent wetlands (springs, seeps, fens). The Ashley likely contains the highest percentage of fens for national forests in the Intermountain Region, with more than 13,000 acres of potential fen habitat estimated. These unique wetland types are slow forming, requiring thousands of years to develop naturally. They

benefit watersheds by reducing flood risk, improving water quality and providing habitat for uncommon and rare species.

The Colorado River cutthroat trout, present on the Ashley National Forest, has been identified as a species of conservation concern. Both native and nonnative sport fishes are actively managed by State fish and game agencies. The Ashley National Forest collaborates with these agencies, with the Forest Service's primary role being a manager of the aquatic habitat on which these species depend.

Desired Conditions (FW-DC-WA)

01 Watersheds and watershed features (including streams, lakes, riparian areas, and wetlands) retain their ability to respond and adjust to disturbance without long-term, adverse effects to their physical or biological integrity.

02 Watersheds are healthy and resilient, providing clean water for designated beneficial uses on the Ashley National Forest and for downstream communities.

03 Aquatic habitat connectivity and ecological conditions, within or between watersheds, support self-sustaining populations of native and desirable nonnative aquatic and riparian species.

04 Streams, seeps, and wetlands having the potential to support native and desirable nonnative aquatic species provide habitat that is resilient to disturbance and projected warmer and drier climates.

05 Streams are in equilibrium with their water and sediment supplies, maintaining channel dimensions, particle size, entrenchment ratios and sinuosity representative of their watershed setting. Floodplains are accessible to overbank flows. Sediment deposited during overbank floods allows for floodplain development and the propagation of flood-dependent plants. Surface and groundwater provide late-season stream flows, moderate water temperatures, and sustain surface and subsurface aquatic ecosystems.

06 Aquatic habitat within stream channels is characterized by riffles, runs, pools and woody material that occur at frequencies and with dimensions reflective of the climate, geology, landform, and natural vegetation of the area.

07 Groundwater-dependent ecosystems (including wetlands, seeps, springs, fens, riparian areas, groundwater-fed streams, lakes, aquifers, and cave and karst systems) persist in size and exhibit water table elevations within their natural range of variation.

08 Fens and other groundwater-dependent wetlands maintain the necessary soil, hydrologic and vegetative conditions and sediment influx rates that provide for the storage, purification and release of water, the storage of carbon, and serve as suitable habitat for rare or uncommon, terrestrial and aquatic species.

09 Where appropriate and suitable habitat exists, beaver play a role in creating and maintaining riparian and wetland areas. These roles include increasing water residence time on the landscape, elevating water tables, connecting streams to the valley floor and floodplain, providing aquatic habitats, increasing over-bank floods, attenuating sediment, and dissipating flood flows.

10 Plant communities along natural perennial waterbodies, in wetlands, and wet meadows are healthy, vigorous, and self-perpetuating with a diverse composition of desired species

that includes key herbaceous and woody plants. These areas are dominated by deep-rooted hydric species that anchor the soil and limit excessive erosion. (Dominance is defined as 80 percent or greater in relative cover along the greenline.) Invasive plant species are absent or in low abundance. The distribution and condition of riparian and wetland areas provide migration, breeding, feeding and sheltering opportunities for a wide range of terrestrial, amphibian and avian wildlife and forage for sustainable livestock grazing.

11 Upland watershed, soil, and vegetation conditions contribute to healthy, resilient riparian areas, wetlands, and stream channels.

12 Water quality (including groundwater) meets or exceeds State and Federal standards and fully supports designated and existing beneficial uses, where attainable. Aquifers possessing groundwater that provide designated beneficial uses maintain water quality at natural or background levels.

13 In perennial waterbodies, aquatic invasive species are either absent or in low abundance so that ecological processes, habitat quality, and the viability of native and desired nonnative species remains undiminished.

14 Habitat conditions on the Ashley National Forest contribute to the long-term viability of Colorado River cutthroat trout throughout their historical range. Cutthroat trout populations on the Ashley National Forest are stable or increasing when necessary barriers are used to protect native cutthroat from nonnative fish.

15 Streambeds should contain less than 20 percent fines (sand, silt, clay) in fish spawning habitat.

16 Sediment producing management activities should be avoided during critical fish spawning periods.

Objectives (FW-OB-WA)

01 Complete at least one project per year with design features to restore habitat or populations of aquatic species.

02 Improve 10 stream miles of aquatic species habitat every 5 years.

03 Improve the condition class of at least three priority watersheds, as defined by the national Watershed Condition Framework over the life of the plan. Improvements in these watersheds may include passive or active restoration efforts.

04 Improve or repair at least five road/trail crossings of water features every 5 years for the life of the plan, where impacts to water resources are identified. Give precedence to priority watersheds and fish-bearing or 303(d)-listed streams.

05 Improve or protect habitat conditions for at least two groundwater-dependent ecosystem features (springs, seeps and other wetlands) every 5 years for the life of the plan, where management-related impacts have been identified.

Guidelines (FW-GL-WA)

01 New, replacement, and reconstructed crossing sites of fish-bearing streams (culverts, bridges, and other stream crossings) should allow for aquatic organism passage unless a

barrier is desired to protect native aquatic species (such as Colorado River cutthroat trout) from invasion or reinvasion of a nonnative species (such as brook trout).

02 To protect spawning Colorado River cutthroat trout, management activities that have the potential to directly deliver sediment to habitat should be limited to times outside of spawning and incubation seasons (May–August). For other fish species, mitigation measures such as silt fences should be used to reduce the effects from potential direct sediment delivery.

03 Management activities in drinking water source water protection areas should be consistent with applicable source water protection requirements and goals. Short-term effects from activities in source water protection areas may be acceptable when those activities support long-term benefits to source water protection areas and aquatic resources.

04 To prevent the introduction of aquatic invasive species, equipment that is exposed to untreated water (including drafting equipment, water tenders, and helicopter buckets) should be inspected and cleaned of aquatic invasive species according to current regional and State best management practices and directives.

05 Information on preventive measures related to aquatic invasive species should be provided at water-based recreation sites, such as boat ramps and docks, to help prevent the introduction of nonnative species

Riparian Management Zones

Riparian areas are important elements of watersheds that provide critical transition zones linking terrestrial and aquatic ecosystems. Riparian management zones, with associated plan components, will be established to protect the ecological integrity of these areas from potential harmful effects of catastrophic wildfire, unmanaged recreation, and potential overgrazing. Forest plans must establish general widths for riparian management zones around lakes, perennial and intermittent streams, and open water wetlands giving special attention to the land and vegetation in the closest 100 feet from perennial waterbodies.

Desired Conditions (FW-DC-RMZ)

01 Riparian management zones provide healthy, functioning aquatic, riparian, upland, and wetland ecosystems. These ecosystems support native and desired nonnative plant, vertebrate, and invertebrate communities. The ecosystems also support a distribution of physical, chemical, and biological conditions appropriate to natural disturbance regimes affecting the area. They contribute to healthy watersheds while providing for multiple uses.

02 Riparian management zones accommodate key riparian functions, including streambank stability, desired inputs of organic matter, dispersal of flood flow, sediment capture and filtration, moderation of stream temperature, and maintenance of water quality.

Guidelines (FW-GL-RMZ)

01 Default riparian management zone widths should be followed as defined in table 2. These widths may be increased or decreased based on site-specific criteria.

Table 2. Riparian management zone widths

Riparian Management Zone Type	Default Riparian Management Zone Distance From Feature
Perennial streams, natural ponds, lakes, open water wetlands, seeps, springs and reservoirs	**150 feet slope distance** or the outer edge of riparian vegetation, whichever is greatest
Intermittent seasonally flowing channels/waterbodies supporting riparian vegetation.	**100 feet slope distance,** or the outer edge of riparian vegetation, whichever is greatest
Ephemeral stream channels/waterbodies, unstable or potentially unstable areas.	**50 feet slope distance**

02 Vegetation management may occur in riparian management zones only as needed to attain or maintain desired conditions for aquatic, terrestrial and riparian resources or to provide for public safety.

03 Pesticides and other toxic chemicals should be applied in riparian management zones only as needed to maintain, protect or enhance aquatic and riparian resource values, to restore native riparian/aquatic species, or to provide for public health (mosquito abatement).

04 The refueling, equipment maintenance, and storage of fuels and toxicants should be avoided within a riparian management zone to protect water quality. Where such actions are necessary (for example, operations for fire suppression or refueling at developed sites and marinas) they should occur in designated areas and have appropriate spill containment provisions onsite.

05 New landings, designated skid trails, and log decks should be located outside riparian management zones to maintain and protect aquatic resources and water quality, unless associated with projects to maintain or improve riparian management zone conditions and alternative locations would result in greater risk to resources. Exceptions may considered where existing system roads are within the riparian management zone and site specific analysis and implementation of mitigation measures are determined appropriate by a Forest aquatics specialist to protect aquatic and riparian resources. Within the riparian management zone, such features shall be of minimum size, located outside the active floodplain - and designed to minimize negative effects to stream shading, wood recruitment, bank integrity, and stream sediment levels.

06 Construction of new roads, temporary roads, and motorized trails should be avoided in riparian management zones to maintain and protect aquatic resources and water quality, except:

- where necessary for stream/riparian management zone crossings;
- where construction or relocation from another area would contribute to attainment of aquatic and riparian desired conditions;
- where construction or relocation outside of the riparian management zone would result in greater resource damage; and
- where Forest Service authorities are limited by law or regulation.

Exceptions may be considered where site-specific analysis and implementation of mitigation measures are determined appropriate by a Forest Service aquatics specialist to protect aquatic and riparian resources.

Terrestrial Vegetation

Terrestrial vegetation occurs variably across the landscape and is controlled by inherent conditions such as topography, geology, soil, aspect, precipitation, elevation, and other factors. Communities range from desert shrubs, within the Green River Basin of Wyoming, to alpine along the crest of the Uinta Mountains. This complexity of communities supports high diversity of plant and animal life. Terrestrial vegetation is typically dynamic and is susceptible to drivers and stressors such as climate, succession, fire, insects, disease, invasive species, drought, and human uses.

Plan components within this section are designed to maintain or restore ecological function, integrity and resilience of vegetation; ensure diversity and persistence of plants, wildlife, and their habitats; and provide long-term social, economic, and ecological sustainability in light of relevant community dynamics. Plant community attributes such as composition, structure, species richness, ground cover, and disturbance response are plan component indicators. These indicators are used to define, measure, and evaluate ecological function, integrity, resilience, and sustainability. Terrestrial vegetation of the Ashley National Forest can be adequately assessed, for the most part, using these attributes.

Desired conditions, standards, and guidelines for terrestrial vegetation are to be applied at the forestwide scale unless otherwise specified. Desired conditions may be achieved through natural processes or management prescriptions. Standards and guidelines are designed to ensure that future project activities are conducted in a manner that move the Ashley National Forest toward desired conditions. Objectives identify vegetation communities with existing conditions that need or may soon need prescribed actions to move existing conditions toward desired condition.

Additional plan components were developed to address specific needs for forest vegetation, nonforest vegetation, and at-risk species. Subsections for these are also found below within the terrestrial vegetation section.

Desired Conditions (FW-DC-TV)

01 A network of viable, healthy native plant communities is present across the landscape, such that genetic and species diversity and connectivity are maintained. Collectively, these communities support numerous and diverse life forms with a range of seral states, compositions, and structure or age classes. These communities are functional, resilient, and self-sustaining, while providing multiple uses and services to the public.

02 Ecological processes that drive ecological conditions are present and functioning in a manner that sustains ecological integrity and resilience. Ecosystems respond to and recover from natural disturbances and management practices, concurrent with other existing and foreseeable drivers and stressors without long-term adverse changes in condition and trend.

03 Plant species and communities that represent a variety of seral stages are present across the landscape and function at physical and biological site potential. Vegetative structure is consistent with fuel densities and patterns that perpetuate historic fire regimes that facilitate ecological function of vegetation communities.

04 Vegetation communities with fire histories maintain resiliency and self-perpetuation. Fire disturbance regimes move toward their natural frequency and magnitude.

05 Invasive species are either nonexistent or in low abundance and neither disrupt ecological processes nor diminish ecological integrity and resilience.

06 Desired nonnative species are used to enhance or sustain ecological integrity and support healthy, functioning ecosystems. These species do not invade into and displace neighboring resilient native communities.

07 Sufficient amounts of protective ground cover (85 percent of potential) commensurate with soil type and site potential are present on desert shrub, upland, montane, subalpine, alpine, and other landscapes. Soil erosion is driven by inherent conditions and natural occurring events.

08 Reduce and limit new noxious weed establishments in terrestrial, riparian, and aquatic communities. Existing noxious weeds either are eradicated or are reduced to densities that do not disrupt ecological processes, nor diminish ecological integrity and resilience of native vegetation communities.

09 Within their capability, vegetation communities provide satisfactory foraging habitat for native pollinator species such as bees, butterflies, moths, and hummingbirds. Ecological processes create vegetation conditions and patterns that sustain plant species richness within the natural range of variability.

Goals (FW-GO-TV)

01 Integrated noxious weed and invasive species management includes coordination and cooperation with County, Region, State, and Federal entities and agencies; government and academic research institutions; private landowners; and other groups or entities. These organizations have an interest in forest and rangeland health to maintain ecological integrity and resilience of vegetation communities vulnerable to destructive stressors and rehabilitate those communities that have been impacted by the same. Coordination is sought to enhance awareness and education; pool resources; expand surveys, inventories, and monitoring; streamline treatment strategies, and implement new and adaptive treatment methods.

02 Noxious weeds are managed using an integrated forest management approach (in strategy, funding, and implementation) across resource programs.

03 Support and accommodate research by Federal, State, and private entities that improve native plant seed genetics and increase native plant material selection, production, and distribution for ecological restoration.

04 Support existing or future plant material industry, through purchasing available and desirable plant material products for ecological restoration.

05 Where opportunities exist, restoration projects incorporate natural processes to achieve desired objectives and reduce the need for long-term maintenance. Restoration projects consider best available science regarding potential effects of climate changes on vegetation communities.

Guidelines (FW-GL-TV)

01 Management actions and restoration techniques should use native plant materials to meet desired condition criteria in native plant communities that have ecological integrity, resiliency, and functional ecological processes and are neither susceptible to nor directly threatened by invasive plants. These may include plant materials that are pollinator-species friendly.

02 Management actions and restoration techniques may use nonnative plant materials to meet desired condition criteria in plant communities where ecological integrity, resiliency, and ecological processes have been compromised by or are susceptible to invasive plants. Nonnative plant materials should have moderate to high resource values with proven capability to compete with invasive plants, but should not invade into and displace neighboring resilient native communities.

03 Ground disturbances in and adjacent to plant communities that are susceptible to or are impacted by invasive plants should be seeded within 1 year following disturbance with plants that have proven capability to compete with invasive plants.

04 Plant communities that are susceptible to or are impacted by invasive plants that have been burned with prescribed fire or wildfire should be seeded shortly within the same growing season following fire. Seed mixes should include plants that have proven capability to compete with invasive plants.

At-Risk Plant Species

Plan components for at-risk species apply to two categories of plants: (1) those that are State and federally recognized as threatened, endangered, proposed, and candidate species; and (2) species of conservation concern, which were identified by the Regional Forester. Plan components focus on habitat conservation and are designed to maintain ecological integrity and ensure plant persistence.

Desired Conditions (FW-DC-TVAR)

01 Ecological processes are present and functioning in a manner that sustains long-term persistence and supports recovery of plants that are at-risk species.

Goal (FW-GO-TVAR)

01 Persistence and recovery of federally protected plants includes cooperation with other government agencies, conservation groups, and landowners that would help expand inventories, identify new habitat, and promote other actions that would enhance conservation or restoration of plant habitat.

Standard (FW-ST-TVAR)

01 To maintain persistence of Evert's wafer-parsnip (*Cymopterus evertii)* on semi-barrens habitat, total tree and shrub canopy cover should not exceed 10 percent within the plant's habitat.

Forest Vegetation

Introduction

The following segment describes plan components for aspen, pinyon-juniper woodlands, and other coniferous tree species on the Ashley National Forest. The Forest Service defines

forested land as land that is at least 10 percent covered by forest trees of any size, including land that formerly had such tree cover. Forested land includes persistent pinyon-juniper woodland (Society of American Foresters definitions).[3]

Aspen

Desired Conditions (FW-DC-FVA)

01 Aspen is represented across montane landscapes within a range of habitable environments with numerous community types, successional states, and structural classes (Mueggler 1988). Aspen stands may consist of one, two, or multiple age or height classes of trees. Communities are dominated by plants of moderate to high resource value, which means 60 percent or greater in relative cover. Plant species richness is within the range of variability. Invasive plant species might be present, but these do not disrupt ecological processes, nor diminish community resilience. Total ground cover is equal to or greater than 85 percent of potential.

02 Aspen clones may successfully regenerate by either catastrophic, continual, episodic, or fine-scale gap phase regeneration modes (Kurzel and others 2007). Aspen stands, both seral and persistent community types, regenerate sufficiently to maintain long-term sustainability, especially following disturbance events. New aspen sprouting occurs at least equal to, but may extend beyond, the pre-disturbance perimeter of the regenerating clone. Crown cover of aspen sprouts is 40 percent or greater at 5 years post-disturbance.

Guidelines (FW-GL-FVA)

01 To protect aspen sprouting and sprout survival following a disturbance event, restrict large vehicles from driving into or across disturbed persistent aspen areas except for emergency purposes such as controlling wildfire.

02 To help support sprouting and sprout survival sufficient to perpetuate the long-term viability and resilience of aspen clones, limit livestock utilization of key forage species to no greater than 50 percent of current year's growth except where long-term monitoring demonstrates a different allowable use level is appropriate.

03 Aspen restoration projects should generally be large-scale spatially, to minimize aspen regeneration failure. Projects designed to regenerate aspen by cutting down, burning, or removing overstory aspen stems should be no less than 75 acres in size except where silvicultural prescriptions specify smaller treatment areas. In persistent aspen stands, project design should not consist of small treatments interspersed within aspen. Rather, treatment boundaries should extend to and follow the perimeter of aspen clones or stands.

04 When aspen sprouting is a desired outcome, timber harvest prescriptions should include cutting down or removing aspen trees in harvests located in seral conifer/aspen communities in order to facilitate new aspen sprouting.

[3] Persistent pinyon-juniper woodland sites are primarily those sites where pre-settlement aged trees are present or trees had once occupied the site (e.g., skeletal remains may be present showing evidence of past fire). Potential expansion sites are areas where site conditions (climate) are intermittently suitable for pinyon and/or juniper. These two historical types of pinyon-juniper vegetation, persistent and expansion, are keyed out at project or site-specific scales and are based in part on 10 percent tree canopy cover (Romme and others 2007).

Pinyon-Juniper Woodlands

Desired Conditions (FW-DC-FVPJ)

01 Pinyon-juniper woodlands are represented across montane landscapes within its suitable thermal and precipitation zone. Colorado pinyon and Utah juniper are co-dominants, but Utah juniper becomes dominant at lower elevations—outside this zone—where environments are drier and colder. Numerous successional or structural stages are represented within the vegetation type (table 3). Plant species composition and richness is variable and dependent upon tree canopy cover, tree density, or vegetation structural stage (Huber and others 1999, Huber and Goodrich 2010). Communities are dominated by plants of moderate to high resource value, which means 60 percent or greater in relative cover. Invasive plant species might be present, but these do not disrupt ecological processes nor diminish community resilience. Total ground cover is equal to or greater than 85 percent of potential.

Table 3. Successional and structural stage measurements for pinyon-juniper (PJ) vegetation type

Desired Structural stage measurements*	Desired Type (%)
Grass/forb with <1% PJ (0–0.19 inches)	≈ 10
Seedling/sapling with <5% PJ (0.2–2.9 inches)	≈ 10
Young woodland with 5%–15% PJ (3–5.9 inches)	≈ 20
Mid-aged to mature woodland with 16%–40% PJ (6–11.9 inches)	≈ 40
Old woodland with 41%–80% PJ (>12 inches)	≈ 20

* Percent of pinyon-juniper is measured by crown cover. Crown cover is the percent of a fixed area covered by a vertical projection of the outermost perimeter of the natural spread of the foliage of plants above 4.5 feet. Crown closure can be measured from above looking down on the canopy (“bird’s-eye view”). The total crown cover percent of an area cannot exceed 100 percent. Diameter ranges are measurements at root collar (DRC) and are only estimates of the tree size that would be present at that successional stage of crown cover.

Objective (FW-OB-FVPJ)

01 Depending upon vegetation community conditions, do one of three things: restore ecological function, integrity, and resilience; initiate upward trend; or maintain desired condition of 500 acres of burned pinyon-juniper woodlands compromised by invasive plants every 5 years during the life of the plan.

Guideline (FW-GL-FVPJ)

01 Use post-treatment seeding (after activities like mechanical thinning and mastication) where invasive plant species are present or have high potential to spread into a treated area of persistent pinyon-juniper.

Coniferous Forests

Desired conditions in coniferous forest are designed to maintain and enhance ecological integrity, diversity, function, and resiliency while contributing to social and economic sustainability. Desired conditions are based on an analysis of the natural range of variation for key ecosystem characteristics, which provides an understanding of how ecosystems are dynamic and change over time in a manner that is resilient to unexpected events and disturbances. As such, the natural range of variation is a guide to understanding how to restore a resilient ecosystem with structural and functional properties that will enable it to persist into the future. Although the natural range of variation is the underpinning, desired conditions represent an integration of additional factors such as existing or anticipated

human use patterns, potential future climate conditions, resiliency to future disturbances, wildlife habitat needs, and ecosystem services that may be desired (such as reduction of fire hazard or production of forest products).

Tree vegetation structural stage[4] (VSS) detailed below in desired conditions is a six-class vegetation scheme that describes the developmental stages of a forest ecosystem. The vegetation structural stage classification strategy was developed in the southwestern United States as a tool to aid development of management recommendations for the Northern Goshawk (Reynolds et al. 1992). These classifications can be applied on a broader scale to any forest-dependent species and are a useful tool for describing existing and desired forest structure across a landscape. The desired vegetation structural stage mix, and the size and arrangement of forest patches on the landscape, can be adapted to a variety of resource purposes. Forest personnel later developed local VSS classifications to address tree sizes and conditions that occur on the Ashley National Forest (Wilson et al. 1996) for the persistent lodgepole and mixed conifer vegetation types.[5]

The rotation lengths given in table 4 for desired conditions represent averages of what would occur on the Ashley National Forest. The rotation lengths are practical maximums, since to manage for anything longer would require prevention of natural mortality (treating to control insects, suppressing fire). Such a management strategy would be expensive, potentially disruptive to other components of the forest community, and in the long run is likely to have limited success. An example of an exception would be for small-scale applications like campgrounds and other high value sites. It is possible to sustain the tree vegetation types based on shorter rotations than those given below by shortening or eliminating the oldest stages of forest development (as through harvest). This practice would most likely be applied in areas of suitable timber production in order to increase wood product availability (see appendix C, timber suitability).

The sustained forest scenario described here is intended to provide broad, long-term management direction. No single management prescription can be expected to achieve desired conditions on every site within a landscape, so it is important that resource specialists consider site-specific conditions and adapt these methods as needed during implementation. For example, individual stands may need to be managed on shorter or longer rotations than shown here, based on site characteristics and the existing mix of tree species.

Likewise, precise achievement of all the vegetation structural stage percentages shown in the following tables is not practical given the long time frames involved, the variability in actual stand growth rates, and the unpredictability of disturbance events. Instead, this scenario is a means of projecting availability of forest products, including wildlife habitat and recreation opportunities, as well as wood products. Success will be defined by designing and evaluating site-specific projects, based on their ability to move forest vegetation toward the desired vegetative mix and a general trend toward that mix at the landscape level.

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[4] Vegetation structural stage classification may not be appropriate to apply to uneven aged stands. Vegetation structural stage is derived from basal area by diameter class. Generally, the class that contains the greatest amount of basal area determines the appropriate stage for an even age stand, assuming the total basal area and/or the basal area of that diameter class is functioning as a structural layer (Johnson 2002).

[5] Local classifications were developed for certain land type associations. Reynolds recommended VSS mix (20:20:40:20) apply where local classifications have not been developed.

Desired Conditions (FW-DC-FVC)

01 The Ashley National Forest supports the diversity of native tree species, generally within the natural range of variability. A full range of seral stages, including the recruitment and sustainability of early seral tree species in the landscape maintains ecosystem resilience to recover and adjust to disturbances without long-term, adverse effects to ecologic integrity (see table 4).

02 The Ashley National Forest supports the distribution and abundance of forested structural stages that are ecologically resilient, sustainable, and support a diversity of forest size classes (see table 5 and table 6).

Table 4. Desired tree composition for mixed conifer, Engelmann spruce, persistent lodgepole, interior Douglas-fir and ponderosa pine

Vegetation type	Desired Coniferous Tree Species Composition[1]	(%)	Desired Condition (other attributes)
Mixed conifer	Engelmann spruce or lodgepole pine	>60	Lodgepole pine, Douglas-fir, and blue spruce may be seral species. Spruce can persist as a seral species, a dominant climax species, or co-dominant climax with subalpine fir. Aspen is present and tends to occur in small canopy gaps. Early seral stands may also be present after a stand-replacing disturbance, composed almost entirely of lodgepole pine and/or aspen, where aspen can act as a nurse tree for conifers.
Engelmann spruce	Engelmann spruce	>40	More than 40% to near 100% of the conifer trees are Engelmann spruce.
Persistent lodgepole pine	Lodgepole pine	>80	Aspen may be an important seral species with lodgepole pine.
Interior Douglas-fir	Douglas-fir True firs	>75 <25	Aspen can be present. Early seral stands of aspen may also be present after a stand-replacing event, where aspen can act as a nurse tree to conifers. Douglas-fir is not replaced by true fir species (subalpine fir and white fir).
Ponderosa pine	Ponderosa pine	>75	Aspen can be co-dominant.

1. Regional PFC 2009, Subregional PFC (V 1.0) 1998, Draft Forest PFC 1996, Northern Goshawk Conservation Strategy.

Table 5. Desired mix* of structural stages by mixed conifer vegetation type

Vegetation type	Desired Structural Stages	Percent of type (%)	Percent of type (%)	Other Attributes
Mixed conifer (as characterized on Trout Slope Landtype Association)		>9,500 ft.	<9,500 ft.	Distribution is based on a 150–200 year rotation. Structure is as characterized by mixed-severity fire. Many stands are in uneven-aged, multi-canopy structural condition. Canopy gaps are also present and may consist of small (e.g., 100s of acres) even aged patches** dominated by seral species (such as lodgepole pine and aspen) especially at the lower elevations. More shade tolerant species dominate the understory as canopies close. The mix of structural stages is weighted towards older classes above 9,500 feet. Coarse woody debris is present in moderate amounts. Sources 1, 1a, 3, 5*.
	Grass/forb, seedling/sapling (0–4 in. dbh)	≈ 20	≈ 27	
	Young forest (4–8 in. dbh)	≈ 12	≈ 13	
	Mid-aged to mature forest (8–16 in. dbh)	≈46	≈53	
	Old forest (16 in.+ dbh)	≈22	≈7	
Mixed conifer (as characterized on Alpine Moraine Landtype Association)	Grass/forb, seedling/sapling (0–4 in. dbh)	≈ 16	Not applicable	Distribution is based on a 250-year rotation. Structure is as characterized by mixed-severity fire. Many stands are in uneven-aged, multi-canopy structural condition. Canopy gaps are also present and may consist of small even aged patches dominated by seral species (such as lodgepole pine and aspen) especially at the lower elevations. More shade tolerant species dominate the understory as canopies close. Coarse woody debris is present in moderate amounts.*
	Young forest (4–8 in. dbh)	≈ 12		
	Mid-aged to mature forest (8–16 in. dbh)	≈ 44		
	Old forest (16 in.+ dbh)	≈ 28		

* Source codes: 1a = Trout Slope Landscape Assessment 1996. 1 = Regional PFC 2009. 2 = Regional PFC 1998. 3 = Northern Goshawk Conservation Strategy. 4 = Draft Ashley NF Ecosystem Diversity Report 2009. 5 =Terrestrial Ecosystem Assessment Report 2017.

** A “patch” is distinguished from a “group” in this table. A patch is a small part of a stand or forest and can be 10s, 100s, or even 1,000s of acres and a relatively homogenous part of a stand or forest that differs from the surrounding forest, while a group is smaller than a patch, often expressed as a function of surrounding tree height. For example, a group size is commonly approximately twice the height of the mature trees (Helms 1998).

Table 6. Desired mix* of structural stages for Engelmann spruce, persistent lodgepole, Douglas-fir, and ponderosa pine vegetation types

Vegetation Type	Structural Stage	Desired Percent of Type	Other Attributes
Engelmann spruce	Individual stand structure is variable and contains a mix of all structural stages.	Not applicable	Many stands are in a multi-canopy structural condition. Sources 1, 4.*
Persistent lodgepole pine[1a] (as characterized on Greendale Plateau, Parks Plateau, and Round Park LTAs)	Grass/forb, seedling/sapling (0–3 in. dbh) Young forest (3–6 in. dbh) Mid-aged to mature forest (6–12 in. dbh) Old forest (12 in. + dbh)	≈ 42 ≈ 17 ≈ 41 ≈ 0	Distribution is based on a 120-year rotation. Patch sizes** can be large (100s to 1000s of acres). Large fluctuations in the distribution of structural classes are more common than a balanced distribution. Consequently, this desired structure may only be achievable at very large geographic scales. Mature structures can be present, but old forests with decadence are rare. Coarse woody debris is present in moderate amounts. Sources 1, 2, 3*.
Douglas-fir	Grass/forb, seedling/sapling (0–4 in. dbh) Young forest (4–8 in. dbh) Mid-aged to mature forest (8–16 in. dbh) Old forest (16 in. + dbh)	≈ 20 ≈ 20 ≈ 40 ≈ 20	Structure is characterized by nonlethal and mixed-severity fires. Stand structure can range from uneven aged to even aged, but a dominating feature is that several structural classes tend to be evident in any landscape, comprised of even-aged patches of mature and younger trees. Sources 1, 2.*
Ponderosa pine	Stand basal areas are at lower densities of approximately 35–70 square feet per acre to ensure regeneration of shade-intolerant ponderosa pine. Where stand structures are uneven-aged, a larger proportion of the basal area is allocated to large trees (e.g., q-factor of 1.1 to 1.2 for 2-in. diameter classes).	Not applicable	Structure is characterized by nonlethal fires. Forests are typically all-aged structure or uneven-aged stands comprised of a mosaic of various even-aged groups; multi-aged but dominated by mature trees. All age/size classes should be represented in the landscape to ensure sustainability. Basal areas are at lower densities; basal areas never exceed 140 square feet per acre. Sources 1, 5.*

* Source codes: 1a = Trout Slope Landscape Assessment 1996. 1 = Regional PFC 2009. 2 = Regional PFC 1998. 3 = Northern Goshawk Conservation Strategy. 4 = Draft Ashley NF Ecosystem Diversity Report 2009. 5 =Terrestrial Ecosystem Assessment Report 2017.

** A “patch” is distinguished from a “group” in this table. A patch is a small part of a stand or forest and can be 10s, 100s, or even 1,000s of acres and a relatively homogenous part of a stand or forest that differs from the surrounding forest, while a group is smaller than a patch, often expressed as a function of surrounding tree height. For example, a group size is commonly approximately twice the height of the mature trees (Helms 1998).

Objectives (FW-OB-FVC)

01 Complete forested vegetation management treatments (such as timber harvest, planned ignitions, thinning, and planting) on 1,648 acres of the Ashley annually, measured on a decadal basis, to maintain or move toward achieving desired conditions for forested ecosystems. Table 7 and table 8 display the projected annual vegetation management practices.

Table 7. Projected forest-wide vegetation management practices (annual average acres first decade)

Forest Cover Types	Improvement/ Selection (Uneven-aged harvest)	Regeneration * (Even-aged harvest)	Thinning (Intermediate harvest)	Sanitation/ Salvage (Intermediate harvest)	Pre-commercial Thinning (intermediate treatment)	Prescribed Fire
Mixed Conifer	25	78	0	163	59	170
Engelmann Spruce	0	4	0	56	0	0
Lodgepole Pine	0	131	39	89	523	22
Douglas-fir	11	6	0	35	0	85
Ponderosa Pine	217	2	0	31	135	1,300
Persistent Aspen	0	2	0	0	0	71
Woodland	24	0	0	0	0	0
Total**	277	222	40	374	717	1,648

* Regeneration harvest treatment includes clearcuts, shelterwoods, shelterwood removal, and seedtree methods.

**Totals may not add up due to rounding.

Table 8. Projected forest-wide vegetation management practices (annual average acres second decade)

Forest Cover Types	Improvement/ Selection (Uneven-aged harvest)	Regeneration* (Even-aged harvest)	Thinning (Intermediate harvest)	Sanitation/ Salvage (Intermediate harvest)	Pre-commercial Thinning (intermediate treatment)	Prescribed Fire
Mixed Conifer	25	78	0	163	59	170
Engelmann Spruce	13	2	0	24	0	0
Lodgepole Pine	0	131	39	89	131	22
Douglas-fir	11	6	0	28	0	85
Ponderosa Pine	217	2	0	31	135	1,300
Persistent Aspen	0	2	0	0	0	71
Woodland	24	0	0	0	0	0
Total**	289	220	40	336	325	1,648

* Regeneration harvest treatment includes clearcuts, shelterwoods, shelterwood removal, and seedtree methods.

** Totals may not add up due to rounding.

Guideline (FW-GL-FVC)

01 During mountain pine beetle outbreaks with high beetle population pressures on surrounding landscapes, prescribed burn operations in ponderosa pine should limit scorch and lower crown damage to less than 50 percent on majority (90 percent) of ponderosa pine in the larger diameter classes. This treatment practice helps reduce tree susceptibility to bark beetle attack.

Nonforest Vegetation

Plan components for this subsection are either specific for all nonforested vegetation or, as indicated, specific for a vegetation community type. These components are designed to maintain or move nonforest vegetation toward desired condition. Desired condition component potential is based on long-term monitoring data and other relevant information described and cited within the forest plan assessment and its supporting documents.

Desired Conditions (FW-DC-NFV)

01 Nonforest vegetation communities occur variably across the landscape and are controlled by inherent conditions such as geology, soil, aspect, annual precipitation, elevation, and others. Communities are dominated by plants of moderate to high resource value, which means 60 percent or greater in relative cover. Plant species richness is within the range of variability for each community. Invasive plant species might be present, but these do not disrupt ecological processes nor diminish community resilience. Encroachment of conifer tree species in vulnerable communities is limited to 10 percent tree crown cover or less. Communities vulnerable to fire and other disturbances recover within expected return intervals. Total ground cover is equal to or greater than 85 percent of potential.

Alpine (FW-DC-NFVA)

01 Alpine landscapes consist of a mosaic of plant communities that are controlled by topography, geology, aspect, snow accumulation and persistence, wind exposure, rodent activity, soil moisture, temperature, and other geomorphic features that help form habitable niches.

Desert Shrub (FW-DC-NFDS)

01 Numerous desert shrub communities are represented across cold desert landscapes in the Green River Basin. Most of these communities are controlled by inherent geologic and soil features, resulting in distinct shrub or subshrub communities. Shrubs occasionally merge to form common co-dominate communities (shad scale and Wyoming big sagebrush). Herbaceous vegetation and total ground cover in most communities is inherently low (no more than 65 percent). Shrub interspaces typically consist of bare soil or pediments, with intermittent herbaceous vegetation. Resilient desert shrub communities recover from drought, browsing, and other disturbances within expected return intervals.

Sagebrush (FW-DC-NFS)

01 Sagebrush communities are represented across the landscape within a broad range of environments, successional states, and community types. Sagebrush landscapes consist of variable ratios of shrub canopy cover that supports habitat needs for known sagebrush-obligate wildlife and plant species.

02 In greater sage-grouse seasonal habitat, 70 percent or more of sagebrush communities have 10 to 30 percent sagebrush canopy cover, with less than 10 percent conifer canopy cover.

Objectives (FW-OB-NFV)

01 Restore ecological function, integrity, and resilience; move toward upward trend; or maintain desired condition of 2,500 acres (on average) annually of nonforest vegetation during the life of the plan that are threatened by conifer encroachment or invasive plants.

02 Within the Anthro Plateau land type association, change no less than 200 acres of mountain big sagebrush every 5 years during the life of the plan from 20 percent or greater canopy cover, to less than 5 percent canopy cover to enhance brood rearing and summer habitat for greater sage-grouse.

Rare and Unique Habitats

Rare and unique habitats were identified during the assessment phase of forest plan. These habitats met the criteria of low occurrence, restricted distribution, presence of rare flora or fauna, and other distinguishing features. Plan components were developed to conserve these habitats.

Desired Conditions (FW-DC-RUH)

01 Calcareous fens and peatlands consist of native plant assemblages adapted to these cool and wet environments, with many plants that are rare, uncommon, or circumboreal. Ground water, surface flows, and nutrients to fens or peatlands are sufficient to support ecological processes. Ecological processes are present and functioning in a manner that sustains ecological integrity and resilience, and facilitates continued development and accumulation of peat. Size of fens or peatlands remain constant and organic soils retain current depth, quality, and uniformity.

Standard (FW-ST-RUH)

01 Avoid or mitigate management activities that would disrupt ecological processes and hydrologic connectivity, diminish organic soils, and compromise the overall ecological integrity and resilience of calcareous fens and peatlands.

Fire

Fire is a primary ecological process that has shaped and maintained forest and nonforest ecosystems, which in turn sustains native plant communities and wildlife species. Wildland fire on the landscape occurs due to unplanned (natural and human caused wildfires) and planned (prescribed fire) ignitions. Fire management strives to balance the natural role of fire while minimizing the impacts to watershed health, wildlife habitat, high valued resource assets, and air quality. This can be accomplished by implementing a coordinated risk management approach, which helps to promote landscapes resilient to fire-related disturbances and prepares for and executing a safe, effective, and efficient response to fire. Fire risk crosses management boundaries. Management on the unit is influenced by the National Cohesive Wildland Fire Management Strategy and other related information. Firefighter and public safety is the first priority in every fire management activity.

Desired Conditions (FW-DC-FI)

01 Fire management activities effectively minimize the risk of loss of life, damage to property, or ecosystem function.

02 The full range of wildland fire management activities are used to achieve ecosystem sustainability, ecological resilience, and reflect economic and social considerations.

03 Management of wildland fires reflects an understanding that fire-adapted ecosystems span jurisdictional boundaries. Opportunities to achieve mutual objectives are identified and are accomplished through collaborative planning. Fires are managed to achieve

Forest Service desired conditions and where possible, help achieve objectives relevant to adjacent land managers.

04 Fuels (from vegetation) are at levels that maintain natural fire regimes, support ecological resilience, and minimize uncharacteristic wildfire. Wildland fires exhibit the appropriate range of severity, and frequency that are representative of historical fire disturbance regimes.

05 Fire management is engaged with both internal and external groups to define wildland fire as a necessary ecological process essential to the sustainability of the Ashley's fire-adapted ecosystems, so there is support for fire management activities.

Objectives (FW-OBJ-FI)

01 Based on the historical disturbance regimes, use wildland fire and other vegetation treatments to improve or maintain desired vegetation conditions on 6,600 to 32,000 acres per year during the life of the plan (table 9).

02 Every 10 years, manage natural unplanned ignitions to meet resource objectives associated with the vegetation types (table 9) on at least 10 percent of the ignitions.

03 Identify hazard tree removal areas during vegetation treatments. Mitigate 80 percent of hazard trees 1.5 tree lengths from primary travel corridors and other values at risk during the life of the plan.

04 Provide education and outreach opportunities annually to local communities and national forest visitors. Topics can include fire prevention, the role of fire, and fire's short-term impacts through a minimum of 15 public contacts per fire season.

Guidelines (FW-GL-FI)

01 Within sensitive areas such as wilderness, fire management tactics will include minimum impact suppression tactics (MIST).

02 To prevent the use of motorized vehicles off existing travel corridors, firelines should not be located near public access points to the greatest extent possible.

03 When responding to fire ignitions outside the Protection Fire Management Area, managers should use fire to achieve management objectives for other resources where and when conditions permit, keeping risk within acceptable limits. This is done to take advantage of the opportunity to use fire to improve ecological conditions and make progress towards other desired conditions.

04 Outside the Protection Fire Management Area, fuel treatments should promote fire severity consistent with table 9 to support ecosystem and other resource outcomes.

Table 9. Potential number of acres burned per decade and desired severity based on each vegetation type*

Vegetation Types	Dominant Fire Regime Groups	Total Acres	Fire Frequency in years	Potential Acres Managed Per Decade Based on Historical Fire Regime Groups (acres, low to high)	Percent of Fires in Each Severity Class
Ponderosa pine	I	37,855	6–60	6,309–63,092	Low: 55 Mixed: 39 High: 6
Lodgepole pine	V	76,786	90–200	3,839–8,532	Low: 19 Mixed: 0 High: 6
Douglas-fir	I, III	47,773	35–200	2,389–13,649	Low: 75 Mixed: 14 High: 81
Mixed conifer	V	310,807	200–300	10,360–15,540	Low: 0 Mixed: 2 High: 11
Engelmann spruce	V	144,492	200–400	3,612–7,225	Low: 0 Mixed: 20 High: 98
Miscellaneous	I	12,769	75–290	440–1,703	Low: 79 Mixed: 0 High: 80
Seral aspen	I, III, IV	117,137	13–70	16,734–90,105	Low: 0 Mixed: 54 High: 21
Persistent aspen	I	35,480	20–300	1,183–17,740	Low: 0 Mixed: 46 High: 46
Sagebrush	III, IV	120,726	40–100	12,073–30,182	Low: 0 Mixed: 0 High: 100
Pinyon juniper	III, IV	122,268	150–200	6,113–8,151	Low: 5 Mixed: 65 High: 29
Desert shrub	IV	68,823	100-240	2,868-–6,882	Low: 0 Mixed: 0 High: 100

* Based on Utah Fire Groups, LANDFIRE BpS/MFRI, and Ashley Terrestrial Condition Report

Adapting to Climate Change

Land management response to the current or future climate and its effects is critical to minimizing the risks associated with climate change impacts. Adaptation actions can vary from simple short-term actions to more complex long-term approaches. Many climate adaptation approaches complement current planning strategies and have been incorporated into land management goals, desired conditions, and other plan components. However, managers may need to make some adjustments to prioritize which management actions to take and where to take those actions based on the vulnerability of resources to climate change and the likelihood that actions in those places will be effective.

The Intermountain Adaptation Partnership identified climate change issues relevant to resource management on Federal lands in Nevada, Utah, southern Idaho, eastern California and western Wyoming, in the General Technical Report “Climate change vulnerability and adaptation in the Intermountain Region” (Halofsky et al. 2018). This vulnerability assessment includes strategies intended to help minimize the effects of climate change through adaptation strategies and approaches in key resource areas. The assessment also provides important information that will help the Ashley National Forest adapt to changing conditions. These conditions include climate change, and improving resource management on the Forest.

Goal (FW-GO-ACC)

01 The adaption strategies and approaches, described in Chapter 14 of the Intermountain Adaption Partnership vulnerability assessment “Climate change vulnerability and adaptation in the Intermountain Region,” (Halofsky et al. 2018) are considered in the development and design of projects and activities for resource management on the Ashley National Forest.

Carbon Storage and Sequestration

The carbon that is stored in terrestrial ecosystems is present within living vegetation, soils, and dead organic matter, including wood and litter. Terrestrial ecosystems contain nearly three times the amount of carbon as the atmosphere, with forested areas storing higher levels of carbon than nonforested areas. Carbon sequestration is the process that captures and stores atmospheric carbon dioxide into other forms, by processes including photosynthesis.

Desired Conditions (FW-DC-CS)

01 Carbon stocks (see glossary) are maintained on the Ashley National Forest by management for biologically diverse and productive plant communities and the regeneration of forest stands.

Wildlife

This section provides direction designed to maintain the diversity of animal communities and support the persistence of native terrestrial wildlife species within the Ashley National Forest. Terrestrial wildlife species on the Ashley include birds, mammals, reptiles, amphibians and invertebrates. Aquatic species, such as fish, and aquatic or semi-aquatic invertebrates, are addressed separately in the Watershed, Aquatic and Riparian Ecosystems section. Wildlife habitat on the Ashley National Forest is diverse. Habitat ranges from the rugged topography and alpine environments associated with the highest peaks in the state of Utah, to the more temperate coniferous forest slopes at mid-elevations, to the lowlands of pinyon/juniper and sagebrush. Such diversity and associated complexity provides conditions for a vast array of wildlife species. Many species are residents with some spending their entire lives within the national forest, while others are migratory, and spend only part of their life cycle here.

The 2012 Planning Rule adopts a complementary ecosystem and species-specific approach—known as a coarse-filter/fine-filter approach—to contribute to the diversity of plant and animal communities and the long-term persistence of native species on the Ashley. The coarse-filter plan components are designed to maintain or restore ecological conditions for ecosystem integrity and biological diversity on the Ashley National Forest. Fine-filter plan components are designed to provide for additional specific habitat needs for native animal

species when those needs are not met through the coarse-filter plan components. Since the Forest Service mission with respect to wildlife is to provide habitat for native species, most of the coarse-filter, and some of the fine-filter plan components that benefit wildlife, are found under other sections of this document including Terrestrial Vegetation (forested and nonforested), Geologic Resources and Hazards, Soils, and Watershed, Aquatic and Riparian Ecosystems.

The habitat needs of breeding populations of at-risk wildlife species that occur on the Ashley National Forest are addressed with plan components. At-risk wildlife species consist of species of conservation concern (species in which a substantial concern exists about their persistence in the national forest) and federally listed threatened, endangered, proposed, and candidate species. The Assessment Report identified the following species of conservation concern on the Ashley: greater sage-grouse, black-rosy finch, peregrine falcon, fringed myotis, bighorn sheep, pygmy rabbit, and Eureka mountain snail. Breeding populations of federally listed threatened, endangered, proposed, and candidate species have not been documented on the Ashley. Thus, there are few specific plan components for those species. The Ashley National Forest contains periphery lynx habitat that is identified as unoccupied and is unlikely to be used by a breeding female lynx. However, this habitat could be occasionally used by lynx during dispersal. Therefore, plan components guide the maintenance of forest structure in this periphery habitat on the Ashley National Forest.

Plan components for the conservation of greater sage-grouse were added to the current forest plan through a plan amendment in 2015 (Greater Sage-Grouse Record of Decision, Utah Plans Amendment 2015). In 2017, the Forest Service initiated another plan amendment process to change several of those plan components to incorporate new information. The purpose was also to improve the clarity, efficiency, and implementation of the 2015 amendment. This includes better alignment with BLM and State plans to benefit greater sage-grouse conservation on a landscape scale.[6] The decision on the plan amendment is expected to precede the decision for the revision of the forest plan. The proposed revised forest plan would incorporate the plan amendment for greater sage grouse conservation as approved.

Forest plan components address habitat needs and threats to species of conservation concern. Desired conditions for feeding, breeding, and sheltering habitat used by these species of conservation concern, and guidelines to achieve those desired conditions, are largely found in the vegetation resource areas. The vegetation desired conditions and guidelines also address the threat of invasive species, conifer encroachment, and beetle epidemics that threaten these species. Guidelines listed below for wildlife primarily focus on addressing threats to species and their habitat that are not addressed in the other resource areas. These threats include habitat loss, fragmentation, and manipulation; human disturbance; spread of disease; and fire.

Desired Conditions (FW-DC-WL)

01 The plan area provides habitat that is needed for feeding, breeding, and sheltering by native species, particularly during periods of high energy demands (such as reproductive seasons and winter) for the portion of those species' lifecycles that occur on the Ashley National Forest. Also see desired conditions for vegetation.

[6] Federal Register 82 FR 55346.

02 Landscape patterns provide habitat connectivity for native species, which promotes daily and seasonal movement of species to facilitate maintenance of genetic diversity.

03 The Ashley National Forest contributes to the habitat needs (feeding, breeding and sheltering) and the long-term persistence of species of conservation concern and those populations of threatened and endangered species that occur on the Ashley National Forest.

Goals (FW-GO-WL)

01 Federally listed wildlife species occurring on the Ashley National Forest achieve recovery through cooperation with other agencies and Tribal governments, collaboration on conservation strategies and recovery plans, and management of habitat. The need for listing of additional wildlife species under the Endangered Species Act is prevented.

02 Management actions are coordinated with other Federal, State and local agencies, Tribes, and adjacent landowners. Opportunities to manage wildlife habitat are expanded through coordination and collaboration along and across administrative boundaries.

Guidelines (FW-GL-WL)

01 Management activities should avoid or mitigate surface disturbance and disruptive activities to native ungulates (animals with hoofs) on winter ranges during the winter season.

02 When implementing large (more than100 acres) vegetation management activities in coniferous forests (excluding pinyon and juniper forests), an average of 60 snags per 10 acres (preferably in clumps with the largest diameter at breast height available) should be retained for wildlife habitat. If snags are not available within the treatment area, then live trees may be substituted. This guideline does not apply to areas where snags pose a safety hazard near roads, trails, campgrounds, trailheads, and other facilities.

03 Vegetation management activities should avoid, minimize, or mitigate removal of known raptor nests and habitat degradation within a 30-acre buffer of the nest. This guideline does not apply to unoccupied nests unlikely to be used in the future because the nest is in poor condition, habitat components around the nest have changed (such as by wildfire, beetle epidemic, or other natural cause) to an unsuitable condition, or if the length of inactivity indicates it is unlikely to be used. “Known raptor nests” are defined as those raptor nests that are known at the time the vegetation management activity is proposed.

04 Management activities should avoid or mitigate disturbance to hibernating bats and bat maternity colonies in caves, mines, or other features known to be used by bats during these critical time periods.

05 Bat-friendly closure devices should be used when mines or caves with suitable habitat for bats are to be closed.

06 Vegetation management activities and prescribed fires should avoid or mitigate known Eureka Mountain snail sites.

07 In occupied pygmy rabbit habitat, vegetation management activities should be designed to maintain interconnected patches of tall dense sagebrush (average of ½ acre in size).

08 Human disturbance in proximity of peregrine falcon eyries (nest site) should be avoided or minimized.

09 When a domestic sheep or goat grazing permit for an allotment that is in proximity to bighorn sheep is voluntarily waived without preference, the allotment should be analyzed to provide separation of domestic sheep and bighorn sheep by either: 1) potential closure of all or a portion of the allotment to domestic sheep/goats, 2) potential conversion to a cattle allotment, or 3) utilization as a forage reserve.

10 New permitted grazing by domestic sheep or goats should not be authorized unless:

- separation of domestic sheep or goats from bighorn sheep can be demonstrated, or
- research demonstrates risk of respiratory pathogen transfer from domestic sheep or goats to bighorn sheep can be avoided in another way, or research demonstrates respiratory pathogen transfer from domestics to bighorn sheep is no longer an issue.

11 To maintain periphery habitat for Canada lynx that may use or move through this habitat on the Ashley, a mosaic of forest structures should be maintained that includes dense early successional coniferous and mixed-coniferous-deciduous stands, along with a component of mature multi-story conifer stands. There can be flexibility in the amounts and arrangement of various successional stages, if a mosaic is sustained. Timber harvest, planting, and thinning should be designed to include some representation of young stands providing for snowshoe hare production areas in the mosaic.

Social and Economic Sustainability and Multiple Uses

Social and Economic Sustainability

Resources in the plan area contribute to the social and economic sustainability of local communities and the public. The 2012 Planning Rule defines ecological and economic sustainability as “the capability to meet the needs of the present generation without compromising the ability of future generations to meet their needs.”[7] The rule’s objectives state that plans are to guide management so that national forests and grasslands are ecologically sustainable and contribute to socioeconomic sustainability, as well as have the capacity to provide people and communities with services and multiple uses that provide a range of social, economic, and ecological benefits for the present and into the future.

These services can be defined as “ecosystem services” or, put more simply, the benefits people obtain from the Ashley National Forest. Healthy Ashley ecosystems provide a full range of goods and services that are vital to human health, financial sustainability, and well-being. Ecosystem services include all the multiple uses that people traditionally have relied on. These uses include livestock forage, recreation opportunities, and mineral extraction, logging and its benefits, as well as less obvious or apparent benefits, such as clean air and water and carbon sequestration. Multiple use is defined by the Multiple-Use Sustained-Yield Act of 1960.

The 2012 Planning Rule also requires that national forest managers take an all-lands approach to ensure that ecological sustainability and contributions to social and economic sustainability are considered in the context of the larger landscape. This involves managing

[7] Code of Federal Regulations 36 CFR 219.19

the plan area in partnership with both public and private landowners and stakeholders to ensure management efforts are coordinated whenever possible.

General desired conditions and goals for social and economic sustainability are included below. Plan components related to social and economic issues for specific resources are addressed in the relevant resources sections of this document.

Desired Conditions (FW-DC-SE)

01 Key Ashley National Forest services contribute to the quality of life and sense of place for both present and future generations. These services include availability of forest products, support of aquatic and terrestrial ecosystems, clean air and water, aesthetic values, cultural heritage values, and recreation opportunities.

02 Sustainable levels of goods and services (such as wilderness, fish and wildlife, recreation opportunities and access, timber, energy resources, livestock forage, and infrastructure), as determined by resource-specific desired conditions, are available from the Ashley National Forest. The flow of these goods and services are responsive to local and regional populations and contribute to existing and emerging industries and overall economic conditions of Ashley National Forest communities.

Goals (FW-GO-SE)

01 Develop memoranda of agreements or other protocols between the Ashley National Forest and local governments as appropriate to guide coordination processes and reflect local perspectives and interests.

02 Identify important socioeconomic locations and activities on the Ashley National Forest with interested local agencies to promote a common understanding of these important contributions. Help identify potential projects that may enhance community benefits. Help identify mitigation measures that may address adverse impacts to these resources.

03 Allow the plan to be dynamic and display adaptive management to the changing needs of communities, while complying with existing Forest Service policy and regulations.

Areas of Tribal Importance

The Ashley National Forest is located within the Ute and the Eastern Shoshone original tribal homelands. These lands remain significant for tribal identity and cultural traditions. Access to culturally significant plants, traditional resources, and ceremonial locations is an important component of tribal identity.

Various treaties with the Ute Tribe and the Eastern Shoshone Tribe provide rights for gathering resources within traditional homelands and provide rights to access and use sacred or ceremonial areas on public lands. Courts have consistently ruled that Native American Indian Tribes retain traditional rights to public lands, unless access or use of the lands have been specifically rescinded through treaties or legislation. Approximately one-third of the Ashley National Forest (the entire Duchesne/Roosevelt Ranger District) is located within the original Uintah Valley Indian Reservation.

Landscape vegetation communities are linked to areas of tribal importance. The Ute Tribe considers the vegetation as a part of the cultural landscape that is important to the Tribe, with special importance to those areas within the original Uintah Valley Indian Reservation.

Locations with native species that are used for ceremonial or ritual purposes have cultural value and meaning beyond the individual plants.

Areas and resources of tribal importance include medicine trees, brush fences, rock art, wickiups (conical pole structures), burials, sundance locations, mountain peaks, and prehistoric archaeological sites. Areas of tribal importance tie to the landscape and the viewshed and include aesthetic, audible, and visual components of the environment.

Desired Conditions (FW-DC-ATI)

01 Cultural landscapes, sacred sites, traditional cultural properties, areas of tribal importance, and other culturally significant areas are managed and preserved in consultation with Indian Tribes and in a way that they are able to provide tangible links to historically rooted beliefs, customs, and practices of tribal members.

02 Tribal members have access to sacred sites, and important cultural landscapes within the Ashley National Forest for effective exercise of cultural, religious, and ceremonial traditions to sustain tribal practices, cultural integrity, social cohesion, and economic well-being.

03 Ashley National Forest employees (such as law enforcement officers, forest protection officers, and resource specialists) have an understanding of reserved Indian treaty rights for hunting, fishing, and gathering on the Ashley National Forest.

04 Ashley National Forest resources (such as plants, animals, and minerals) that are significant to the cultural and ceremonial practices of tribal members are healthy, sustainable, and accessible to support reserved Indian treaty rights for hunting, fishing, and gathering.

Goal (FW-GO-ATI)

01 The Ashley National Forest will collaborate with the Ute Indian Tribe to establish an agreement to facilitate solutions for issues that are important to the Tribe and to the Ashley National Forest. Examples of known issues include public access to the Ashley boundary through tribal lands and tribal identification and access to culturally important plants on National Forest System lands.

02 Meet regularly with the Ute Indian Tribe at both the staff level and the leadership level to improve the relationship between the Ashley National Forest staff and the Ute tribe.

Objective (FW-OBJ-ATI)

01 Increase understanding of areas of tribal importance by meeting annually with Indian Tribes to gather information on the resources, locations, and significance of areas of tribal importance.

02 Annually include information regarding reserved Indian treaty rights in all initial training and refresher training for law enforcement officers and forest protection officers.

Guidelines (FW-GL-ATI)

01 To support reserved Indian treaty rights, avoid adverse effects to plants or other resources that have been designated as culturally important by the Ute Tribe Cultural Rights and Protection Office.

02 To support reserved Indian Treaty rights, management activities should avoid areas of tribal importance during specific times of tribal use as designated by the Ute Tribe Cultural Rights and Protection Office.

Cultural and Historic Resources

Cultural and historic resources are nonrenewable resources that provide a context for understanding the social, economic and ecological sustainability of the broader region across northeastern Utah and Southwestern Wyoming. Cultural and historic resources within the Ashley National Forest represent the processes and events important to the identity and history of local communities and Indian Tribes and contain a wealth of information regarding social and ecological conditions and changes through time.

The Ashley National Forest contains more than 2,500 known cultural sites (more than 2,000 prehistoric and almost 500 historic) that represent a vast range of human activities and occupation during an approximately 12,000-year period. Only about one-fifth of the lands within the Ashley National Forest have been surveyed for cultural resources so it is likely that thousands of additional cultural sites may yet be found. The variety of cultural resources on the Ashley National Forest include Fremont baskets, Fremont storage structures, ancient stone tools, historic logging camps, historic military roads, rock art, Ute brush fences, Forest Service Ranger Stations, and the last standing fire tower in the state of Utah.

Four specific cultural and historic resources are managed as historic management areas on the Ashley National Forest. These resources include the Ute Mountain Fire Lookout Tower, the Carter Military Road, the Swett Ranch Historic Site, and historic guard stations. These historic resources are further discussed in the Historic Management Areas section of this document.

To protect cultural and historic resources as required by the National Historic Preservation Act, the Forest Service has established policies and directives[8] for the management of cultural and historic resources that maximize their benefits for the public and the agency. The Forest Service also evaluates how agency-authorized projects, activities, programs, and permits could affect cultural and historic resources. Such projects, activities, and undertakings will avoid, minimize, or mitigate adverse effects to National Register eligible cultural and historic resources.[9]

Desired Conditions (FW-DC-CHR)

01 Cultural and historic resources having scientific, cultural, or social values are preserved and maintain their ability to provide information about historic and prehistoric lifeways to foster opportunities to connect people with the past and provide valuable perspectives on past climates and environments.

02 Cultural and historic resource programs, interpretive presentations, and publications are available for the education and enjoyment of current and future generations and provide public benefits and opportunities to understand and appreciate history and prehistory.

[8] Forest Service Manual 2360
[9] 36 CFR 800.6

03 Collected prehistoric and historic artifacts are preserved and maintain their ability to provide information about past lifeways, cultures, and history.

04 Opportunities are available for volunteers to participate in cultural resource conservation activities, which include research, site stabilization, conservation, and interpretation.

05 Heritage resources are identified, documented, and evaluated for inclusion in the National Register of Historic places.

Goal (FW-GL-CHR)

01 Meet regularly with the Wyoming State Historic Preservation Officer and the Utah to consult, coordinate, and collaborate on long term strategies and plans for the preservation, protection, and management of cultural resources on the Ashley National Forest.

Objectives (FW-OB-CHR)

01 Enhance public understanding and increase awareness of cultural and historic resources by conducting five public outreach or interpretive projects each year for the life of the plan.

02 Increase the ability of the Ashley National Forest to preserve cultural and historic resources by completing cultural surveys to find and document five cultural resource sites each year for the life of the plan.

03 Increase understanding of heritage resources by collaborating annually with Indian Tribes to increase and share a native perspective of cultural resources on the Ashley.

04 Implement a proactive heritage program plan to address national forest-specific requirements of the National Historic Preservation Act, the Archaeological Resources Protection Act, the Native American Graves Protection and Repatriation Act, and Forest Service Manual 2360, within 2 years of forest plan implementation. Implementation will be in close coordination with Native American Tribes, the Wyoming State Historic Preservation Officer, the Utah State Historic Preservation Officer, and other interested parties.

Standard (FW-ST-CHR)

01 Prior to the approval of Ashley National Forest projects, activities, permits, contracts, or programs, adverse effects to National Register eligible cultural resources will be avoided, minimized, or mitigated in accordance with section 106 of the National Historic Preservation Act as specified in 36 CFR 800.

Guideline (FW-GL-CHR)

01 If archaeological resources are inadvertently discovered, uncovered, or exposed during project activities, avoid further damage to the cultural resources and implement the Ashley National Forest Cultural Resource Inadvertent Discovery Protocols.

Timber

Timber harvesting is an important contributor to the local economy and is a critical tool that may be used to achieve the desired vegetation conditions. The 2012 Planning Rule requires identification of lands that are suited and not suited for timber production, based on several factors that include:

- legal withdrawal (such as timber production prohibited due to statute or executive order),
- technical factors (nonforest lands, geology or soil conditions), and
- compatibility with desired conditions and objectives stated in the plan (forestwide or management area plan components).

On lands suitable for timber production, regularly scheduled timber harvests are expected to occur; these areas are located where other resource considerations and site limitations do not restrict management or limit the rate and amount of harvest over time to a considerable degree (table 10).

Table 10. Timber production suitability classification for the proposed action

Land classification category	Acres
A. Total National Forest System lands in the plan area	1,400,000
B. Lands not suited for timber production due to legal or technical reasons*	1,265,000
C. Lands that ***may* be suited** for timber production (A–B)	135,000
D. Total lands **suited** for timber production because timber production is compatible with the desired conditions and objectives established by the plan	To be determined
E. Lands not suited for timber production because timber production is not compatible with the desired conditions and objectives established by the plan (C–D)	To be determined
F. Total lands not suited for timber production (B+E)	To be determined

*These include: lands on which timber production is prohibited or lands withdrawn form timber production, lands on which technology to harvest timber is not currently available without causing irreversible damage, lands on which there is no reasonable assurance that they can be adequately restocked within five years of final regeneration harvest, and lands that are not forest lands.

In accordance with the National Forest Management Act and Planning Rule regulations, the quantity of timber that may be sold must be less than or equal to the **sustained yield limit**. The sustained yield limit is the amount of timber meeting applicable utilization standards, "which can be removed from [a] forest annually in perpetuity on a sustained-yield basis."[10] It is the volume that could be produced in perpetuity on lands that may be suitable for timber production (line C from table 10). Calculation of the sustained yield limit includes volume from lands that are identified as not suitable for timber production during the planning process because timber production would not be compatible with desired conditions or objectives established in the plan (line E in table 10).

The sustained yield limit estimated was determined to be of 20,539 hundred cubic feet (CCF) average annual volume. This represents the biological capability for the land base on which it was calculated and is the upper limit of timber harvest that could be offered. It is unconstrained by budgets assumptions or land management plan desired conditions. Actual sale levels depend on any number of factors, including fiscal capability of the planning unit, timber market conditions, constraints on timber harvest in the forest plan, and project-level analysis.

To clearly display the intended timber program, the plan identifies the projected wood sale quantity and projected timber sale quantity.

[10] National Forest Management Act, section 11, 16 United States Code 1611; 36 Code of Federal Regulations 219.11(d)(6)

- The **projected wood sale quantity** is the estimated output of timber and all other wood products (such as fuelwood, firewood, or biomass) expected to be sold during the plan period for any purpose (except salvage harvest, sanitation harvest, removal of trees to improve stand health, or to reduce actual or anticipated spread of insects and disease) on all lands in the plan area.
- The **projected timber sale quantity** is the portion of the projected wood sale quantity that meets applicable timber utilization standards.

Table 11 displays the key characteristics of the different timber volume metrics.

Table 11. Characteristics of timber volume metrics

Characteristics	Sustained Yield Limit	Projected Wood Sale Quantity	Projected Timber Sale Quantity
Based on lands that may be suitable for timber production (line c; table 10)	Yes	No	No
Based on quantity sold from all lands in plan area	No	Yes	Yes
Based on the assumption that all lands that may be suitable for timber production are managed for timber production	Yes	No	No
Limited by plan components, fiscal capability, and organizational capacity	No	Yes	Yes
All volume meets utilization standards	Yes	No	Yes
Includes salvage or sanitation harvest volume	No	No	No

Neither the projected wood sale quantity nor the projected timber sale quantity serve as management targets or as limitations on harvest. Both are based on reasonable expectations about the fiscal capability and organizational capacity to achieve the desired conditions and objectives in the revised plan for the planning period. Calculation of these volume estimates are sensitive to a number of important assumptions, including future budget trends, future markets for timber products, efficiency in planning and implementation, and the timing and locations of large disturbance events. If additional support to achieve desired conditions was provided through opportunities—such as increased congressional allocations, stewardship contracting, or work with partners through the Good Neighbor Authority—the potential wood and timber sale quantity identified in the revised plan could be exceeded. Conversely, if available resources, markets, or other factors are less favorable than anticipated, the potential wood and timber sale quantities identified may not be met.

Desired Conditions (FW-DC-TI)

01 Lands identified as suitable for timber production have a regularly scheduled timber harvest program that promotes ecosystem health and sustainability.

02 Timber production and timber harvests contribute wood products and jobs to the local economy. A sustainable mix of timber products are offered using a variety of harvest methods and contract types, in response to current and future market demands.

03 Lands suitable for timber production are actively managed to promote conditions that are resilient and resistant to damages caused by natural disturbance (wildfire, insects, and disease) and are less susceptible to economic loss of timber resources.

04 On lands suitable for timber production, dead or dying trees (due to fire, insects, or disease) are salvaged to recover as much of the economic value of the wood as possible. This is done while achieving desired conditions and management direction for other resources.

05 On lands suitable for timber production, vegetation management activities that include timber harvesting have a primary role in modifying the composition, density, structure, and spatial arrangement of vegetation to achieve desired conditions.

06 Timber tending and maintenance (such as precommercial thinning) contribute to meeting long-term desired vegetation conditions. These conditions include species composition, size classes, and improved forest resilience.

07 On lands not suitable for timber production, vegetation management activities that include irregular or unscheduled timber harvests have a role in achieving the desired conditions when timber harvesting is consistent with other resource objectives. Purposes for harvests may include, but are not limited to salvaging dead and dying trees, reducing hazardous fuels, maintaining or enhancing wildlife habitat, and enhancing public safety.

Objectives (FW-OB-TI)

01 Annually offer timber (meeting timber product utilization standards) for sale at an average projected timber sale quantity of 4,597 to 4,635 hundred cubic feet (CCF) (1,356 to 1,357 thousand board feet or MBF), measured on a decadal basis (see table 22 in appendix C).

02 Annually offer wood products (including fuelwood, biomass, and other volumes that do not meet timber product utilization standards) for sale at an average annual projected wood sale quantity of 4,658 to 4,696 CCF (1,357 to 1,376 MBF), measured on a decadal basis (see table 22 in appendix C).

Standards (FW-ST-TI)

01 Timber harvest solely for the purposes of timber production shall not occur on lands not suited for timber production.

02 Timber harvest shall not occur where soil, slope, or watershed conditions would be irreversibly damaged.

03 Silvicultural treatments shall be selected based on their ability to meet desired conditions and not be selected based solely on their ability to provide the greatest dollar return or output of timber.

04 Clearcutting shall be used as a harvest method only where it has been determined to be the method most appropriate to meet the purpose and need of the project outcome. Other types of even-aged harvest shall be used only where determined to be appropriate. Determinations shall be based on an interdisciplinary team review of site-specific conditions and the desired conditions for vegetation, wildlife habitat, scenery, and other resources.

05 Timber harvest units shall be shaped and blended to the extent practicable with the natural terrain.

06 Even-aged stands shall generally reach a minimum of 95 percent of culmination of mean annual increment as measured by cubic volume prior to regeneration harvest unless at least one of the following conditions have been identified during project development:

- When such harvesting would modify fire behavior to protect identified resource, social, or economic values.
- When harvesting of stands will trend landscapes toward vegetation desired conditions.
- When harvest uses uneven-aged silvicultural systems, thinning, or other intermediate stand treatments that do not regenerate even-aged or two-aged stands.
- When harvest is for sanitation (the removal of trees to improve stand health and to reduce actual or anticipated spread of insects and disease) or salvage of timber stands that have been substantially damaged by fire, windthrow, or other disturbance or are in imminent danger from insect or disease attack.
- When harvest is on lands not suited for timber production, and the type and frequency of harvest is due to the need to protect or restore multiple use values other than timber production.

07 The quantity of timber that may be sold per decade shall not exceed 10 times the annual sustained yield limit. This includes timber sold from both lands suitable for timber production and lands not suitable for timber production. The sustained yield maximum limit is 20,539 hundred cubic feet (approximately 9,684 MBF). Cutting of trees that have been killed or severely damaged by fire, windthrow, or other disturbances are not subject to this limitation. Trees cut to manage insect infestations and disease spread are also not subject to this limitation. Tree cutting for salvage or sanitation may be harvested above the annual sustained yield limit, where such harvest is consistent with desired conditions for terrestrial and aquatic ecosystems.

08 Openings created by clearcutting, seed-tree cutting, shelterwood seed cutting, or other cuts designed to regenerate an even-aged stand of timber in one harvest operation shall not exceed 40 acres. This standard applies to new, individual harvest proposals on national forest lands only and need not consider existing openings on national forest land, adjacent private or other agency lands.

- Openings will no longer be considered openings once a new crop of trees meeting minimum stocking requirements becomes established.
- Exceptions to the 40-acre maximum opening size may occur when determined necessary to achieve desired ecological conditions for the plan area, such as those associated with forest patterns, patch sizes, and forest resilience in the short and long term. Maximum opening size under this exception is shown in table 12.

Table 12. Maximum opening sizes for regenerating and even-aged stand of timber in a single harvest operation

Vegetation Type	Maximum Opening Size (acres)
Persistent lodgepole pine	200
Seral aspen	100

- Harvest openings created as a result of a single harvest operation that exceed the maximum opening size shall require 60-day public review and Regional Forester approval.

09 The maximum opening size displayed in standard 08 above and the 60-day public review and regional approval process shall not apply to the size of harvest openings created as a result of natural disturbances, such as wildfire, windstorms, or insect and disease infestations.

10 To maintain forest cover, timber harvest shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. Restocking level will be prescribed in a site-specific silvicultural prescription for a treatment unit and is based on the objectives and desired conditions for the plan area. For instances where timber harvests are conducted to create nonforest conditions to meet the objectives and desired conditions for the plan area, and are consistent with other plan components, it is acceptable not to restock or restock at low tree densities. In such cases, the affected land would no longer be forest land and no longer classified as suitable for timber production.

Guidelines (FW-GL-TI)

01 Timber will be harvested only where protection is provided for streams, streambanks, shorelines, lakes, wetlands, and other bodies of water.

02 Timber harvest would be carried out consistent with the protection of soil, watershed, fish, wildlife, recreation, and aesthetic resources

03 Timber harvest on lands identified as not suitable for timber production, but where timber harvesting is allowed for other multiple-use purposes may occur for such purposes as:

- salvage of dead or dying trees;
- hazardous fuels reduction;
- forest insect or disease mitigation;
- to trend conditions towards desired stand or landscape vegetation composition, structure, and patterns;
- maintenance or enhancement of wildlife habitat;
- to perform research or administrative studies;
- to address issues of public safety and health; or
- for recreation and scenic-resource management purposes, consistent with other management direction.

04 Minimum stocking requirements for plantation certification for conifer-forested types are described in table 13. A certified silviculturist may prescribe different minimum stocking requirements, which are more appropriate for site-specific conditions and stand management objectives; otherwise, the minimum stocking standards outlined in this table must be used.

Table 13. Minimum stocking requirement, plantation certification, for coniferous forested types

Vegetation type	Minimum number of established trees per acre	Distribution across area (%)
Lodgepole pine	150	70
High elevation lodgepole pine (>10,000 feet)	100	60
Ponderosa pine	100	70
All other types	150	70

Livestock Grazing

Livestock grazing on National Forest System lands is an important contribution to the social and economic importance of rural communities. Domestic livestock grazing is authorized on active grazing allotments on the Ashley National Forest and permit holders participate in the management of grazing on these allotments. The allotments are managed to be responsive to current Federal and State environmental laws and regulations. Livestock grazing plan components are designed to support terrestrial vegetation, riparian, soils, socio-economics and other resource plan components. They apply adaptive management practices that use science and ecological conditions to inform decisions and respond to drought and documented climate changes.

Desired Conditions (FW-DC-LGR)

01 Sustainable rangelands provide forage for livestock grazing opportunities that contribute to the agricultural economy and, local employment, and support traditional lifestyles, cultural values, and generational ties to the land.

02 Livestock grazing and associated management activities are compatible with ecological functions and processes and the management of social resources, including designated areas.

Goals (FW-GO-LGR)

01 Collaborate with livestock grazing permittees and local and State governments to develop contingency plans that address wildfire, drought, annual precipitation, or other events impacting the ability to graze allotments according to the terms and conditions of the permit.

02 Collaborate with livestock grazing permittees and local and State governments to develop monitoring methods and strategies, and provide grazing management resources to permittees.

Guidelines (FW-GL-LGR)

01 Utilization of key forage species should be no greater than 50 percent of current year's growth, except where long-term monitoring demonstrates a different allowable use level that will meet desired conditions for soils and terrestrial vegetation.

02 Leave a four-inch or greater stubble height of herbaceous species at the end of the grazing season between greenline and bankfull of stream systems, except where long-term monitoring demonstrates a different stubble height that will meet desired conditions for soils, watershed, aquatic ecosystems, and riparian ecosystems.

Energy and Minerals

The Ashley National Forest contains a variety of energy and mineral resources, including crude oil and natural gas, limestone, phosphate, trona, and others. People have been using and benefitting from these resources for many years. There are currently over 150 active oil and gas wells on the South Unit area of the Ashley National Forest with an additional of 50 proposed and approved for development but not drilled. Smaller hard-rock mining operations on the Ashley National Forest currently produce chemical-grade limestone and decorative calcite, with sporadic exploration for other valuable minerals including lead-silver, copper, gold, and others. Renewable energy is also produced from Flaming Gorge reservoir.

Energy and mineral resources provide the raw materials that support and contribute to all aspects of modern society and technology. Part of the Forest Service's mission is to encourage, facilitate, and administer the orderly exploration, development, and production of mineral and energy resources on National Forest System lands to help meet the present and future needs of the nation. Existing Federal and local laws, regulations, and legal decisions guide much of how or if particular minerals and energy management actions should take place. The energy and minerals plan components do not need to reiterate overarching Federal and local laws, regulations, and policies, which must already be implemented.

Energy resources are classified either as renewable energy (solar power, hydropower, wind energy, biomass, and geothermal energy), or as nonrenewable energy resources (crude oil, natural gas, coal, tar sand, and oil shale). The nonrenewable energy resources are managed as "leasable" minerals, described below. Mineral resources are grouped into three types, based on different laws and regulations that apply to each type. These resource types include the following.

Leasable Minerals: These minerals include specific mineral commodities such as crude oil, natural gas, coal, geothermal energy, potassium, sodium (including trona), phosphates, oil shale, and sulfur, as well as solid leasable minerals on acquired lands. Leasing of mineral resources on national forest system lands is managed by the Bureau of Land Management, following consent to lease by the Forest Service. The Forest Service has discretion to decide what lands can be made available for mineral leasing, and what stipulations (such as timing restrictions, or no surface occupancy) should be applied to future leases. However, once lands are leased, the development and production of mineral resources from those leases become a nondiscretionary right for the lease holder.

Locatable Minerals: These minerals include rare and valuable mineral commodities such as gold, silver, copper, zinc, nickel, lead, platinum, as well as some nonmetallic minerals such as gypsum and gemstones. Under the Mining Law of 1872,[11] U.S. citizens are guaranteed the right to prospect and explore lands reserved from the public domain and open to mineral entry. On valid federal mining claims, the development and production of these mineral commodities is a non-discretionary right for the claim holder.

Salable Minerals: Sometimes known as "common variety minerals" or "mineral materials," these materials include sand, stone, gravel, clay, and landscaping boulders. The Forest Service has authority to dispose of salable minerals on public National Forest System lands through a variety of methods, including both sales and free-use permits. The development and production of these materials is discretionary for the Forest Service.

[11] Code of Federal Regulations 36 CFR 228

Management of mineral resources is primarily responsive to industry proposals and mineral rights. All mineral and energy management activities on National Forest System lands are required to meet applicable environmental protection measures as required by law, regulation, and policy. Proposed mineral and energy activities are subject to review and approval, as well as environmental analysis, review, reclamation, and monitoring. Management of each type of resource requires consideration of applicable laws and regulations, jurisdiction of other Federal, State or local agencies, and recognition of valid existing rights (mining claims, mineral leases, and private mineral rights). Ownership of valid federal mining claims and mineral leases grants legal property rights for exploration, development, and removal of the respective mineral resources.

Treasure hunting for lost or buried treasures are not locatable or leasable minerals, and are not managed or regulated by the Forest Service as energy or mineral resources. Seeking or recovering lost or buried treasures on National Forest System lands requires a special use permit, and is considered a recreational activity. Forest Service approval of such activities is discretionary on a case-by-case basis and must take into account several Federal laws such as the Archaeological Resources Protection Act. Treasure hunting activities conducted under the guise or pretense of mineral prospecting or mining activity are considered trespassing, even where valid mining claims exist.

Some minerals-related activities (such as tribal collecting for traditional or ceremonial purposes and recreational rock hounding or gold panning) do not require prior Forest Service approval. Such activities can only involve nonpowered hand tools, cannot create nontrivial surface or environmental disturbances, allow for removal of only trivial quantities of minerals or materials, and cannot not be commercial in nature or purpose. Otherwise, prior Forest Service approvals or authorizations are needed.

Future mineral and energy actions, which may take place over the life span of the Ashley forest plan, are proposed and implemented by the energy and minerals industries. Via existing law, regulation, and policy, the task of the Forest Service is to accept, review, evaluate, approve, and administer these actions, and then ensure appropriate site reclamation when operations are complete. The timing, amount, and scope of proposed and possible energy and mineral actions is largely determined by industry, based on commodity prices, environmental constraints, available technology, and public and industry demand.

Desired Conditions (FW-DC-EM)

01 Exploration and development of energy and mineral resources contribute jobs, income, and raw materials to the local and national economy.

02 Environmental impacts from energy and mineral exploration and development activities are effectively avoided, minimized, or mitigated, consistent with valid existing rights.

03 Areas with renewable energy generation (hydropower, solar, and wind energy) potential are available or considered for energy development, where such development is not otherwise precluded and following consideration of other resource values and desired conditions.

04 Locatable minerals are available for exploration, development, and production on Ashley National Forest System lands, where not withdrawn from mineral entry.

05 Leasable minerals are available for leasing, exploration, development, and production on Ashley National Forest System lands where not withdrawn from mineral leasing.

06 Salable materials are available based upon public interest, in-service needs, material availability, and valid existing rights where consistent with desired conditions for other resources.

07 Lands developed for mineral or energy resources (including locatable, leasable, and salable materials, and energy resources) are reclaimed in an appropriate manner when those lands are no longer needed for exploration, development, or production of mineral or energy resources.

08 Abandoned mineral or energy development sites are identified and returned to environmental conditions comparable to the surrounding area or conditions that existed prior to development.

09 Opportunities for rock hounding and other types of noncommercial mineral collecting (for example scientific research or educational purposes) are available and managed to protect natural resources.

Goals (FW-GO-EM)

01 The Ashley National Forest is responsive to requests for exploration and development of energy and mineral resources. The Ashley encourages responsible mineral and energy exploration, development, and reclamation in accordance with applicable mining and leasing laws and regulations.

02 Where minerals projects have valid existing rights, work with operators to develop and implement appropriate voluntary protection measures for sensitive resources.

03 Areas disturbed by mineral developments are reclaimed when no longer needed for approved, proposed, or reasonably foreseeable mineral operations.

Standards (FW-ST-EM)

01 New oil and gas leases shall include lease stipulations identified by the 1997 Western Uinta Basin Oil and Gas Leasing Record of Decision until or unless a new leasing analysis has been completed.

02 New oil and gas leases shall also include no surface occupancy stipulations for inventoried roadless areas and occupied sage-grouse habitat that occurs within priority habitat management areas.

Guidelines (FW-GL-EM)

01 New mineral material disposals or developments (for discretionary saleable minerals such as sand, stone, gravel, and clay) should not be authorized within the following areas, to protect the values for which those areas were created:

- Designated or recommended wilderness areas
- Research natural areas
- Within 500 feet of developed recreation or administrative sites, except as needed for internal Forest Service use

02 Oil and gas operations should use closed-loop drilling methods, to avoid the need for storage or reserve pits.

03 Mineral exploration, development, or production activities occurring on National Forest System lands—where feasible and subject to existing rights—should avoid, minimize, or mitigate adverse environmental impacts.

04 New energy or mineral operations should not authorize ground-disturbing activities within riparian zones. If riparian zones cannot be avoided, authorizations should include measures needed to maintain, protect, or rehabilitate fish and wildlife habitat that may be affected by the operations.

05 Authorization of energy or minerals activities and operations should consider timing restrictions, as needed, to avoid or minimize disturbance and displacement of wildlife during sensitive times.

06 Mineral exploration, development, or production activities occurring on National Forest System lands should avoid or minimize adverse effects to the aesthetic, visual, atmospheric, and audible integrity of cultural resources or areas of Tribal importance:

- when those aspects of integrity are a significant or essential component of the resource,
- where such resources or areas have been clearly identified, and
- where feasible and subject to existing rights.

Geologic Resources and Hazards

The Ashley National Forest includes a variety of geologic resources and hazards. The potential hazards include landslides, debris flows, earthquakes, sinkholes, and other concerns. Geologic resources on the Ashley National Forest include many types and ages of fossils, natural caves and karst (cave-related) resources, and areas with scenic or scientifically important rock layers or features. Significant fossils, natural caves, and related resources are protected by Federal laws and regulations. Fossil and cave resources are both fragile and nonrenewable, and special considerations are required to provide for both resource protection and recreational and scientific opportunities. Locations and details for significant fossil sites and natural caves are considered sensitive information, and should be protected from inappropriate public disclosure.

Desired Conditions (FW-CD-GRH)

01 Geologic hazards (landslides, floods, sinkholes) and associated risks to public safety and infrastructure are recognized. Where feasible, those hazards are avoided, minimized, or mitigated.

02 Geologic resources are intact, and available to provide appropriate ecological, scientific, educational, interpretative, scenic, recreational, and paleontological benefits to the public and academia.

03 Cave and karst-related resources are available for scientific and recreational uses where such uses do not adversely impact sensitive resources (such as cultural, biological, geological, hydrological, paleontological, or aesthetic resources, or naturally occurring air or water flows).

04 Cave and karst-related groundwater systems, ecosystems, and microclimates are recognized, intact, and functioning.

05 Caves and other underground habitats provide undisturbed habitat for native bat species during the critical periods of maternity and hibernation. Caves and other underground habitats also provide undisturbed habitat for other cave-dependent terrestrial or aquatic species.

06 Natural caves on National Forest System lands—containing or exhibiting sensitive or significant resources per the Federal Cave Resources Protection Act—are identified, nominated, and designated as significant federal caves.

Goals (FW-GO-GRH)

01 The Forest Service fosters cooperation and exchange of appropriate information between governmental authorities and those who research, manage, or use fossils and caves located on Federal lands for scientific, educational, rescue, or recreation purposes.

02 Cave locations, names, and resources on National Forest System lands are considered and managed as confidential information in accordance with Forest Service cave management regulations. Such information is made available only on a need-to-know basis to qualified researchers, appropriate Forest Service or other agency staff, or the public.

03 Integrate and coordinate cave and karst management with the management of other national forest resources and activities. Consider the function and biological significance of the entire karst landscape.

04 Known caves on the Ashley National Forest are nominated and evaluated to determine if they should be designated as Significant Federal Caves. Caves not yet nominated or designated are managed as though significant until an evaluation and determination of significance has been made.

Guidelines (FW-GL-GRH)

01 Ground-disturbing activities should not be authorized in areas prone or susceptible to landslides or other geologic hazards unless those hazards have been considered, minimized, or mitigated.

02 Information and locations for significant cave and fossil sites should not be publicly disclosed or promoted, advertised as available for public use, or shown on maps, signs, or brochures unless measures are developed to manage recreational use and adequately protect the associated cave or fossil resources.

03 Ground-disturbing activities should not be allowed within or adjacent to significant caves or sensitive karst areas, unless measures are in place to avoid or mitigate adverse impacts to cave and karst resources. Such resources include natural air and water flow, water quality, cave-loving or cave-dependent biota and their underground habitats and access, and known or suspected scenic, mineral, recreational, paleontological, or scientific resources.

04 If needed, cave gates should be designed and constructed so that appropriate wildlife access (such as for bats and rodents) and naturally occurring air and water exchange are not restricted. Cave gates should be designed to allow for periodic human access as may be needed for appropriate management, scientific, or permitted recreational activities.

05 Logging slash, construction debris, waste products, road gravel, and similar material should not be deposited into or adjacent to cave entrances or active sinkholes unless measures are in place to avoid or mitigate adverse impacts to cave and karst-related resources (as described in guideline FW-GL-GRH-03 above).

06 Toxic chemicals (including pesticides, herbicides, and piscicides such as rotenone) should not be used or applied within or adjacent to significant caves, active sinkholes, or sinking streams unless measures are in place to avoid or mitigate adverse impacts to cave and karst-related resources.

Transportation Infrastructure

The Ashley National Forest manages a 1,450-mile open public road system, including 50 road bridges. These roads support land-management activities, recreational users, access to private land inholdings and commercial ventures, and Forest Service administrative needs. Roads include the roadway and any constructed feature (such as bridges, ditches, culverts, signs, and retaining walls that support the user(s) and minimize the effects to other values). The road system consists of National Forest System roads and is part of the national forest road system atlas.

The Ashley National Forest manages a 1,263-mile system of summer and winter-use trails, including 38 trail bridges. These trails are managed for a variety of recreational uses, including hiking, horseback riding, bicycling, running, skiing, snowshoeing, snowmobiling, and riding of motorcycles, all-terrain vehicles, and off-highway vehicles. In addition to recreation uses, the trail system supports commercial ventures such as outfitter and guide services. Trails include the trail way, and any constructed feature. These features include bridges, ditches, culverts, signs, and retaining walls that support users and minimize effects to other resource values.

Desired Conditions (FW-DC-IN)

01 A transportation system is in place that provides safe and efficient public and administrative access to the Ashley National Forest. The access serves recreation, special uses, forest resource management, and fire management activities. The transportation system is connected to State, County, local, public, Tribal, and other Federal roads and trails. The transportation system provides reasonable access to facilities, private inholdings, and infrastructure (such as buildings, recreation facilities, municipal water systems, dams, reservoirs, range improvements, electronic and communication sites, and utility lines).

02 The transportation system and its use have minimal adverse impacts on resources including but not limited to threatened and endangered species, species of conservation concern, heritage and cultural sites, watersheds, water quality, and aquatic species. Newly constructed or reconstructed roads do not encroach into streams and riparian areas in ways that impact channel function, geometry, or sediment delivery. Administratively closed roads pose minimal risks to water quality and aquatic ecosystems. Stream crossings provide for passage of aquatic organisms except where barriers are desired.

03 The Forest Service road system is part of a coordinated multi-jurisdictional transportation system. The national forest road and trail systems conform to the national forest travel

plan while connecting to access from and across the transportation systems of other Federal, State, and local jurisdictions.

04 The transportation system accommodates current and reasonably foreseeable demands.

05 Road, trail, and infrastructure maintenance activities do not contribute to the establishment and spread of invasive plant species.

06 The road and trail system includes only those that are needed to serve administrative, multiple use, and public needs. Temporary roads and trails may be constructed only when needed for specific project purposes, and are decommissioned upon project completion.

07 Roads and bridges preserve access in a cost effective manner while protecting the public health and safety of traveler and the natural, cultural, and aesthetic values within the roadway corridor.

08 The creation of unauthorized roads and trails are prevented through Forest Service education, enforcement, and partnerships with its users.

09 Year-round nonmotorized experiences are available in remote settings. Nonmotorized areas are large enough and configured to minimize disturbances from other uses. Nonmotorized use is also available in more developed areas, but provides less solitude than in the more remote settings

10 Nonmotorized single-track trails exist for mountain biking, horseback riding, and hiking.

Goals (FW-GO-IN)

01 The road system is part of a broader public road system that is under the jurisdiction of multiple road agencies. Road agencies cooperate routinely to reduce conflicts, ensure cost effective partnering and provide a seamless transportation system to the public.

02 Road maintenance is shared with users on a commensurate basis. Residential subdivisions, commercial enterprises, and utility companies using a National Forest System road are expected to provide their fair share of road maintenance based on volume, type of traffic, and timing of use.

03 Develop and implement strategies to significantly increase the roles of communities, partners, and volunteers in planning, developing, and maintaining motorized and nonmotorized trails.

Objectives (FW-OB-IN)

01 Annually maintain 40 percent of the class 2, 3, and 4 National Forest System trails emphasizing areas of higher use.

02 Annually maintain 90 percent of class 5 National Forest System trails.

Guidelines (FW-GL-IN)

01 Road maintenance activities should protect the existing road prism and maintain drainage features to prevent resource damage, while minimizing safety issues in accommodating public traffic.

02 Wetlands and unstable areas should be avoided when reconstructing existing roads or constructing new roads and landings. Mitigate impacts where necessary when avoidance is not practical.

03 Consider impacts to streams when constructing, reconstructing, or maintaining roads. Where practical, implement mitigation that reduces sediment delivery to streams.

04 In fish-bearing streams, construction, reconstruction, or replacement of stream crossings should provide and maintain passage for all life stages of native aquatic organisms unless barriers should be created or maintained to prevent spread or invasion of nonnative species in alignment with native species conservation.

Facilities Infrastructure

The Forest manages a variety of buildings and infrastructure including administrative facilities and public recreational facilities, associated water and wastewater treatment systems, dams, and communication towers, for a variety of purposes to enable the Forest Service to fulfill its mission.

This infrastructure should be managed and maintained to meet the needs of the intended purpose and user and provide long-term sustainability of the resources and structure. Administrative infrastructure should function to provide employees a safe and mission-oriented working environment. Recreational infrastructure should align with the recreational uses designated for that area. In all cases, the infrastructure should be maintained to a standard that protects the users and integrity of the asset.

Currently, the Ashley National Forest has facilities that are being used for purposes not originally intended. Some facilities and areas have been converted from one use type to another use type (and even multiple use types) to meet the current needs of the Agency. The maintenance requirements of the facilities and infrastructure are increasing, with much of the annual and cyclic preventative maintenance becoming deferred. The accumulation of deferred maintenance leads to deterioration of performance, increased costs to repair, and a decrease in asset values.

As the workforce and mission services continue to evolve, the existing infrastructure may become obsolete from the originally designed purpose and will require the Ashley National Forest to look at adaptive reuses, multi-uses, and other ways to address accumulating deferred maintenance. The facilities master plan, sustainable recreation plan, recreation site analysis, and other long-term planning documentation will dictate how infrastructure will be maintained, modified, or removed from service.

Desired Conditions (FW-DC-FAC)

01 Historic characteristics are retained when structures eligible for or listed in the National Register of Historic Places are converted for adaptive reuse.

02 All facilities are safe, well maintained, function as intended, or are adapted to accommodate the current and anticipated demands. The facilities provide an environment free from recognized hazards for people, while avoiding or minimizing negative impacts to natural, cultural, and social resources.

03 Facilities that no longer serve the need and intent of the Ashley National Forest are conveyed or disposed of as appropriate. Structures that are eligible for the National Historic Register are adapted for other uses when possible.

04 Developed potable water systems that no longer serve the current needs are appropriately upgraded, or reclassified or decommissioned, and the site is returned to its natural state.

05 Existing facilities comply with applicable accessibility guidelines and current building or occupancy standards.

06 Where appropriate, existing highly developed campgrounds accommodate modern, larger recreational vehicles and integrate off-highway vehicle use into the design and circulation.

Goal (FW-GO-FAC)

01 Pursue partnerships to assist in completing necessary facility improvements.

Recreation Settings and Opportunities

The Ashley National Forest manages recreation settings and opportunities for a variety of developed and dispersed recreation activities. Campgrounds, trails, marinas, water systems, parking lots, and restrooms contribute to the settings and opportunities across the Ashley National Forest.

The Flaming Gorge National Recreation Area is a popular national attraction. The Flaming Gorge area offers boating and fishing on the Flaming Gorge Reservoir and fishing on the Green River, a blue ribbon trout fishery. The High Uintas Wilderness is a national attraction, popular for backpacking and horse packing to explore the many lake basins and alpine areas. The Highline Trail spans the wilderness from west to east along the crest of the Uinta Mountains and passes by Kings Peak—the highest point in Utah. The areas of the Ashley National Forest outside of the High Uintas Wilderness and Flaming Gorge National Recreation Area offer opportunities for many diverse recreation opportunities. These opportunities include off-highway vehicle use, dispersed and developed camping, backpacking, hiking, and viewing scenery and wildlife.

Recreation Opportunity Spectrum

The recreation opportunity spectrum is a classification tool used by the Forest Service to provide visitors with varying challenges and outdoor experiences. The recreation opportunity spectrum (USDA Forest Service 1982) classifies national forest lands into six management class categories: urban, rural, roaded natural, semi-primitive motorized, semi-primitive nonmotorized, and primitive. The categories are defined by settings and the probable recreation experiences and activities they afford. Table 14 identifies the acres and percentages of the identified recreation opportunity spectrum classifications on the Ashley National Forest. The Ashley National Forest does not contain any identified urban recreation opportunity spectrum classifications. See appendix D, figure 4 for a map showing locations of recreation opportunity spectrum settings in summer.

Table 14. Recreation opportunity spectrum class categories

Spectrum class	Summer (acres)	Summer percent of forest (%)	Winter (acres)	Winter percent of forest (%)
Primitive	276,571	20	NA	NA
Semi-primitive Non-motorized	371,572	27	NA	NA
Semi-primitive Motorized	288,471	20	NA	NA
Roaded natural	451,035	32	NA	NA
Rural	12,620	1	NA	NA

NA = not applicable

Sustainable recreation is the set of recreation settings and opportunities on national forests that is ecologically, economically, and socially sustainable for present and future generations. The recreation opportunity spectrum for summer and winter is used in each phase of planning to assess, integrate, convey, and monitor the plan area's social, managerial, and physical settings including seasonal variations and associated benefits. The summer recreation opportunity spectrum includes recreation settings in the fall and spring that don't involve snow.

Desired Conditions (FW-DC-ROS)

01 Outdoor recreation settings, opportunities, and experiences are provided year round on the Ashley National Forest and reflect the integration of other resources in a sustainable manner.

02 A variety of developed and dispersed recreation opportunities are available for a diverse group of users. Recreation opportunities are commensurate with recreation settings and other resource values.

03 Recreation opportunities enhance the economic, cultural, and social vitality and well-being of surrounding communities. Local communities are involved in partnerships and long-term relationships with stakeholders and are fostered to facilitate and participate in sustainable recreation on the Ashley National Forest.

04 Primitive summer recreation settings encompass large, wild, remote, and predominately unmodified landscapes. These settings often coincide with designated wilderness. Primitive summer settings contain no motorized recreation. The settings provide quiet solitude away from roads and people, are generally free of human development, and facilitate self-reliance and discovery. The presence of signs and other infrastructure is minimal and constructed of rustic, native materials.

05 Primitive winter recreation settings are large, remote, wild, and predominately unmodified landscapes. Winter primitive recreation opportunity spectrum settings provide quiet solitude away from roads and people. There is no motorized activity and little probability of seeing other people. Constructed trails that are evident in the summer months are covered by snow in winter, making these settings appear even more natural and untouched by human management.

06 Semi-primitive nonmotorized summer settings provide opportunities for exploration, challenge, and self-reliance. Rustic structures, such as signs and footbridges, are occasionally present to direct use and protect the setting's natural and cultural resources.

These rustic constructed features are built from native materials or those that mimic native materials. These settings are free of motorized recreation travel, but mechanized travel may be present.

07 Semi-primitive nonmotorized winter settings provide backcountry skiing, snowboarding, and snowshoeing opportunities. Trails are ungroomed and often not marked.

08 Semi-primitive motorized summer settings provide motorized recreation opportunities in backcountry settings. Routes are designed for off-highway vehicles and high-clearance vehicles that access key destinations and vantage points, provide short day trips on scenic loops, or facilitate longer and even overnight expeditions. Visitors challenge themselves as they explore vast, rugged landscapes. Mountain bikes and other mechanized equipment may also be present. Facilities are rustic and are used to protect the setting's natural and cultural resources. Bridges are sometimes present to accommodate foot, horse, and all-terrain vehicle traffic but are built from native or natural-appearing materials that blend with the surrounding landscape and maintain the semi-primitive character of the setting.

09 Semi-primitive motorized winter settings provide backcountry skiing and snowmobiling opportunities. Routes are typically ungroomed, but are often signed and marked. There are vast areas to travel cross-country, offering visitors an opportunity for exploration and challenge. Occasionally, historic cabins or yurts are available for short breaks or overnight use.

10 Roaded natural summer settings are 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 passenger car travel. Sanitation, interpretive signing, and other amenities are strategically placed to serve as destination points or portals to adjacent backcountry settings. Signing, facilities, bridges, and other infrastructure are constructed of native materials or natural-appearing materials that blend with and complement the surrounding natural setting.

11 Roaded natural winter settings support higher concentrations of use, user comfort, and social interaction. The road system is plowed and accommodates passenger car travel. Winter trails are groomed and may have ancillary facilities, such as restrooms. System roads and trails often provide staging to adjacent backcountry settings (primitive, semi-primitive nonmotorized and semi-primitive motorized).

12 Rural settings often serve as a recreation destination and sometimes provide access to adjacent roaded natural and semi-primitive settings and opportunities. These areas are accessed from roads that are generally close to communities. Developed recreation facilities are designed for various group sizes and provide opportunities to socialize in both day-use and overnight sites.

13 Rural winter settings provide staging to adjacent winter settings and opportunities. These areas are accessed from roads that are generally close to communities. Sanitation facilities are well located for public demand and information and education are commonly present. Parking areas are appropriately sized and maintained for designed season of use. Entry points and routes are signed and lead snowmobiles to adjacent roaded natural and semi-primitive motorized settings. Nonmotorized trails may be groomed for cross-country skiing.

Guideline (FW-GL-ROS)

01 New and reconstructed recreation facilities should be designed to be appropriate for the assigned recreation opportunity spectrum class in terms of materials, development scale, on-site regimentation signage, and density of sites. New facilities should also be consistent with the architectural character principles of the Forest Service Built Environment Image Guide.

Developed Recreation Sites

Developed recreation sites include but are not limited to developed campgrounds, picnic areas, interpretive sites, cabin and lookout rentals, trailheads, and visitor centers.

Desired Conditions (FW-DC-RECDEV)

01 Quality, well-maintained recreation facilities at key locations, accommodate use, enhance the visitor's experience, and protect the natural resources of the area.

02 Recreation rental cabins and rental yurts provide a range of settings and opportunities. Historic rental facilities are managed to protect the historic character of the structure and offer visitors a window to the past.

03 Developed recreation site locations and seasons of use adapt to anticipated potential climate changes, including increases in predicted temperatures and extreme weather events. The changes may affect the timing, quantity, and duration of water flows, snow levels and snow elevation changes, impacts to fish and wildlife habitat, changes in vegetation conditions, and shifts and other changes in seasonal recreation use.

04 Snags and hazard trees are not present within developed recreation sites to ensure the safety of the public.

05 Developed campgrounds accommodate both tent and recreational vehicle camping, have structures or vegetation that provide adequate shade for picnic tables, and are maintained and improved to meet user demands.

Goal (FW-GO-RECDEV)

01 Partners, concessionaires, and volunteers are used to expand the Ashley National Forest's capacity to manage recreation facilities and programs, and to help meet future recreation demands.

Objective (FW-OB-RECDEV)

01 Improve Architectural Barriers Act accessibility on five developed recreation facilities every 5 years for the life of the plan if improvements are needed.

Guideline (FW-GL-RECDEV)

01 Vegetation management activities in developed recreation sites should mitigate hazard trees and manage vegetation to promote recreational values and to protect public safety and scenic value.

Dispersed Recreation

Dispersed activities generally occur outside of facilities provided by the Ashley National Forest, expressing a sense of freedom and unconfined recreation. The main dispersed recreation activities on the Ashley National Forest are boating, hiking, biking, hunting, driving

for pleasure, fishing, off-highway vehicle use, and camping outside of developed campgrounds. Some dispersed recreation locations and activities are renowned destinations for national travelers. These locations include boating on the Flaming Gorge Reservoir, fly fishing the Green River below the Flaming Gorge Dam, and backpacking in the High Uintas Wilderness. Other locations are predominantly visited by residents from the surrounding local or state areas.

Desired Conditions (FW-DC-RECDIS)

01 Dispersed recreation opportunities are available across the Ashley National Forest for a variety of users where they are compatible with environmental resources and opportunities are managed so that user conflicts do not occur.

02 Dispersed recreation is compatible with ecological values, other multiple uses, and recreation settings.

Recreation Special Uses

The Ashley National Forest provides opportunities for a variety of recreation special uses. These include outfitter and guiding services, resorts and lodging, recreational events, organizational camps, marinas, and recreation residences. Recreation facilities and opportunities are owned and provided by private individuals, businesses, institutions and other organizations permitted to operate and be located on the Ashley National Forest.

Desired Conditions (FW-DC-RECSU)

01 Recreation special uses provide unique opportunities, services, and experiences for the recreating public on National Forest System lands or address a demonstrated demand for a specific recreation opportunity.

02 Services provided by recreation special uses enhance the recreation experiences of forest visitors, enhance public health and safety, and protect natural resources.

03 The vegetation within recreation special use areas is healthy, resilient, and does not create health or safety hazards for visitors.

04 Recreation special uses contribute to economic sustainability, and are compatible with ecological and social capacity thresholds.

Guidelines (FW-GL-RECSU)

01 Modifications to historic structures authorized under special use authorizations should not result in adverse effects to historic properties.

Outfitters and Guides

Thousands of visitors experience the Ashley National Forest using outfitter and guide services that operate on the Ashley National Forest. Guided fly fishing trips on the Green River are the most popular outfitted and guided activity. Environmental education, backpacking, fishing, hunting, and horseback trail rides are among the other outfitted and guided activities. Many river-based outfitters and guides, and other recreation-based companies, are dependent on the Ashley National Forest for their livelihood.

Desired Conditions (FW-DC-RECOG)

01 Outfitters and guides offer services that the Forest Service and public need, and increase the diversity of recreation opportunities available.

02 Outfitter and guide recreation special uses provide service to the extent necessary for realizing the recreational opportunities of the Ashley National Forest.

03 Outfitter and guide services are appropriate for the recreation opportunity spectrum class of the area in which they operate.

04 Outfitter and guide activities do not degrade the experiences of other recreation visitors.

Goal (FW-GO-RECOG)

01 The Ashley National Forest works with outfitters and guides, partners, and other permittees to deliver interpretation and education messages that instill an appreciation of the natural and cultural resources of the national forest, and promotes conservation and stewardship.

Recreation Residences

Recreation residences are privately owned cabins located on national forest land, authorized by special use permits. Permit holders pay an annual fee for their use. On the Ashley National Forest, there are on average 55 recreation residences. Recreation residences are administered to ensure compliance with direction in the special-use permit Forest Service Manual and Handbook. Permits are terminated only in rare circumstances per the conditions and protocols specified in the permit, Forest Service Handbook and Manual, regulations and law.

Desired Conditions (FW-DC-RECRES)

01 Existing recreation residences continue to provide rustic, vacation-style facilities that are visually appropriate to their natural-appearing forest settings. The residences allow cabin owners, their families, and guests the ability to be able to enjoy the Ashley National Forest and its recreation opportunities.

Standards (FW-DC-RECRES)

01 With the exception of *in lieu* lots (unoccupied lots within a tract), which have limited application for existing cabin owners pursuant to national policy and the permit itself, no new recreation residence lots shall be made available or assigned.

02 New or reconstructed recreation residences shall not exceed the square footage limitations as outlined in the Recreation Residence Management Administrative Guidelines and will only be allowed upon prior approval from the authorizing officer.

Emerging Recreation Technologies

New recreational products are likely to emerge over the lifetime of the forest plan. Some of these products will likely be prohibited under existing regulations, while others may require additional regulations or direction when they appear.

Desired Conditions (FW-DC-RETEC)

01 New recreation technologies contribute to visitor enjoyment and experiences, are consistent with recreation settings, and still allow for the enjoyment of other existing recreational opportunities.

Goal (FW-GO-RECTEC)

01 New recreational technologies are integrated into the Ashley National Forest with support and guidance from interested users.

Guidelines (FW-GL-RECTEC)

01 New and emerging recreation technologies and equipment should not create adverse effects to existing recreation uses and activities. If adverse effects occur, limit new uses to appropriate sites or locations or prohibit use.

02 New and emerging recreation technologies and equipment should not be allowed or limited to appropriate sites if safety issues and environmental effects cannot be addressed through mitigation measures.

Recreation Events

The Ashley National Forest has a number of recreation special use permittees, including those hosting recreation events that help provide opportunities for visitors. These permits are issued for activities such as summer trail races, fishing derbies, benefit horseback trail rides, and off-highway vehicle jamborees.

Desired Conditions (FW-DC-RECEV)

01 Recreation events provide opportunities to participate in competitions or highlight special occasions.

Guideline (FW-GL-RECEV)

01 Permitted recreation events should not displace or conflict with 90 percent of other users, activities, events, or access for the time period they are occurring.

Noncommercial Group Use

The Forest Service issues group use permits for organized noncommercial activities where those activities would not unreasonably conflict with other uses, and would not adversely affect forest resources, or create unsafe conditions. Such activities might include weddings, family reunions, and special interest events or club outings.

Desired Conditions (FW-DC-RECNCG)

01 The Ashley National Forest provides opportunities for noncommercial organized group activities. Noncommercial organized group activities provide for public health and safety and do not conflict with other uses. Areas used for these activities continue to maintain or progress toward desired condition for soils, watersheds, aquatics, riparian management zones, wildlife, and terrestrial vegetation.

Guideline (FW-GL-RECNCG)

01 New permits for noncommercial group use of more than 75 people, requested for dispersed areas, should be approved only if developed recreation sites designed to accommodate that level of use are not available or feasible.

Visitor Education and Interpretation

The Ashley National Forest offers opportunities for connecting people to their environment and to the natural and cultural history of the area. These connections provide opportunities for the development of strong stewardship ethics in the form of personally delivered talks and programs, brochures and booklets, and interpretive wayside exhibits using digital and other formats. These connections contribute to offering an appreciation for the natural and cultural history across these landscapes. There are opportunities for other organizations and partners to join the Ashley National Forest in achieving mutual goals for education and interpretation.

Desired Conditions (FW-DC-VEI)

01 Interpretation and education programs help enhance visitors' understanding and appreciation for the rich natural and cultural resources of the Ashley National Forest, and build support for public lands.

02 Visitor information is readily available for pre-visit information gathering in a variety of forums. The information is kept up to date so the public may be informed and educated through modern technology about current Forest Service-related policies, activities, services, and issues.

03 Education efforts are provided in a variety of mediums about forest stewardship and responsible use in order to educate visitors and achieve visitor compliance with regulations.

04 Red Canyon Visitor Center serves as a hub, which enhances interpretation and education of the surrounding geologic and cultural areas.

05 The Swett Ranch Historic Site and historic Ute Mountain Fire Lookout Tower provide opportunities for visitors to learn about the past and to gain a greater appreciation of the history of Ashley National Forest. Additional plan components for Swett Ranch Historic Site and Ute Mountain Fire Lookout Tower are located in the Management Area section.

06 Conservation education, visitor information, and interpretation inform and engage visitors and local communities. These resources are readily available and encourage increased forest stewardship, ecological awareness, visitor orientation, and knowledge of recreation opportunities.

Goals (FW-GO-VEI)

01 The Ashley National Forest seeks partners and volunteers to assist in the delivery of public information, natural and historic interpretation, conservation education, and stewardship services.

02 The Ashley National Forest seeks to reduce conflicts between multiple-use through educational resources.

03 The Ashley National Forest collaborates with universities and local schools on research projects when feasible.

Objectives (FW-OB-VEI)

01 Annually conduct 30 interpretation and conservation education opportunities for the public.

02 Develop or update one recreation guide or interpretation material every 3 years.

Scenic Resources

Scenery is a resource valued and enjoyed by Ashley National Forest visitors. It also provides an integral and important sense-of-place backdrop, setting, and character-defining element for adjacent communities, residential areas, and travel ways. The aesthetic experience also represents a key ecosystem service. The spectacular scenery of the Ashley National Forest, especially in the Flaming Gorge National Recreation Area and the High Uintas Wilderness, is a national and regional driver for tourism, recreation, the economy, and growth of communities. Over half of the Ashley National Forest landscape is classified with a scenic attractiveness of "Class A–Distinctive." Scenic attractiveness as defined in the Forest Service Scenery Management System has three levels: distinctive, typical, and indistinct. Distinct scenic attractiveness is defined by areas where landforms, vegetation patterns, water characteristics, and cultural features combine to provide unusual and outstanding scenic qualities.

Scenery management on National Forest System lands of the Ashley is guided by assigned scenic integrity objectives developed according to the Forest Service Scenery Management System process, which specifies five levels from "very high" to "very low." The scenic integrity objectives are used for project planning, analysis, implementation and monitoring work. The assigned acres and percentages of the Ashley National Forest scenic integrity objectives are identified in table 15 below. Figure 5 in appendix D shows scenic integrity objective locations.

Table 15. Acres of each scenic integrity objective level within lands suitable for timber production

Scenic Integrity Objective Level	Acres in Timber Suitability
High	23,950
Moderate	96,139
Low	14,882

Desired Conditions (FW-DC-SEC)

01 The Ashley National Forest's scenery provides public enjoyment of the varied ecological landscapes, which range from the Uinta Mountains to the Green River Basin and the Tavaputs Plateau.

02 The condition of the Ashley National Forest scenery reflects a relative range that balances social and economic values, ecosystem health, and sustainability and diversity, and contributes to the quality of life of local residents and Ashley National Forest visitors.

Guidelines (FW-GL-SEC)

01 Scenic deviations that are visible in some areas of the Ashley National Forest should generally be subordinate to the surrounding natural landscape and diminish over time.

02 Vegetation management activities should be designed to reflect natural disturbance regimes and processes and minimize visible contrasts with the scenic character.

03 Vegetation management components of new projects should achieve the assigned scenic integrity objectives within 5 years after completion of all activities associated with the

project (including activities such as rehabilitation of temporary roads, burning slash piles, or reseeding and planting), to reduce significant visual deviations from the surrounding landscape.

04 Components of new projects other than vegetation management, such as facility installation or road construction, should meet the assigned scenic integrity objectives within two years after completion of all activities associated with the project to reduce significant visual deviations from the surrounding landscape.

05 New landscape modifications (such as timber harvesting on lands not suitable for timber production or construction of facilities) should meet or exceed the assigned scenic integrity objectives as seen from anywhere within areas assigned as scenic integrity objective of very high or high as seen from mapped concern level 1 and 2 travel ways and viewpoints. The scenic integrity objectives serve as thresholds of allowable visual dominance by landscape modifications over the valued scenic resources and allowable deviation from the desired scenic resource.

06 Within an area rated moderate, low, or very low, no forest plan scenic integrity objective applies to areas that are unseen from the mapped concern level 1 or 2 travel ways and viewpoints. However, timber harvest units must be shaped and blended to the extent practicable with the natural terrain.

07 Visual impacts to significant cultural resources are avoided, minimized, or mitigated when scenery is an important component of the visual integrity of the resources.

Land Status and Ownership

Land ownership is the basic pattern of public and private ownership of surface and subsurface estates. It refers to the ownership of land and interests in land. **Land status** is defined as the ownership record of title to lands, including withdrawals, rights, and privileges affecting or influencing the use and management of National Forest System lands. **Land ownership status** on National Forest System lands can be changed through land adjustments. Under land adjustment programs, the Forest Service acquires and consolidates key tracts of non-Federal land to conserve valuable natural habitat, reduce the risk of permanent development in sensitive areas, and enhance public recreational opportunities. Some land adjustment programs also provide the Forest Service an opportunity to secure permanent road and trail right-of-way easements, which will assure the protection, administration, access, and use of National Forest System lands and resources.

National Forest System lands are generally retained in Federal ownership to provide long-term values. The vision for the Ashley National Forest is to retain in public ownership all lands currently under its administration that meet the long term needs of maintaining the integrity of contiguous natural ecosystems, riparian areas and wetland ecosystems, recreation and open space, scenery, clean air and water, and habitat for plant and animal populations. Through the methods available to the agency, the Forest Service would acquire lands or mineral estates that enhance this vision. Lands or mineral estates that do not meet these needs would be disposed of. In all such cases, the primary guiding principle would be the greater public benefit.

Management of National Forest System lands on the Ashley National Forest is important to protect the public’s estate interest in its national forest. Surveying National Forest boundaries, maintaining posted property lines, and defending public lands from trespass or

encroachment are activities that maintain the integrity of the National Forest System. The Ashley National Forest has some instances of inholdings (completely surrounded by USFS) or near inholdings (not completely surrounded) found within the confines of the national forest boundaries. These private properties came about in the form of patented mining claims and the Homestead Act and provide management challenges unique to the area.

Desired Conditions (FW-DC-LSO)

01 The land ownership pattern of the plan area provides for simplified and improved national forest management and achievement of desired conditions.

02 National Forest System land ownership boundaries are surveyed and posted to reduce the potential for encroachment and trespass.

03 Existing road and trail easements provide for access to National Forest System lands.

Goals (FW-GO-LSO)

01 Implement land adjustments that improve ownership patterns, to increase public benefit and the efficiency of national forest management.

02 To improve public and administrative access to National Forest System lands, acquire new road or trail easements as needed to manage national forest resources or to fill a gap in existing access to public lands.

Guideline (FW-GL-LSO)

01 To provide public and administrative access to National Forest System lands, land adjustment proposals should consider reciprocal right-of-way acquisitions when feasible.

Lands Special Uses

Special use permits authorize the occupancy and use of National Forest System lands by private individuals, organizations, or companies for a wide variety of uses. Such uses include roads, dams, water systems, utility corridors, communication sites, and other private or commercial uses that cannot be accommodated on private lands and that conform to management direction for the area.

Requests for occupancy and use of National Forest System lands must be submitted as a proposal, which is a request to use National Forest System lands. The proposal must pass a two-level screening process to determine if the proposed use is consistent with Forest Service policy before it can be accepted as a formal application.

For proposals that have passed the screening criteria and have the potential for disturbance to land and resources, a project design is required and is subject to environmental analysis, review, and monitoring. All authorized uses on public lands are required by law to meet applicable environmental protection measures.

Desired Conditions (FW-DC-LU)

01 Opportunities are available for a wide variety of non-recreation lands special uses. These uses include but are not limited to roads, dams, water systems, utilities, energy transmission rights-of-way, and other public or private services on lands that are suitable for these activities and that cannot be accommodated on other land.

02 Environmental and visual impacts of emerging technology, communication sites, energy corridors, and other permitted infrastructure are managed for minimum effect to the resource.

03 Utility corridors and communication sites meet safety standards and permittee needs as well as resource considerations.

04 Utility corridors and communication sites use existing facilities, sites, and corridors unless new sites can provide better social, economic, and ecological benefits. Local distribution lines and smaller pipelines occur within existing road rights-of-way or other previously disturbed areas, where technically feasible.

Goals (FS-GO-LU)

01 Encourage the formation of user associations *in lieu* of individual special use permits and rights-of-way in common use facilities, uses, or areas. Multiple permits to the same organization should be incorporated into one permit if this facilitates permit administration.

02 Work with tribal and county road authorities to provide access to National Forest System lands that serve the public.

Guidelines (FS-GL-LU)

01 Vegetation treatment within corridors and along linear transmission facilities should meet facility safety requirements, provide for control of invasive species, and provide for revegetation in order to reduce visual impacts.

02 The use of buried utilities instead of overhead should be considered to avoid potential conflicts with resources (such as scenic integrity, wildlife, or wildfire).

03 Special use permits for land uses should include operation and maintenance plans that address health and safety, resource protection, and operating procedures.

Chapter 3. Management Area Direction

Introduction

The Ashley National Forest has areas that contain special, exceptional, or unique values that provide important ecosystem services. Many of these areas meet the criteria of special places that people associate with the Ashley National Forest. Such an area is identified as a designated area or a management area for a specific purpose. The plan components for these two areas are specific so they provide additional emphasis for that specific value. The designation protects the special values of the area and the ecosystem services those values provide.

Designated Areas

A designated area is defined as an area or feature congressionally or administratively identified and managed to maintain its unique special character or purpose. Examples of congressionally designated areas include but are not limited to designated wilderness areas, wild and scenic rivers, and national scenic trails. Examples of administratively designated areas include but are not limited to research natural areas, scenic byways, and special areas with unique values. The following are designated areas.

Flaming Gorge National Recreation Area

The Flaming Gorge National Recreation Area is located within Daggett County in northeastern Utah and Sweetwater County in southwestern Wyoming (see appendix D, figure 6). The area was designated by Congress in 1968 by the enactment of Public Law 90-540 for the purpose of: the Colorado River storage project, public outdoor recreation use and enjoyment of the Flaming Gorge Reservoir and surrounding lands in the States of Utah and Wyoming, and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of the lands and waters. The Flaming Gorge National Recreation Area covers 207,363-acres and includes 91 water miles, encompassing the 42,020-acre reservoir. The area is divided by the Utah/Wyoming state line. The Utah side contains approximately 43 reservoir water miles, 12 miles of the Green River below the Flaming Gorge Dam, and 111,213 acres of the national recreation area. The Wyoming side contains approximately 48 reservoir and river water miles and 96,149 acres of the Flaming Gorge National Recreation Area. The national recreation area is most known for its scenery, geology, and recreation opportunities. The recreation opportunities include fishing on the Flaming Gorge Reservoir and the Green River, which attracts visitors from across the United States. Overall, the national recreation area has the greatest development of recreation facilities on the Ashley National Forest. These facilities support water- and road-based recreational opportunities.

The national recreation area also includes areas such as the Green River corridor below the Flaming Gorge Dam, Red Canyon, Firehole Canyon, Antelope Flat, Sheep Creek Bay, Hideout Canyon, Kingfisher Island, and many other unique areas and opportunities for motorized and nonmotorized recreation. Multiple developed and dispersed camping settings and opportunities are available as well. These opportunities include lake and river fishing, boating, sailing, water skiing, mountain biking, hiking, ice fishing, rafting, hunting, and scenic byways and backways.

Two management challenges are likely to persist in the national recreation area lands flanking Flaming Gorge Reservoir. The first challenge stems from the need to maintain and expand recreation opportunities around the reservoir to support local economies. The Flaming Gorge National Recreation Area is an important economic driver for Utah and Wyoming and needs to be managed to maintain its natural setting and scenic beauty, while accommodating growing recreational demands and increasing economic importance to the region. The public and local governments advocate for the use of public lands to both continue and expand developed and dispersed recreation sites and motorized access. Unmanaged recreation can leave increasing and persistent footprints in fragile desert ecosystems, with highest impacts resulting from dispersed camping and off-road or "open-use" of off-highway vehicles. Vegetation, soil, wildlife and watershed resources can be impacted. Damage to natural resources around Flaming Gorge Reservoir includes loss of vegetation, wildlife habitat impacts, compaction and displacement of soils, reduced water infiltration and increased erosion. The low-lying areas surrounding the reservoir are in an arid environment with an annual precipitation of approximately 6 to 9 inches. These conditions reduce the landscape's resilience to recover from land disturbance.

The Ashley National Forest land surrounding the reservoir is also impacted by two invasive species that displace native plant communities. Cheatgrass and halogeton, aggressive annuals, have reduced native areas of desert-shrub, sagebrush, and grassland communities. The expansion of these plants on the landscape alters soil physical and chemical properties, reduces effective ground cover, and reduces available forage for livestock and wildlife. Factors that have contributed to the spread of these invasive species include drought cycles (as documented in 2002) and soil disturbance from roads, trails, off-highway vehicle use, and oil and gas developments. These infested land areas create a risk of spreading cheatgrass and halogeton elsewhere in the national recreation area.

Desired Conditions (DA-DC-FGNRA)

01 The Flaming Gorge National Recreation Area provides public outdoor recreation benefits and conservation of scenic, scientific, historic, and other values contributing to public enjoyment.

02 Management, utilization, and disposal of natural resources will promote, be compatible with, and not significantly impair the purpose for which the Flaming Gorge National Recreation Area was established. Conflicts between resources will be resolved in favor of the purposes for which the Flaming Gorge National Recreation Area was established.

03 Boating and water-oriented sanitation needs are adequate for the level of use.

04 Open spaces and undeveloped areas are maintained throughout the Flaming Gorge National Recreation Area, and developed recreation facilities are clustered for high public use.

05 A variety of motorized and nonmotorized recreation opportunities are available.

06 Forested stands are generally uneven-aged, contributing to recreational and scenic values by offering continuous and diverse tree cover in a mosaic of tree sizes ranging from young to very old.

Goals (DA-GO-FGNRA)

01 The Ashley National Forest continues to work with Bureau of Reclamation, and Wyoming and Utah Wildlife Agencies, to improve the fisheries within the Flaming Gorge National Recreation Area.

02 The Ashley National Forest works collaboratively with Wyoming wildlife agencies and the Historic Preservation Office to maintain and identify unique habitat and historic sites.

Guidelines (DA-GL-FGNRA)

01 Manage timber stands for maximum recreation, wildlife, and esthetic benefits consistent with maintaining satisfactory watershed conditions.

02 Ground-disturbing activities should consider impacts to the midget-faded rattlesnake.

03 Components of new projects other than vegetation management, such as facility installation or road construction, should meet the assigned scenic integrity objectives to reduce significant visual deviations from the surrounding landscape.

High Uintas Wilderness

The High Uintas Wilderness in northeastern Utah comprises the wild core of the massive Uinta Mountains and provides a nearly pristine natural setting. At 453,900 acres, the High Uintas Wilderness is the largest wilderness area in the state of Utah, more than three and half times larger than the second largest wilderness area in the state. The Ashley National Forest manages 60 percent (274,154 acres) of the wilderness, and the rest is managed by the Uinta-Wasatch-Cache National Forest. Management of the wilderness is coordinated between the two national forests, and the Ashley is the lead national forest for the management of the High Uintas Wilderness.

The Uinta Mountains were carved by glaciers from an immense uplift of Precambrian rock. The main crest of the Uinta Mountains runs west to east for more than 60 miles. The crest rises more than 6,000 feet above the Wyoming and Uinta Basins, to the north and south. Massive secondary ridges extend north and south from the crest of the range, framing glacial basins and canyons far below. This rugged expanse of peaks and flat-topped mountains is the largest alpine area in the Intermountain West and is the setting for Kings Peak, the highest peak in Utah. Hundreds of picturesque lakes, streams, and meadows are nestled in beautiful basins. Cold, clear rivers plunge from the basins to deep canyons that form the headwaters of several of Utah’s major rivers.

The Uinta Mountains rise from 7,500 to 13,528 feet at the summit of Kings Peak, offering diverse habitat for plants and animals. Above tree line, tundra plant communities thrive in the harsh climate of the highest altitudes. Thick forests of Engelmann spruce, subalpine fir, and lodgepole pine trees blanket the land below tree line. These forests are interrupted by park-like meadows and lush wetlands. In the lower elevations, aspen groves and countless mixed species offer contrast to the scene. The Uinta Mountains are home to elk, mule deer, moose, mountain goats, coyotes, black bears, bighorn sheep, ptarmigan, river otter, and several species of raptor, pine marten, and cougar.

Desired Conditions (DA-DC-HUW)

01 The High Uintas Wilderness is essentially unhindered and free from modern human control and manipulation.

02 Natural ecological processes and disturbances (such as succession, wildfire, avalanches, insects, and disease) are the primary forces affecting the composition, structure, and pattern of vegetation. Wilderness areas provide opportunities for visitors to experience natural ecological processes and disturbances with a limited amount of human influence.

03 Soils support naturally occurring vegetation and are not significantly impaired by human activities.

04 The High Uintas Wilderness acts as an area to maintain plant and animal indigenous species presently existing in the area.

05 Wildlife and fish contribute significantly to overall biodiversity.

06 Natural processes and the forces of natural selection influence the diversity of wildlife and fish habitat and species.

07 Livestock grazing is recognized as an appropriate use of wilderness.

08 The High Uintas Wilderness exhibits an undeveloped quality and is without nonconforming and unnecessary facilities, installations or human-caused surface disturbances.

09 Cultural and historic sites are recognized as an integral component of the wilderness resource. Past human uses of the landscape are understood.

10 The wilderness area accommodates levels of recreation use that are ecologically sustainable and provides opportunities for solitude and primitive recreation.

11 National Forest System trails that access wilderness are part of a high-quality wilderness experience for visitors.

12 Human impacted areas and associated resource impacts are not expanding into nearby unimpacted areas.

13 User-created trails do not negatively impact wilderness character.

14 Commercial uses (outfitter and guiding) of wilderness provide wilderness appropriate recreation access.

Goal (DA-GO-HUW)

01 Stewardship and management of the High Uintas Wilderness is coordinated between the managing national forests (Ashley National Forest and Uinta-Wasatch-Cache National Forest).

Standards (DA-ST-HUW)

01 New or reconstructed trails shall not be designed to trail class 5 within the wilderness.

02 Administrative authorizations for use of motor vehicles, motorized equipment or mechanical transport shall be limited to the minimum necessary for the purposes of the 1964 Wilderness Act and the 1984 Utah Wilderness Act.

03 Construction of new roads shall not be allowed.

04 Energy and utility corridors shall not be allowed.

05 Recreation events shall not be allowed.

Guidelines (DA-GL-HUW)

01 New or rerouted trails in wilderness shall be located in resilient areas and not cause impacts to at-risk species, water quality, soils, hydrologic connectivity, or cultural resources unless an alternative location is not feasible and trail structures can minimize impacts.

02 New bridges or structures should use native, rustic or natural-appearing materials, and structures should be designed for resource protection and to preserve wilderness character, not for visitor convenience.

Proposed Ashley Karst National Recreation and Geologic Area

This is a placeholder for a potential area currently being proposed on the Ashley National Forest. The purposes of the area are to conserve and protect the watershed, geological, recreational, wildlife, scenic, natural, cultural, and historic resources of the area under U.S. Senate Bill 47, Section 1117. No plan components have been developed at this time nor will they be until official enactment.

Eligible and Suitable Wild and Scenic Rivers

A wild and scenic river eligibility study was conducted for the Ashley National Forest in 2005, and a suitability study report was completed in 2008. None of the river segments previously evaluated for eligibility in 2005 and suitability in 2008 were reevaluated as part of the Ashley National Forest plan revision process. Two river segments were identified as suitable in 2008:

- Green River below the Flaming Gorge Dam (13 miles, scenic classification)
- Upper Uinta River - including Gilbert Creek, Center Fork, and Painter Draw (40 miles, wild classification)

The Wild and Scenic Rivers Act requires the identification and evaluation of additional potential rivers for inclusion in the National Wild and Scenic Rivers System during planning (section 5(d)(1) of the Act). The criteria for the river segments for which eligibility studies are conducted changed since the time of the 2005 wild and scenic river eligibility study from any named waterway on a 1:100,000 scale map to named rivers on a 7.5 minute U.S. Geological Survey map. The Ashley National Forest identified 40 river segments that meet the new criteria that were not evaluated in the 2005 study. Of these, four have been identified as eligible.

These designated areas include river segments that have been identified as eligible, but for which a suitability determination has not been made, and river segments that have been identified as suitable, and for which preliminary administrative recommendation has been made for inclusion in the National Wild and Scenic Rivers System. The revised forest plan will include interim protection measures for these designated areas to protect the characteristics and values for which the river segments were found to be eligible and suitable, until Congress can act on recommendations of suitable segments or river segments are found not to be suitable. The designated area extends one-quarter mile on both sides of the river segment to protect the river-related values. See appendix D, figure 7 for locations of suitable wild and scenic rivers.

Desired Conditions (DA-DC-WSR)

01 Eligible and suitable wild, scenic, or recreational rivers retain their free-flowing status and tentative or final classification, and the outstandingly remarkable values for which they have been identified.

Guideline (DA-GL-WSR)

01 The following table describes protection measures applied to interim management of eligible or suitable wild, scenic, or recreation rivers.

Table 16. Interim protection measures for management of eligible or suitable wild, scenic, or recreational rivers.

Type of Project or Activity	Interim Protection Measures
Water Resource Projects (dams, diversions, flood control, activities that affect free flow)	**Wild, Scenic, and Recreational Rivers:** Water resource projects on Forest Service-identified eligible or suitable rivers, shall be analyzed as to their effect on a river's free-flow, water quality, and outstandingly remarkable values, with adverse effects to the extent of existing agency authorities (such as special-use authority).
Hydroelectirc Power Facilities	**Wild, Scenic, and Recreational Rivers:** Forest Service-identified eligible rivers are to be protected pending a suitability determination. Forest Service-identified suitable rivers are to be protected for their free-flowing condition, water quality, and outstandingly remarkable values pending a designation by Congress.
Locatable Minerals	**Wild, Scenic, and Recreational Rivers:** Existing or new mining activity on a Forest Service-identified eligible or suitable river are subject to regulations in 36 CFR part 228 and must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impairment.
Leasable Minerals	**For all eligible or suitable rivers,** leases, licenses, and permits under mineral leasing laws must include conditions necessary to protect the values of the river corridor that make it eligible or suitable for inclusion in the National System.
Saleable Minerals	**Wild Rivers:** For all eligible or suitable rivers disposal of saleable mineral material is prohibited. **Scenic and Recreational Rivers:** For all eligible or suitable rivers saleable mineral material disposal is allowed if the values for which the river may be included in the National System are protected.
Transportation System	**Wild Rivers:** Roads and railroads are generally not compatible. Prevent action related to the road system that would preclude protection of the river as wild. Do not plan roads outside of the corridor that would adversely affect the wild classification. New trail construction should generally be designed for nonmotorized uses. New airfields may not be developed. **Scenic Rivers:** Roads and railroads may parallel the river for short segments or bridge the river if such construction protects the river values, including the free flowing character. Bridge crossings and access points are allowed. New trails construction and new airfield development must be compatible with and fully protect identified values. **Recreational Rivers:** Roads and railroads are permitted to parallel the river if such construction fully protects outstanding remarkable river values, including the free flowing character. Bridge crossing and access points are allowed. New trail construction and new airfield development must be compatible and fully protect river outstanding remarkable values.

Type of Project or Activity	Interim Protection Measures
Utility Proposals	**Wild, Scenic, and Recreational Rivers:** New transmission lines such as gas lines, water line, and similar linear features are not compatible with eligible wild and scenic rivers and are discouraged. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-or-way would be necessary for a utility line, the proposed project must be evaluated as to its effect on the river's outstandingly remarkable values and classification. Any portion of a utility proposal that has the potential to affect the river's free-flowing character must be evaluated as a water resources project.
Recreation Developments	**Wild Rivers:** Major public use areas such as large campgrounds, interpretive centers, or administrative headquarters must be located outside of the river corridor (typically ¼ mile either side of the river). Minimum facilities such as toilets and refuse containers may be provided to protect and enhance water quality and other river values. Facilities must be located and designed to harmonize with the primate character, must protect river values, and must be screened from view to the extent possible. **Scenic Rivers:** Public facilities, such as moderate sized campgrounds, simple sanitation and convenience facilities, public information centers, administration sites, and river access developments are allowed. Facilities must be located and designed to harmonize with the natural and cultural settings, must protect river values, including water quality, and must be screened from view to the extent possible. **Recreational Rivers:** Recreation, administration, and river access facilities may be located in close proximity to the river. Facilities must be located and designed to harmonize with the natural and cultural settings, must protect river values, including water quality, and must be screened from view to the extent possible.
Motorized Travel	Motorized travel on land or water may be permitted but is generally not compatible. Where motorized travel is deemed necessary, uses should be carefully defined and impacts mitigated. **Scenic and Recreational Rivers:** Motorized travel on land or water may be permitted, prohibited, or restricted to protect identified river values.
Wildlife and Fish Projects	**Wild Rivers:** Construction of minor structures and vegetation management to protect and enhance wildlife and fish habitat should harmonize with the area's primitive character and protect identified river values. Any portion of a proposed wildlife or fisheries restoration or enhancement projects that have potential to affect the rivers free-flowing character must be evaluated as water resource project. **Scenic Rivers:** Construction of structures and vegetation management designed to protect and enhance wildlife and fish habitat should harmonize with the area's largely undeveloped character and protect identified river values. Any portion of a proposed wildlife or fisheries restoration or enhancement projects that have potential to affect the rivers free-flowing character must be evaluated as water resource project. **Recreational Rivers:** Construction of structures and vegetation management designed to protect and enhance wildlife and fish habitat should fully protect identified river values. Any portion of a proposed wildlife or fisheries restoration or enhancement projects that have potential to affect the rivers free-flowing character must be evaluated as water resource project.
Vegetation Management	**Wild Rivers:** Cutting of trees and other vegetation is not permitted except when needed in association with a primitive recreation experience, to protect users, or to protect identified outstandingly remarkable values. **Scenic and Recreational Rivers:** A range of vegetation management and timber harvest practices are allowed, if these practices are designed to protect users, protect, restore, or enhance the river environment, including the long-term scenic character.

Type of Project or Activity	Interim Protection Measures
Domestic Livestock Grazing	**Wild Rivers:** Domestic livestock grazing should be managed to protect identified river values. Existing structures may be maintained. New facilities may be developed to facilitate livestock management so long as they maintain the values for which a river was found eligible or suitable including the area's essentially primitive character. **Scenic Rivers:** Domestic livestock grazing should be managed to protect outstanding remarkable values. Existing structures may be maintained. New facilities may be developed so long as they maintain the values for which a river was eligible or suitable, including the areas' largely undeveloped character. **Recreational Rivers:** Domestic livestock grazing should be managed to protect identified river values. Existing structures may be maintained. New facilities may be developed to facilitate livestock management so long as they maintain the values for which a river was found eligible or suitable.

National Scenic Byways

The Ashley National Forest contains segments of two national scenic byways: Flaming Gorge-Uintas Scenic Byway and the Dinosaur Diamond Scenic Byway. Scenic byways are designated to recognize one or more of six intrinsic qualities: archeological, cultural, historic, natural, recreational, and scenic.

Desired Conditions (DA-DC-NSB)

01 The intrinsic qualities for which the national scenic byways were designated are retained.

Inventoried Roadless Areas

The 2001 Roadless Area Conservation Rule (Roadless Rule) established prohibitions and exceptions on road construction, road reconstruction, and timber harvesting on 58.5 million acres of National Forest System lands across the United States. This includes approximately 795,950 acres of inventoried roadless areas on the Ashley National Forest. The intent of the Roadless Rule is to provide lasting protection for inventoried roadless areas within the National Forest System in the context of multiple-use management. Specifically, the Roadless Rule prohibits activities that have the greatest likelihood of altering and fragmenting landscapes. These activities result in immediate, long-term loss of roadless area values and characteristics.

Inventoried roadless areas are identified in a set of inventoried roadless area maps in Forest Service Roadless Area Conservation, Volume 2 (November 2000), which are held at the national headquarters office of the Forest Service, or in any subsequent update or revisions of those maps.[12] Maps of the inventoried roadless areas can be found in appendix D. Management activities follows direction found in the 2001 Roadless Rule.

The approximately 795,950 acres of lands within inventoried roadless areas constitute approximately 57.5 percent of the Ashley National Forest. Table 17 identifies each inventoried roadless area and the number of acres of the inventoried roadless area. Appendix D, Figure 8 shows the location of roadless areas on the Ashley.

[12] 36 CFR 294 subpart B, published at 66 Federal Register 3244–3273

Desired Conditions (DA-DC-IRA)

01 Inventoried roadless areas provide remote primitive and semi-primitive recreation opportunities. A diversity of recreation opportunities are available, including both motorized and nonmotorized trail opportunities.

02 Ecological restoration and enhancement activities are encouraged in inventoried roadless areas. These activities include forest health improvements, wildlife habitat enhancements, fuels reductions, trail maintenance and improvements, and range improvements.

Suitability (DA-SUIT-IRA)

01 Inventoried roadless areas are not suitable for timber production. Timber harvest may be allowed for other resource benefits consistent with the 2001 Roadless Area Conservation Rule.

02 Inventoried roadless areas are not suitable for road reconstruction or new road construction; exceptions are listed in the 2001 Roadless Area Conservation Rule.

Table 17. Inventoried roadless areas as measured by acres

Inventoried Roadless Area	Acres
0401001	11,705
0401002	36,150
0401003	5,111
0401004	10,509
0401005	38,929
0401006	7,645
0401007	16,483
0401008	15,615
0401009	30,378
0401010	21,886
0401011	30,134
0401012	46,414
0401013	11,910
0401014	26,904
0401015	14,423
0401016	5,695
0401018	6,157
0401019	6,202

Inventoried Roadless Area	Acres
0401021	5,152
0401023	8,393
0401024	12,882
0401025	1,471
0401026	398
0401027	7,312
0401028	446
0401029	6,718
0401030	531
0401031	7,110
0401032	6,471
0401034	967
0401035	5,465
0401036	6,309
0401037	1,166
0418033	24,909
0419020	355,768
0419022	2,232

Research Natural Areas

The Ashley National Forest has seven existing research natural areas, which total approximately 6,230 acres (table 18). These research natural areas are part of a national network of ecological areas. The areas are designated in perpetuity for research, education, and/or to maintain biological diversity of national forest lands. The areas serve as baseline areas for non-manipulative research, observation, and study. Appendix D, Figure 8 shows the location of research natural areas on the Ashley

Forest Service Manual 4063, applicable Forest Service decisions, and research natural area establishment records provide management guidance for these areas. Research natural areas are cooperatively managed with the Rocky Mountain Research Station. All proposals for research or management activities in research natural areas need to follow direction outlined in Forest Service Manual 4063, and must be approved by the Rocky Mountain Research Station Director. All proposals for research in research natural areas in wilderness areas need also to follow direction outlined in Forest Service Manual 2323.

Table 18. Research natural areas described

Research Natural Area	Year Established	Acres	Features
Ashley Gorge	1996	874	Blue spruce, lodgepole pine, and aspen woodlands; shrub lands with mountain mahogany and snowberry; moderate-gradient perennial stream; rare plant.
Gates of Birch Creek	1988	269	Steep slope forests of Douglas-fir and lodgepole pine; hogback and water gap landforms.
Lance Canyon	1996	234	Douglas-fir and pinyon pine woodlands; outstanding occurrence of Salina wildrye grassland community; big sagebrush shrub land with bluebunch wheatgrass.
Pollen Lake	1987	1,090	Subalpine fir and Engelmann spruce forest and krummholz; alpine turf communities on shallow rocky soil; lake and wetlands in cirque basin; rare plants.
Sims Peak Potholes	1991	1,006	Seral lodgepole pine with subalpine fir and Engelmann spruce understory; sedge dominated pothole wetlands; rare plant.
Timber-Cow Ridge	1996	571	Open Douglas-fir and ponderosa pine woodlands with abundant curlleaf mountain mahogany; juniper pinyon pine woodlands.
Uinta Shale Creek	1996	2,186	Subalpine fir and Engelmann spruce forest and krummholz; alpine turf communities; cirque basins draining into moist forest-meadow complexes.

Desired Conditions (DA-DC-RNA)

01 Research natural areas provide opportunities for research, study, observation, and monitoring of naturally occurring ecological processes.

02 Ecological processes that drive the functional and structural patterns of research natural area ecosystems are present and functioning to support sustainability and resiliency.

Management Areas

Historical Management Areas (MA)

These management areas are specific areas or features within the Ashley National Forest that have been given a designation to maintain unique character, purpose, or management emphasis. Several of the areas on the Ashley National Forest have a historic interest and are officially designated on the National Register of Historic Places

See Appendix D, figure 9 for a map showing locations of the following historic management areas.

Swett Ranch

Swett Ranch was a homestead farm and ranch built and operated by Oscar and Emma Swett, from 1909 to 1969. The ranch serves as an excellent example of a historic homestead that used horse and manual labor prior to the introduction of motorized equipment and vehicles. Swett Ranch is listed on the National Register of Historic Places.

Desired Conditions (MA-DC-SR)

01 The Swett Ranch buildings and landscape are intact and safe in order to provide a historically accurate representation of an early 20th century homestead and ranch complex.

02 The Swett Ranch historic site provides opportunities and information for visitors to learn about the past and to gain a greater appreciation of the history of Ashley National Forest.

Ute Mountain Fire Lookout Tower

The Ute Mountain Fire Lookout Tower was built by the Civilian Conservation Corps between 1935 and 1937. It served as a fire lookout for the North Slope of the Uinta Mountains and served as the fire lookout's living quarters (30 feet above the ground with a 14 foot by 14 foot cab). The Ute Tower is listed on the National Register of Historic Places and is the last standing historic fire tower in the state of Utah.

Desired Conditions (MA-DC-UML)

01 The Ute Fire Tower is intact and safe and provides a historically accurate representation of a 20th century Civilian Conservation Corps constructed fire tower.

02 The Ute Fire Tower provides opportunities and information for visitors to learn about the past and to gain a greater appreciation of the history of Ashley National Forest.

Historic Ranger Stations

Forest Service ranger stations were positioned throughout the Ashley National Forest and served as offices and living quarters for the Ashley National Forest's earliest rangers. Today, many of the ranger stations and guard stations have been converted to recreational rental cabins and provide visitors with a comfortable and rustic way to enjoy their visit to the Ashley National Forest. Several of the Ranger Stations are listed on National Register of Historic Places.

Desired Conditions (MA-DC-HRS)

01 Historic ranger stations provide historically accurate representations of early Forest Service administrative structures.

02 Historic ranger stations provide opportunities for visitors to learn about the past and to gain a greater appreciation of the history of Ashley National Forest.

Carter Military Road

The Carter Military Road was built between 1881 and 1882 as an Army supply route between Fort Bridger, Wyoming and Fort Thornburgh in northeastern Utah. The road provided the primary access across the Uinta Mountains until the 1920s, when automobile

routes were developed on the eastern flanks of the Uinta Mountains. The Carter Military Road is listed on the National Register of Historic Places.

Desired Conditions (MA-DC-CMR)

01 The Carter Military Road is able to provide a historic representation of a 19th century military constructed road.

02 The Carter Military Road provides opportunities for visitors to experience and use a historic 19th century military road and to gain a greater appreciation of the history of Ashley National Forest.

Recreation Management Areas

Recreation management areas are locations on the Ashley National Forest where similar types and levels of recreation occur. The nonwilderness lands on the Ashley National Forest are divided into three recreation management areas; Destination Recreation Area, General Recreation Area, and Backcountry Recreation Area. These three areas identify recreation settings and opportunities. See Appendix D, figure 9 for a map showing locations of recreation management areas on the Ashley.

Table 19. Types of recreation management areas and their acreages

RMA	Type	Acres
DRA	Destination Recreation Area	29,209
GRA	General Recreation Area	670,036
BRA	Backcountry Recreation Area	404,417

Destination Recreation Area

The Destination Recreation Management Area provides the most intensive recreation development within the Ashley National Forest. Well-known attractions and iconic destinations create a high demand for recreation experiences at specific locations (areas such as the Red Canyon Corridor, Moon Lake, Cedar Springs, Mustang Ridge, and the Lucerne Peninsula). These places, along with the close proximity to other attractions make these destinations highly desirable to many visitors. The public should expect areas of high-density recreation activity, with high use levels. In winter, portions of this area provide facilities for winter uses, such as ice fishing and cross-country skiing. Recreationists are attracted to this setting because of the variety of opportunities. Motorized access and support facilities (roads, parking lots, water access and boating support services, campgrounds, resorts, and marinas) are emphasized. The summer recreation opportunity spectrum setting is primarily rural and roaded natural.

Desired Conditions (MA-DC-RMADRA)

01 The developed recreation facilities footprint within the destination recreation area is visually appealing and well maintained.

02 A natural-appearing landscape is retained outside the developed recreation facility footprint.

03 National Forest System roads and trails provide users relatively easy access to destinations.

04 The area provides amenities and sustainable infrastructure to support a variety of recreation activities in close proximity to each other.

05 Available infrastructure and amenities are consistent with use capacity.

06 Interpretation and education activities provide learning opportunities to visitors about the natural and cultural environment and responsible visitor behavior.

Objectives (MA-OB-RMADRA)

01 Chip seal or slurry seal 2 miles of roads within the Destination Recreation Area every 5 years, if road conditions warrant maintenance.

02 Improve facilities and infrastructure at five developed campgrounds every 10 years for the life of the plan, emphasizing areas with higher use and in a deteriorated condition.

Suitability (MA-SU-RMADRA)

01 Destination Recreation Areas are suitable for wheeled motorized travel consistent with the desired recreation opportunity spectrum settings as assigned and on designated roads, trails, and areas.

General Recreation Area

This management area is where the concept of multiple use is most evident. It is the working landscape where dispersed and developed recreation, fuelwood gathering, vegetation management, livestock grazing, electrical transmission infrastructure, communication sites, and oil and gas production may occur. People should expect to see a variety of ecosystem-conservation management activities and some lands modified to meet multiple-use objectives. A broad spectrum of landscapes, activities, and uses are included, ranging from relatively unaltered lands to areas of active management for purposes of meeting a variety of social, economic, and ecological objectives. Small pockets of concentrated use may exist, but these do not dominate the landscape. In summer dispersed recreation, camping outside a developed campground, off-highway vehicle riding, and motorized water recreation are the most popular uses. Popular areas of use in the General Recreation Area include:

- dispersed camping on the east side of Highway 191, Taylor Mountain, Iron Springs, Dry Gulch, and Hickerson Park Road;
- off-highway vehicle riding in the east side of the Vernal Ranger District, including the Outlaw Trail, Hickerson Park Road area, Flaming Gorge shoreline, and the Yellowstone all-terrain vehicle trail, and
- the Flaming Gorge Reservoir for motorized water recreation.

Winter uses within this management area includes facilities and infrastructure that support winter recreation uses such as snowmobiling, cross-country skiing, and ice fishing. These facilities include trailheads, boat ramps, parking lots, and groomed trails. The summer recreation opportunity spectrum settings are primarily roaded-natural and semi-primitive motorized.

Desired Conditions (MA-DC-RMAGRA)

01 In this management area, there are some developed recreation facilities but a majority of the area has limited amenities, signs, and developments.

02 Where developed facilities are present, they are aesthetically incorporated into the landscape. Scenic integrity is maintained at or enhanced from current conditions.

03 Places for people seeking natural scenery and solitude are available in some areas. In other areas, motorized and nonmotorized recreation opportunities are easily accessed by roads and water access, and visitors can expect encounters with others. In other areas, motorized access is challenging and visitors can expect few encounters with others.

04 A mosaic of vegetation conditions is often present with some areas showing the effects of past management activities and other areas appearing predominantly natural.

05 The management area offers opportunities for expansion of recreational opportunities.

06 There is a network of motorized routes from easy to challenging.

07 Conflicts between different uses are infrequent.

08 As new forms of recreation activities emerge, recreation settings retain their natural character.

Objectives (MA-OB-RMAGRA)

01 Provide five new dispersed camping docks on the shoreline of the Flaming Gorge Reservoir within 10 years of plan approval if funding is available.

02 Construct 10 miles of designed use mountain bike over the life of the plan if local user groups or partnerships are identified to conduct annual trail maintenance.

03 Improve 1 mile of road to dispersed camping sites every 3 years if road improvements are found to be necessary.

04 Construct two off-highway vehicle loop trails (no more than 60 inches wide) within 10 years of plan approval if local user groups or partnerships are identified to conduct annual trail maintenance.

05 Convert 10 miles of National Forest System 50-inch-wide or narrower off-highway vehicle trails to no more than 60 inches wide within 5 years of plan approval, through cooperation with local motorized use groups to identify trails that have the highest use by side-by-side off-highway vehicles and identified trails can be converted without resulting resource issues.

06 Improve 2 miles of motorized trails every 3 years if local user groups are available to assist in improvement work.

Goals (MA-GO-RMAGRA)

01 Local user groups and volunteers are used to identify needed maintenance and improvements and to maintain and improve motorized and nonmotorized trails.

Suitability (MA-SU-RMADRA)

01 The General Recreation Area is suitable for wheeled motorized travel consistent within desired the recreation opportunity spectrum settings as assigned and on designated roads, trails, and areas.

Backcountry Recreation Area

This management area provides large undeveloped landscapes suited for dispersed summer recreation use. These areas include the more remote parts of the Ashley National Forest and access can be challenging. The public should expect to see natural landscapes with few amenities, limited management, lower visitor use and density levels, and limited Forest Service presence. Nonmotorized recreation is often challenging due to terrain and low density of trails. Popular recreation locations in the Backcountry Recreation Area are Dry Fork Canyon, the Green River below the Flaming Gorge Dam, Chepeta Lake area, Leidy Peak area, and the mountain lakes on the north slope of the Uinta Mountains between Browne Lake and Spirit Lake. The summer recreation opportunity spectrum settings in these areas are semi-primitive nonmotorized, and primitive classes to support remote recreation pursuits that require less dependence on development.

Desired Conditions (MA-DC-RMABRA)

01 The landscape provides opportunities for challenging and remote recreation experiences.

02 The area contributes to ecosystem and species diversity and sustainability, serve as habitat for fauna and flora, and offer wildlife corridors. The area provides a diversity of terrestrial and aquatic habitats, and support species dependent on large areas of land.

03 A mosaic of vegetation conditions is often present, with some areas showing the effects of past management activities, and other areas appearing predominantly natural.

04 Management that supports recreation activities is minimal.

05 There is a lower density of infrastructure and trails.

06 Nonmotorized trails accommodate use by hikers, equestrians, mountain bikes, and other nonmotorized activities.

07 Conflicts between different recreation uses are infrequent.

08 There are vast areas for nonmotorized cross-country travel, offering visitors opportunities for exploration and challenge in summer.

Objectives (MA-OB-RMABRA)

01 Improve 7 miles of the Little Hole National Recreation Trail for safety, resource protection, and increased user access during the life of the plan if funding is available.

02 Improve 5 miles of existing nonmotorized National Forest System trails for mountain bike use every 5 years over the life of the plan if user groups are available to assist in improvement work.

Suitability (MA-SU-RMABRA)

01 The Backcountry Recreation Area is suitable for wheeled motorized travel consistent within desired recreation opportunity spectrum settings as assigned and on designated roads, trails, and areas, but motorized trails are a minimal part of the trail network.

02 The Backcountry Recreation Area is suitable for mechanized transport (such as mountain bikes).

Protection Fire Management Area

To further characterize the landscape as it pertains to strategic fire management guidance, the following Protection Fire Management Area is delineated to spatially guide and prioritize the management of wildland fire and fuels reduction treatments to work with our cooperators toward achieving desired conditions. See Appendix D, figure 10 for a map showing locations of Protection Fire Management Areas.

Specifically, this area has hazardous fuel conditions that currently put communities, infrastructure, and natural resource assets at risk of damage from wildfire. Wildfire is suppressed under most conditions due to the potential economic loss and public safety concerns posed by a wildfire. Wildfire education and mitigation, hazardous fuel reduction treatments and fire protection is necessary to reduce the impacts to values. Coordination with cooperators will emphasize reducing fire risk and creating fire-adapted communities and fire resilient landscapes that are less reliant on aggressive wildfire suppression.

As a result, this area will have a consistent decision-making methodology for pre-assessing areas for wildland fire risk and benefits. Factors that will change wildfire risk include changes in vegetation and fuels conditions from restoration treatments and wildfires, new or changing communities, assets or natural resource values and hazardous fuels treatments.

Desired Conditions (MA-DC-PFMA)

01 Where permanent infrastructure, structures, communities and other high valued resources limit the use of wildland fire, fuel accumulations promote safe, effective fire management opportunities.

02 The Ashley's engagement with communities adjacent to the national forest contributes to the ability of those communities to be resilient to fire.

03 Where wildfire has the potential to affect lands outside the national forest, multi-agency wildfire management decisions include incident response planning that involve effective, efficient risk based wildfire management decisions and considers input from communities and multiple stakeholders.

04 Hazardous fuel reduction activities protect social, economic, and ecological values at risk from high-severity fire effects. Hazardous fuel treatments adjacent to values at risk are prioritized to produce fire resilient landscapes.

Objectives (MA-OBJ-PFMA)

01 Wildfire mitigation planning will partition wildfire risk within firesheds among major land ownerships according to mitigation capability. In locations where wildfire risk transmission and risk mitigation potential coincide, provide an annual prioritization for those areas where the most significant opportunities exist for reducing wildfire risk.

02 During the first 5 years of the plan, promote collaboration with private industry and outside interests to increase the percentage of fire resilient landscapes within the Protection Fire Management Area. Annually treat a minimum of 1,000 to 3,000 acres (based on current funding and capacity).

Guidelines (MA-GL-PFMA)

01 In the Protection Fire Management Area, if assurances can be made for public safety, managers should consider using fire to achieve management objectives.

02 Where firefighters are likely to work in close proximity to structures, administration sites, permitted infrastructure, and along primary travel corridors, hazard trees are mitigated to maximize firefighter safety and minimize the likelihood of spotting.

03 Fuel treatments should result in low flame lengths based on 90 percentile weather conditions in order to provide protection of highly valued resources and assets, and firefighter and public safety. Treatments will focus on reducing fuel loadings that may deviate from other resource requirements to meet the desired fire behavior characteristics.

Chapter 4. Plan Monitoring Program

Introduction

Plan monitoring provides the feedback for the Ashley National Forest planning cycle. Monitoring tests assumptions and evaluates effects of management practices. Monitoring information should enable the Ashley National Forest to determine if a change in plan components, or other plan management guidance, may be needed. Monitoring allows adaptive management if changes need to be made. Direction for the monitoring and evaluation of forest plans is found under the 2012 Planning Rule at 36 CFR 219.12 and in the directives at 1909.12, Chapter 30.

The plan monitoring program addresses the most critical components for informed management of the Ashley National Forest's resources, within the financial and technical capability of the agency. Every monitoring question links to one or more desired conditions, objectives, standards, or guidelines. However, not every plan component has a corresponding monitoring question.

This monitoring program is neither intended to depict all monitoring, inventorying, and data gathering done on the Ashley National Forest nor to limit monitoring to just the questions and indicators listed in table 20. The intention is to improve the forest plan or our management under the forest plan. In addition, project and activity monitoring may be used to gather information for plan monitoring if it will provide relevant information to inform adaptive management. Consideration and coordination will increase efficiencies and help track changing conditions beyond the Ashley National Forest. Coordination and consideration are done within the boundaries with broad-scale monitoring, multi-party collaboration, and cooperation with government agencies where practical.

The monitoring program sets out the plan monitoring questions and associated indicators. The program consists of a monitoring guide (being developed) and a biennial monitoring evaluation report. The monitoring guide will provide detailed information on the monitoring questions, indicators, frequency and reliability, data sources and storage, and cost. An interdisciplinary team will develop a biennial monitoring evaluation report. The report will summarize the results of completed monitoring, evaluate the data, consider relevant information from broad-scale or other monitoring efforts; and make recommendations to the responsible official. The monitoring evaluation report will indicate whether a change to the forest plan, management activities, or the monitoring program is warranted, or whether a new assessment may be warranted based on new information. The monitoring evaluation report is used to inform adaptive management of the plan area and will be made available to the public.

Some kinds of monitoring indicators will require longer time frames for thorough evaluation of results, but a biennial review of what information has been collected will ensure timely evaluation to inform planning. The biennial monitoring evaluation does not need to evaluate all questions or indicators on a biennial basis. However, the evaluation must focus on new data and results that provide new information. The new information can regard management effectiveness; progress towards meeting desired conditions, objectives, and other plan components; changing conditions; or validation (or invalidation) of assumptions.

The following monitoring table (table 20) is organized to display the plan components that drive the monitoring question(s) and the indicator(s) for answering the monitoring question. Monitoring questions are used to evaluate whether management is maintaining or moving toward or away from desired conditions. Indicators are the specific resource measures used in answering the monitoring questions. In general, each forest plan component listed is the primary direction being addressed by the monitoring question.

Monitoring Table

Table 20 (spanning subsequent pages) outlines key monitoring questions for select plan components and indicators. The final planning documents will have a more detailed monitoring guide.

Required monitoring items from 36 CFR 219.12(a)(5) are listed as follows. Numbers that apply are listed in table 20.

1. Status of select watershed conditions
2. Status of select ecological conditions including key characteristics of terrestrial and aquatic ecosystems
3. Status of focal species to assess the ecological conditions required under 36 CFR 219.9
4. Status of select set of the ecological conditions required under 36 CFR 219.9 to contribute to the recovery of threatened, endangered, and candidate species, and species of conservation concern
5. Status of visitor use, visitor satisfaction, and progress toward meeting recreation objectives
6. Measurable changes in the plan area related to climate change and other stressors that may be affecting the plan area
7. Progress toward meeting the desired conditions and objectives in the plan
8. Effects of each management system to determine that they do not substantially and permanently impair productivity of the land (16 U.S.C. 1604(g)(3)(C).

Table 20. Key monitoring questions for select plan components and indicators

Topic	Monitoring Question	Indicator	Potential Data Sources
Terrestrial vegetation, at-risk plant species	Are ecological processes present and functioning in a manner that sustains ecological integrity and resiliency, and long-term persistence of at-risk species habitats	Vegetation composition based on resource values (RV). Total ground cover within 85% of potential. Plant species richness within range of variability. Conifer encroachment limited to 10% tree crown cover or less.	ANF Studies Inventory; At-Risk Species Database
Terrestrial ecosystems, forested vegetation	To what extent is forested vegetation trending toward desired conditions for vegetation structure and composition	Proportion (% of total acres) forestwide and by vegetation type (and LTA where applicable) for each of these indicators: a. Vegetation structure stage distribution b. Status of early seral species percent composition.	FSVEG Layer and VCMQ as it becomes available; FIA
Terrestrial vegetation, aspen	Is persistent aspen increasing, maintaining, or decreasing on the landscape	Acres of persistent aspen.	ANF Veg Layer; ANF Studies Inventory; Aerial Veg Mapping
Terrestrial vegetation, invasive and noxious plant species	Are invasive and/or noxious plant species expanding or decreasing over time	Presence or absence derived from vegetation composition.	ANF Studies Inventory; ANF Invasive Species GIS Dataset; FACTS Database
Terrestrial vegetation, invasive and noxious plant species	Are invasive and/or noxious plant species disrupting ecological processes and diminishing resiliency of native vegetation communities	Vegetation composition based on resource values (RV).	ANF Studies Inventory; Work with Partnerships
Terrestrial vegetation, non-forest vegetation	Are non-forest vegetation communities meeting or trending towards desired condition	Vegetation composition based on resource values (RV). Total ground cover within 85% of potential. Plant species richness within range of variability. Conifer encroachment limited to 10% tree crown cover or less.	ANF Studies Inventory
Heritage resources	Are heritage resources maintaining their ability to provide important information about history and prehistory	Percentage of heritage resources in good condition based on most recent condition assessment.	NRM Database
Heritage resources and visitor uses	To what extent are visitors experiencing developed heritage sites	Number of visitors visiting a developed heritage site.	NVUM
Tribal uses	To what extent is the Ashley staff coordinating and collaborating with Tribal Governments	Number of meetings between forest line officers and Tribal officers and staff.	Tribal Relations Tracking
Visitor use and recreation	What are the trends in visitation forestwide	Visitor number trends over time.	NVUM

Topic	Monitoring Question	Indicator	Potential Data Sources
Visitor use and recreation	Are visitors satisfied with forest developed recreation sites and signage	Visitor satisfaction as measured by NVUM.	NVUM
Scenery	What level of satisfaction do visitors express for scenery associated with the Ashley NF developed recreation sites	Visitor satisfaction as measured by NVUM.	NVUM
Fire/fuels	Is the frequency and severity of wildland fire within the natural range of variation	IND-VEGF: Acres burned by wildfire (and large prescribed fire) and by Fire Regime Group and Vegetation Condition Class.	MTBS; LANDFIRE
Fire/fuels	Are fuel treatments helping to protect high value resources and assets, and assisting with control and/or management of fires	IND-FIRE: Fuel treatment effectiveness. Acres prescribed fire and other fuel treatments to protect HVRAs. Number of fuel treatments helping control or manage fire. Number of fuel treatments that changed fire behavior Number of treatments strategically located to facilitate control and/or management of fire.	FACTS; WFDSS; FTEM
Fire/fuels	How will changes to vegetation composition, structure affect fire behavior characteristics	IND-FIRE: Acres of vegetation succession due to exclusion from wildland fire. Wildfire and fuel treated (prescribed burning, thinning, grazing) acres treated to change vertical and horizontal structure and changes associated with shade tolerant species.	FACTS; WFDSS; LANDFIRE
Lands	What is the progress toward reducing the potential for encroachment and trespass on Ashley NF lands	Number of miles of forest boundary surveyed and posted on an annual basis.	Boundary and Title Work Plan (regional team); data entry into TCEMS
Lands	Are land adjustments (conveyance, purchase, donation) improving the national forest ownership pattern to increase management efficiency	Number of acres conveyed or purchased and the benefitting resource (recreation, wildlife habitat, wetlands).	Lands Adjustment Team
Wildlife, TEPC species and species of conservation concern	Are vegetative communities that support TEPC and/or SCC in the plan area being maintained or improved	IND-WLTESC: Vegetative communities that are meeting or trending toward desired condition.	ANF Studies Inventory; UDWR range trend data
Wildlife, greater sage-grouse	Is occupied sage-grouse habitat in the plan area being maintained or improved	IND-WLSG: Acres of occupied sage-grouse habitat (e.g., nesting, brood-rearing and/or winter habitat).	State (Utah, Wyoming) wildlife monitoring data; ANF monitoring data
Wildlife, fringed myotis	Has white-nose syndrome been detected in bat populations within 50 miles of the plan area	IND-WLFM: White-nose syndrome detections in bat hibernacula	USFWS data and/or State (Utah or Wyoming) data

Topic	Monitoring Question	Indicator	Potential Data Sources
Wildlife, species of interest	Are vegetative communities that support SOI in the plan area being maintained or improved	IND-WLSOI: Vegetative communities that are meeting or trending toward desired condition.	ANF Studies Inventory and UDWR range trend data
Focal species, aspen	Are net total acres of persistent aspen being maintained	Acres of persistent aspen.	ANF Veg Layer; ANF Studies Inventory; Aerial Veg Mapping
Fisheries, Colorado River cutthroat trout	Is the amount of occupied stream and lake habitat in the plan area changing	IND-NFCRCT: Are stream habitats that support CRCT being maintained or improved? Are stream miles and lake acres occupied by CRCT stable, decreasing, or increasing?	State ANF stream habitat data (Utah) fisheries monitoring data
Soils	Is soil productivity being maintained or improved in timber management systems?	Presence of invasive plants. Ground cover composition. Surface soil structure. Detrimental soil disturbance. CWD and litter additions. Depth and consistency of soil" O" and "A" horizons. Erosion (sheet, rill, gully, pedestalling, deposition, mounds). Mass wasting (flows, slumps, slides).	Soil Pedon Descriptions. Soil Condition Evaluation Form (Region4). 1/10 Acre Ocular Plot for vegetation and surface cover. Forest Soil Disturbance Monitoring: Soil Disturbance Field Guide.
Soils	Is soil quality being maintained or improved so soil physical, biological, and chemical properties support ecosystem integrity and diversity?	Presence of invasive plants. Ground cover composition. Surface soil structure. Detrimental soil disturbance. CWD and litter additions. Depth and consistency of soil" O" and "A" horizons. Erosion (sheet, rill, gully, pedestalling, deposition, mounds). Mass wasting (flows, slumps, slides). Reclamation and seeding success. Fen/spring/wetland condition.	Soil Pedon Descriptions. Soil Condition Evaluation Form (Region 4). 1/10 Acre Ocular Plot for vegetation and surface cover. Forest Soil Disturbance Monitoring: Soil Disturbance Field Guide. Line-Point Intercept Transects. Oil/Gas Onsite Evaluations.
Watersheds	Are watersheds and water quality protected and moving toward desired conditions	Watershed Condition Framework indices and trends.	Watershed Condition ramework and other watershed scale assessments

Topic	Monitoring Question	Indicator	Potential Data Sources
Aquatics	Are water bodies being maintained or moving toward desired conditions	Trends in stream channel/habitat monitoring may include: key channel dimension, bank stability, substrate class, habitat complexity, residual pool depth, water quality, temperature. Population, distribution and condition trends of native and nonnative aquatic organisms. Trends in management barriers in aquatic migration. Acres/miles of stream habitat restored.	State and ANF fisheries and aquatic organism survey data; state and ANF water quality and stream habitat monitoring; WIT
Aquatics	Are wetland and riparian habitats being maintained or moving toward desired conditions	Trends in riparian and wetland surveys could include: greenline monitoring, riparian woody species monitoring, Level 1 GDE inventory, stream bank stability. Acres of restoration work within RMZs.	WIT; ANF studies inventory; GDE inventories; BMP monitoring
Air	Is air quality on the Ashley being maintained or moving toward desired conditions	Acres on forest within airsheds determined non-compliant with air quality standards. Nitrate and sulfate deposition trends.	EPA critical load mapper; NADP database; water quality, snowpack sampling; State/Uinta Basin ozone monitoring
Livestock grazing	Are allotments meeting Forest Plan or Allotment Management Plan utilization guidelines?	Utilization of key forage species (≤ 50% or other allowable use level in AMP), and stubble height (≤ 4 inch or other allowable use level in AMP) between greenline and bank-full streams systems.	ANF Studies Inventory, ANF utilization monitoring
Social and economic	To what extent is the Ashley providing goods and services (e.g., wilderness, fish and wildlife, recreation opportunities and access, timber, energy resources, livestock forage, infrastructure) to support the local and regional economy	Levels of goods and services provided by the Ashley National Forest including timber products (MMCF/tons); grazing (AUMs); recreation (visits); energy resources (leases and production levels); special uses (number of authorizations); access (miles of National Forest System roads and trails).	NVUM; NFRA; FACTS; SUDS; TIM
Social and economic	To what extent is the Ashley contributing to social and economic sustainability for local communities	Contribution of jobs and labor income from Forest Service management.	Forest use data from above and IMPLAN analysis
Social and economic	Are there changes in local demographics and economic characteristics that may be influencing the demand for forest contributions	Changes in area demographics and composition of local economy such as percent change in population size; percent change in poverty rate; percent change in unemployment rate; percent employment per industrial sector.	U.S. Census Bureau; U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics

Topic	Monitoring Question	Indicator	Potential Data Sources
Wilderness	Do management activities in designated wilderness preserve and protect wilderness character	Score on National Wilderness Stewardship Performance elements. Limits of acceptable change monitoring measures for the High Uintas Wilderness. Number and type of authorized motorized use and mechanized transport entry. Number and type of unauthorized motorized use and mechanized transport.	INFRA; WSP; LAC, Wilderness Character Monitoring Database
Recreation opportunity spectrum	Are the current recreation settings and opportunities meeting or moving toward desired recreation settings and opportunities	Management actions or activities that move toward desired recreation opportunity spectrum class characteristics.	NVUM
Scenery	Is the existing condition and trend or the scenic character meeting or moving toward desired conditions	Management actions or activities that move toward the desired scenic integrity objectives.	Means to quantify?
Partnerships and collaboration	To what degree is the national forest developing or using partnerships to provide additional capacity for visitor services	Number of agreements with partners, by activity type, that are supporting visitor services. Number and type of projects completed with partners. Number of grazing permittees that actively participate in rangeland monitoring.	Data on agreements and partnerships
Timber sustainability, [still being discussed and developed]	Is the harvest level exceeding the sustained yield prediction	TIM	Sustained yield versus annual sale volume

References

INFORMATION IS BEING ASSEMBLED & VERIFIED

Glossary

Active floodplain – Flood prone area; the zone bordering a stream subject to more frequent flooding (less than 50 year recurrence interval). General field interpretation of the active floodplain is the valley bottom up to an elevation twice the stream's maximum bankfull depth, measured at the thalweg.

At-risk species – Federally recognized threatened, endangered, proposed, and candidate species (and species of conservation concern within a plan area).

All-terrain vehicle (ATV) – A type of off-highway vehicle that travels on three or more low pressure tires; has handle-bar steering; is less than or equal to 50 inches in width; and has a seat designed to be straddled by the operator.

Alpine – High altitude areas (above approximately 11,200 feet) found above timberline, including their associated plant communities.

Aquifer – An underground layer of water-bearing permeable rock, rock fractures or unconsolidated material (gravel, sand or silt) from which groundwater can be extracted using a water well.

Aquatic organism passage – Provides the ability for fish and other aquatic creatures to move up and downstream under a road.

Aspen stand – Term used where numerous individual aspen clones have coalesced to form a continuous aspen community.

Bark beetle – Species of beetle, plays important role in forest ecology by creating complex early successional forest (ecosystems that occupy potentially forested sites after a stand-replacement disturbance and before re-establishment of a closed forest canopy). Bark beetles can attack and kill trees, but most live in dead, weakened or dying trees.

Biodiversity – The variety of life in an area, including the variety of gene pools, species, plant and animal communities, ecosystems, and the processes through which individual organisms interact with one another, and their environments.

Burn Severity – A qualitative assessment of the heat pulse directed toward the ground during a fire. Burn severity relates to canopy fuels (vegetation) burned and soil heating, large fuel and duff consumption, consumption of the litter and organic layer beneath trees and isolated shrubs, and mortality of buried plant parts.

Calcareous fen – A type of fen with high (alkaline) pH due to calcium concentration in the parent materials and water. These are rare wetlands on the Ashley National Forest.

Canopy cover – The percent of a fixed area covered by the crowns of plant species, these are usually trees or shrubs.

Capability – The potential of an area of land and/or water to produce resources, supply goods and services, and allow resource uses under a specified set of management practices and at a given level of management intensity.

Carbon Stocks – The quantity of carbon stored within soils, vegetation (live and dead), and wood products.

Classification – Identification of the class (wild, scenic, or recreational) that appropriately describes an eligible river or river segment, based on the criteria established in section 2(b) of the Wild and Scenic Rivers Act.

Clearcutting – A regeneration harvest method that removes essentially all trees in a stand producing a fully exposed microclimate for the development of a new age class of trees. A clearcut may or may not have reserve trees left to attain goals other than regeneration.

Coarse woody debris – A piece or pieces of larger sized dead woody material (for example, dead boles, limbs, and large root masses) on the ground or in streams.

Commercial thinning – Any type of thinning producing merchantable material at least equal to the value of the direct cost of harvesting.

Community Wildfire Protection Plan (CWPP) – A plan developed in the collaborative framework that prioritizes areas for hazardous fuel (vegetation) reduction treatments. The plan also recommends the types and methods of treatment on Federal and non-Federal land that will protect one or more at-risk communities and essential infrastructure. The plan also recommends measures to reduce structural ignitability throughout the at-risk community. A CWPP may address issues such as wildfire response, hazard mitigation, community preparedness, or structure protection - or all of the above.

Compaction – A compression of soil resulting in an increase in soil bulk density and a decrease in soil porosity and infiltration. Compaction is commonly due to the weight and vibration of equipment, or other traffic on the soil and can commonly impact soil 2 to 12 inches below the surface. Compaction changes or destroys soil structure, reduces infiltration, inhibits water movement, and lowers the air and water holding capacity of the soil.

Composition (stand) – The proportion of each tree species in a stand expressed as a percentage of the total number, basal area, or volume of all tree species in the stand.

Conservation – The protection, preservation, management, or restoration of natural environments, ecological communities, and species.

Corridor – A linear strip of land identified for the present or future location of transportation or utility rights-of-way within its boundaries. It can also be identified for wildlife habitat connecting, or protecting forest resources.

Cover – The elements of the environment used by an animal for hiding.

Culvert – Drain or waterway crossing under a road or railroad.

Decommission – Demolition, dismantling, removal, obliteration and/or disposal of a deteriorated or otherwise unneeded asset or component, including necessary restoration and cleanup work.

Detrimental Soil Disturbance – A degradation of soil condition that alters the productivity and hydrologic function of a soil. Detrimental soil disturbance is defined by soil displacement, soil compaction, soil puddling, severely burned soil, and soil erosion.

Developed recreation – Recreation use or opportunities occurring at developed sites.

Developed recreation site – A discrete place containing a concentration of facilities and services used to provide recreation opportunities to the public and evidencing a significant

investment in facilities and management under the direction of an administrative unit in the National Forest System

Dispersed recreation – Any recreation activity outside of a developed recreation site

Displacement – The movement of soil from one place to another by physical forces, including mechanical (equipment) and human or animal traffic.

Disturbance – Any relatively discrete event in time that disrupts ecosystem, watershed, community, or species population structure and/or function and changes resources, substrate availability, or the physical environment.

Disturbance regime – A description of the characteristic types of disturbance on a given landscape; the frequency, severity, and size distribution of these characteristic disturbance types; and their interactions.

Diversity of plant and animal communities – The distribution and relative abundance or extent of plant and animal communities and their component species, including tree in an area.

Easement – Permissions the Forest Service give another party to use National Forest land for a specific purpose (like a private landowner needing to build a road across national forest land to the to their property).

Ecological conditions – The biological and physical environment that affect the diversity, persistence, and productivity of plant and animal communities.

Ecological integrity – The quality or condition of an ecosystem when its dominant ecological characteristics (for example, composition, structure, function, connectivity, and species composition and diversity) occur within the natural range of variation and can withstand and recover from most perturbations imposed by natural environmental dynamics or human influence.

Ecological processes – The physical, chemical, and biological actions or events that link organisms and their environment. Processes include water cycle, nutrient cycling, disturbance response, composition and structural succession.

Ecosystem – A community of living organisms, in conjunction with non-living components of their environment (air, water, mineral soil), interacting as a system. An ecosystem is commonly described in terms of composition, structure, function, and connectivity.

Endangered species – Any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insect determined by the Secretary to constitute a pest whose protection under the provisions of this Act would present an overwhelming and overriding risk to man.

Energy resources – Renewable (solar, hydropower, wind, biomass, geothermal) or non-renewable (oil, natural gas, coal, tar sand) resources.

Environment – All the conditions, circumstances, and influences surrounding and affecting the development of an organism, or group of organisms.

Environmental impact – Used interchangeably with environmental consequence or effect.

Erosion – The detachment and transport of individual soil particles or soil aggregates of soil by wind, water, or gravity. Different forms and levels of soil erosion include sheet wash (fairly even soil loss), rills (small channels), and gullies (channeled erosion deeper than 19 inches or the depth that can be obliterated by a plow).

Even-aged stand – A stand of trees composed of a single age-class in which the range of tree ages is usually ± 20 percent of rotation.

Fens – Peat accumulating wetland, supports marsh-like vegetation, usually fed by mineral-rich surface water or groundwater.

Final regeneration harvest – The final timber harvest in a sequence of harvests designed to regenerate a timber stand or release a regenerated stand. A final regeneration harvest could be a clearcut, removal cut of a shelterwood or seedtree system, or a selection cut.

Fire Behavior – The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire Frequency – A general term referring to the recurrence of fire in a given area over time.

Fire regime – Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects as well, in a given area or ecosystem.

Forage Species – Plants and animals that are food sources for fish, mammals, and birds.

Forage – Plant material that livestock graze or that is cut for them.

Forage Reserve - allotments on which there is no current term permit obligation for some or all of the estimated livestock grazing capacity.

Forest – An ecosystem characterized by a more or less dense and extensive tree cover, often consisting of stands varying in characteristics such as species composition, structure, age class, and associated processes.

Forest health – A useful way to communicate about the current condition of the forest, especially with regard to the ability of the ecosystem to respond to disturbances.

Fuel treatment – Manipulation or removal of dead or live plant materials. The aim is to reduce the likelihood of ignition and/or lessen potential damage and resistance to fire control.

Grazing – Consumption of range or pasture forage by animals.

Groundwater –Water in a saturated zone in a geologic stratum. Water stored below the water table where the soil (or other geologic material) is saturated.

Groundwater-dependent ecosystem – Community of plants, animals, and other organisms whose extent and life processes depend on groundwater. Examples include many wetlands, groundwater-fed lakes and streams, cave and karst systems, aquifer system.

Habitat – The native environment of an animal or plant.

Highly Valued Resources and Assets (HVRA) – Those ecologic, social, and economic assets and resources that could be impacted by fire or fire management actions. Examples

include life, property, structures, natural and cultural resources, community infrastructure, public support, economic opportunities such as tourism, and air quality.

Homestead – Public land acquired through the Homestead Act of 1862, which accelerated the settlement of the western territory by granting 160 acres of surveyed public land for a minimal filing fee, and required five years of continuous residence and improvements on that land.

Invasive plant – Nonnative plants that are capable of spreading into native plant communities and disrupting vital ecological processes.

Invasive species – An alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health. A species that causes, or is likely to cause, harm and that is exotic to the ecosystem it has infested. Invasive species infest both aquatic and terrestrial areas and can be identified within any of the following four taxonomic categories: Plants, Vertebrates, Invertebrates, and Pathogens.

Landing – A cleared area in the forest to which logs are yarded or skidded for loading onto trucks for transport

Landscape – A defined area irrespective of ownership or other artificial boundaries

Land type – An intermediate level in the ecological classification system hierarchy that addresses land areas ranging in size from hundreds of acres up to ten thousands of acres. These units typically have similarities in landform, natural vegetative communities, and soils.

Land-type association – A group of land-types. The land-types in the association are sufficiently homogeneous to be considered as a whole for modeling the future outputs and effects of planned management activities. Land-type associations may not follow watershed boundaries, and are defined on the basis of general similarities in climate, geology, landform, and vegetation.

Lease – A contract between the landowner and another granting the latter the right to search for and produce oil, gas, or other mineral substances (as specified in the document) or the right to conduct an activity for a payment of an agreed rental, bonus, or royalty. This right is subject to the terms, conditions, and limitations specified in the document.

Minimum Impact Suppression Tactics – Application of strategy and tactics that effectively meet suppression and resource objectives with the least environmental, cultural and social impacts.

Multiple use – The management of all the various renewable surface resources of the National Forest Service so that they are utilized in the combination that will best meet the needs of the American people.

Native species – an organism that was historically or is present in a particular ecosystem as a result of natural migratory or evolutionary processes.

National Forest System Lands – A nationally significant system of Federally owned units of forest, range, and related land consisting of national forests, purchase units, national grasslands, land utilization project areas, experimental forest areas, experimental range areas, designated experimental areas, other land areas, water areas, and interests in lands

that are administered by the USDA Forest Service or designated for administration through the Forest Service.

National Wilderness Preservation System – All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

Off-highway vehicle (OHV) – Any motorized vehicle designed for or capable of cross county travel.

Partnership – Voluntary, mutually beneficial and desired arrangement between the Forest Service and another or others to accomplish mutually agreed-on objectives consistent with the agency's mission and serving the public's interest.

Patch – Areas larger than tree groups in which the vegetation composition and structure are relatively homogeneous.

Peatland – A generic term for any wetland that accumulates partially decayed plant matter (peat).

Persistence – Continued existence.

Pinyon-juniper woodland – A common woodland type in the western United States - where pinyon pines and junipers are co-dominate trees of this woodland type.

Plan area – The National Forest System lands covered by a land management plan.

Prescribed fire – A wildland fire beginning from a planned ignition to meet specific objectives identified in a written, approved, prescribed fire plan for which NEPA requirements (where applicable) have been met prior to ignition.

Productivity – Capacity of National Forest System lands and their ecological systems to provide the various renewable resources.

Protection Fire Management Area (PFMA) – This management area has hazardous fuel (vegetation) conditions that currently put highly valued resources and assets at risk of damage from wildfire. Wildfire is suppressed under most conditions due to the potential economic loss and public safety concerns posed by a wildfire.

Rangelands – Land on which the indigenous vegetation (climax or natural potential) is predominantly grasses, grass-like plants, forbs, or shrubs and is managed as a natural ecosystem. If plants are introduced, they are managed similarly. Rangelands include natural grasslands, savannas, shrub lands, many deserts, tundra, alpine communities, marshes, and wet meadows. Also included in this definition are oak and pinyon-juniper woodlands.

Rangeland health – The degree to which the integrity of the soil, vegetation and ecological processes are sustained

Recommended wilderness – An area that has been determined to meet the criteria to be designated as wilderness. The area is proposed in this land management plan by the Forest Supervisor to be recommended to Congress for inclusion into the National Wilderness Preservation System.

Recovery – Denotes improvement in a threatened or endangered species population or viability.

Recreation – Leisure time activity including swimming, picnicking, camping, boating, hiking, hunting, and fishing.

Recreation opportunity – An opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue.

Recreation opportunity spectrum – An opportunity to participate in a specific recreation activity in a particular recreation setting to enjoy desired recreation experiences and other benefits that accrue. Identify and determine the diversity of recreation opportunities for a natural area or group of natural areas.

Recreation setting – 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 nonmotorized,” “semi-primitive motorized,” “roaded natural,” “rural,” and “urban.”

Resilience – Ability of an ecosystem to maintain key functions and processes in the face of stresses and pressures either by resisting or adapting to change. Also, the amount of disturbance that an ecosystem could withstand without changing self-organized processes and structures.

Response to wildland fire – The mobilization of the necessary services and responders to a fire. The mobilization is based on ecological, social, and legal consequences, the circumstances under which a fire occurs, and the likely consequences on firefighter and public safety and welfare, natural and cultural resources, and values to be protected.

Revegetation – The reestablishment and development of a plant cover. This may take place naturally through the reproductive processes of the existing flora or artificially through the direct action of people.

Rights-of-way – Legal rights provided by the Forest Service to another party to pass along a specific route through national forest land (such as a transmission line passing through a national forest).

Riparian – Of or pertaining to the bank of a body of flowing water; the land adjacent to a river or stream that is at least periodically influenced by flooding. Riparian is sometimes also used to indicate the banks of lakes and ponds subject to periodic inundation by wave action or flooding.

Riparian (vegetation type) – The plant community adjacent to a river, stream, or spring. Riparian vegetation is typified by the presence of hydrophilic (water-loving) plants.

Riparian areas – Areas of land directly influenced by water, an ecosystem that is transitional between land and water ecosystems. Riparian areas usually have visible vegetative or physical characteristics reflecting the influence of water. Riverbanks, lake borders, and marshes are typical riparian areas.

Riparian management zone – Portions of a watershed where riparian-dependent resources receive primary emphasis, and for which plans include components to maintain or restore hydrologic and ecological function.

Sagebrush – Any of several North American shrubs or sub-shrubs that are capable of forming vast communities in the semi-desert, steppe, and montane regions of the western United States.

Sacred Site (Executive Order 13007) – (Indian Sacred Sites) "any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian Tribe…"

Scenic integrity objectives and landscape character goals – These are developed for Forest Plan Management Areas. A desired level of excellence based on physical and sociological characteristics of an area. Refers to the degree of acceptable alterations of the characteristic landscape. Objectives include very high, high, moderate, and low.

Sediment – Solid mineral and organic material that is in suspension, is being transported, or has been moved from its site of origin by air, water, gravity, or ice.

Sediment delivery – Delivery of sediment to a water body via overland flow, mass wasting, human activity, or some other means.

Seep – A wet area where a seasonal high water table intersects with the ground surface. Seeps that meet the definition of a wetland are included in the Riparian Corridor.

Seral – A biotic community that is developmental; a transitory stage in an ecologic succession.

Seral/structural stage – A phase of development of an ecosystem in ecological succession from a disturbed, relatively unvegetated state to a complex, mature plant community

Shrub – Perennial, multi-stemmed woody plant that is usually less than 13 to 16 feet in height. Shrubs typically have several stems arising from or near the ground, but may be taller than 16 feet or single-stemmed under certain environmental conditions.

Significant Federal Cave – A natural cave located on federal lands, which has been evaluated and found to meet the criteria for designation as a Significant Federal Cave. The criteria for designation as a significant federal cave include biota, cultural, geologic, mineralogic, paleontologic, hydrologic, recreational, educational, or other scientific resources or opportunities.

Silvicultural system – A management process whereby forests are tended, harvested, and replaced resulting in a forest of distinctive form. Systems are classified according to the method of carrying out the fellings that remove the mature crop, and provide for regeneration and according to the type of forest thereby produced.

Silviculture – The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands. Silviculture entails the manipulation of forest and woodland vegetation in stands and on landscapes to meet the diverse needs and values of landowners and society on a sustainable basis.

Slash – Coarse and fine woody material generated during timber harvest, thinning, etc. All vegetative debris resulting from the harvester's operations.

Source water protection areas – The area delineated by a State or Tribe for a public water system whether the source is ground water or surface water or both

Special use permit – A permit issued under established laws and regulations to an individual, organization, or company for occupancy or use of National Forest land for some special purpose.

Species of conservation concern (SCC) – Forest Service designation of species of conservation concern is for native species that are not included in Federal categories - but have declined populations, habitat threats, restricted habitat range, or factors of concern

Spring – A water source located where water begins to flow from the ground due to the intersection of the water table, with the ground surface. The source generally flows throughout the year. Springs that are the source of perennial or intermittent streams are included in the riparian corridor.

Stressor – For the purposes of the 2012 Planning Rule: A factor that may directly or indirectly degrade or impair ecosystem composition, structure, or ecological process in a manner that may impair its ecological integrity, such as an invasive species, loss of connectivity, or the disruption of a natural disturbance regime.

Succession – Change in species composition and structure over time.

Suppression – All the work of extinguishing a fire or confining fire spread.

Sustainability – meeting the needs of the present generation without compromising the ability of future generations to meet their needs, key part of conservation. As it pertains to agriculture, sustainable describes farming systems that are capable of maintaining their productivity and usefulness to society indefinitely.

Terrestrial – Term in biology generally used to describe living organisms that live and grow on land, as opposed to air or water.

Thalweg – the longitudinal profile line, or line connecting the lowest points along a streambed.

Thinning – A cutting made to reduce stand density of trees primarily to improve growth, enhance forest health, or to recover potential mortality.

Topography – The configuration of a land surface including its relief, elevation, and the position of its natural and human-made features (mapping).

Trail – A route 50 inches or less in width or a route over 50 inches wide that is identified and managed as a trail.

Trail Class – A range of categories, 1 – 5, that reflect the level of trail development with 1 being the least developed and 5 the most developed.

Trailhead – The transfer point between a trail and a road, lake, or airfield. The area may have developments that require or facilitate the transfer from one transportation mode to another.

Two-aged system – A planned sequence of treatments designed to regenerate or maintain a timber stand with two age classes. A two-aged system is a form of even-aged management.

Type conversion – A change from tree species or species group to another. An example is a change from hardwoods to pine.

Unauthorized road or trail – A road or trail that is not a Forest road or trail or a temporary road or trail and that is not included in a forest transportation atlas.

Understory – Plant communities that live under the canopy of trees, shrubs, or the dominant plant of the community.

Unplanned Ignition – The start of a wildland fire by lightning, volcanoes, unauthorized and accidental human-caused fires.

Utility corridor – Passage built either above or below ground to carry utility lines, such as steam, electricity, water supply pipes, and sewer pipes.

Vegetation condition class (VCC) – Depiction of the degree of departure from historical fire regimes, possibly resulting in alternations of key ecosystem components. These classes categorize and describe vegetation composition and structure conditions that currently exist inside the Fire Regime Groups. Based on the coarse-scale national data, they serve as generalized wildfire rankings.

Watershed – A region or area drained by a river.

Watershed condition – The state of a watershed based on physical and biogeochemical characteristics and processes.

Wetlands – Those areas that are inundated by surface or ground water. The water has a frequency sufficient to support and that, under normal circumstances, do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds.

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.

Wildfire – Unplanned ignition of a wildland fire (such as a fire caused by lightning, unauthorized and accidental human-caused fires) and escaped prescribed fires.

Wildland – Forests, shrub lands, grasslands, and other vegetation communities that have not been significantly modified by agriculture or human development.

Wildland fire – Any non-structure fire that occurs in vegetation or natural fuels. Wildland fire includes prescribed fire and wildfire.

Wildland-Urban Interface – The line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetation fuels.

Without Preference – A grazing permit that is waived back to the Forest Service without preference of a new permit designee.

Woodland – A plant community in which, in contrast to a typical forest, the trees are often small, characteristically short-boled relative to their crown depth.

Sources for Glossary:

- Ashley National Forest Assessment
- Cibola National Forest Mountain Districts Forest Plan Revision Glossary
- Francis Marion National Forest Glossary
- Draft Revised Forest Plan for the Inyo National Forest Glossary
- Custer Gallatin National Forest Proposed Action—Revised Forest Plan Glossary
- Proposed Action – Revised Forest Plan Helena-Lewis and Clark National Forest Glossary

Appendix A. Priority Watersheds

Healthy, resilient watersheds are essential to forest health, water quality, and attenuation of late season water. Watershed condition is integral to all aspects of forest resource management and uses. Good watershed management maintains the productive capacity of soils, protects water quality, sustains native species, provides for state-designated beneficial water uses, and reduces threat of fire and flood damage to infrastructure on the Ashley National Forest and downstream. In the Intermountain West, with projections for increasing human demand on water resources and uncertainty about future climate variability, managing for healthy, resilient watersheds is of high importance to terrestrial, riparian and aquatic ecosystems, and to people, downstream communities and economies.

The Watershed Condition Framework was initiated in 2011 and is a comprehensive, national Forest Service approach for proactively implementing integrated restoration. The Watershed Condition Framework includes the watershed condition classification, which is a nationally consistent approach to classifying watershed condition using a set of 12 indicators to represent the underlying biological and physical functions and processes that affect watershed condition. The primary emphasis of the Watershed Condition Framework is on aquatic and terrestrial processes and conditions that Forest Service management actions can influence. Using this classification model, watersheds are evaluated and classified as functioning properly (good), functioning at risk (fair) or impaired function (poor).

The Watershed Condition Framework provides a mechanism to enhance communication and coordination with external agencies and partners. It identifies priority watersheds and serves as an outcome-based performance measure for documenting improvements to watershed condition at the national forest, regional, and national levels. Priority watersheds (table 21) have been selected using the Watershed Condition Framework with restoration objectives that focus on maintaining or improving watershed condition (see appendix D, figure 2). Priority watersheds will change over the life of the forest plan and are reevaluated periodically based on ecological values, landscape restoration priorities, alignment with regulatory requirements, Forest Service priorities and those of other agencies, tribes, organizations and stakeholders.

Table 21. Priority watersheds currently identified on the Ashley National Forest

Name	Hydrologic Unit Code
Middle Sheep Creek	140401060603
Wolf Creek	140600030102
Hades Creek, Duchesne River	140600030106
Swift Creek, Duchesne River	140600030207
Rudy Hollow, Duchesne River	140600030203
Farm Creek	140600030205
Blind Stream	140600030201
South Fork Rock Creek	140600030304

The web-based Watershed Condition Framework map viewer, located at https://apps.fs.usda.gov/wcatt/ , contains the current priority watersheds and their associated information. Description of Watershed Condition Framework results specific to the Ashley National Forest can also be found on page 19 of the Ashley National Forest Assessment - and pages 88–97 of the Air, Soil, and Watershed Resources technical report, developed for the assessment.

Appendix B. Management Approaches

Introduction

This appendix describes potential management approaches, strategies, and coordination activities that may take place on the Ashley National Forest at the project or activity level to help maintain existing conditions or achieve the desired conditions described in the plan. Included are items such as ongoing work with partners and cooperating agencies anticipated during the life of the plan.

A plan amendment is not required to change or modify any potential management approach. The list of approaches can be updated at any time through an administrative correction of the plan. More information may be found under 36 CFR 219.7 (f)(2).

Working and Coordinating with Partners and Cooperators

01 Work with local governments, businesses, individuals and organizations to assist in permit processes, to streamline programmatic environmental analysis, and other measures to save time and expense of permitting.

02 Work to maintain and expand contracting and partnering opportunities with local governments, businesses and organizations. Develop partnerships that leverage different sources of funding to support opportunities to contribute to the economic and social sustainability of local communities.

03 Develop partnerships with local governments, businesses and organizations to collect economic data to track changes for businesses in sectors dependent on national forest activities. Practice adaptability to dynamic changes that can occur with the needs of local communities while still complying with Federal policy.

04 Develop collaborative projects that share the spirit of stewardship and work towards mutual interests and mutual gains for the Forest Service and outside interests.

05 Educate and coordinate with internal and external groups so that wildland fire is understood and accepted as a necessary process essential to the sustainability of the Ashley's fire-adapted ecosystems and to provide safer wildland fire operations.

06 Consider value added opportunities for existing forest users that promote and maintain ecosystem integrity and sustainability. Work with local governments and communities to expand new socioeconomic opportunities that support agency multiple uses.

07 Seek opportunities to work collaboratively with State and local governments, other Federal agencies, partners, conservation corps, Tribes, private property owners, and industries depending on forestland to accomplish restoration and management efforts. Encourage these cooperators to work toward sustainable practice.

08 Foster partnership and coordination through facilitating early and frequent communication between Forest Service and local, State, and Tribal governments in national forest planning processes. This communication is intended to promote productive discussion resulting in more positive land management planning decisions for all parties and to assure consistency in the process and outcomes. Additional intent of the communication

is to build positive working relationships, maximize trust, minimize misunderstanding and potential conflicts, and produce actions that result in positive outcomes and greater community support for those actions.

09 Build and maintain relationships with a diversity of local communities, partnerships, volunteers, other government agencies, range permittees, cooperators, recreation users, and permit holders to help co-manage a sustainable recreation program and minimize conflicts among uses through planning, design, implementation, and operations and maintenance. Recognize partners for their roles in providing recreational opportunities when possible.

Air Quality

01 The Ashley National Forest cooperates with Federal, State, and Tribal agencies to meet air quality regulations as necessary. This includes participation in State smoke management programs and compliance with State implementation plans.

02 Provide early notification to the public about potential smoke from prescribed fire activities to promote awareness and protect human health and safety.

03 The risk of smoke-related impacts to nearby communities and national forest visitors from unplanned wildfire events is diminished by returning fuel load conditions to within the natural range of variation. Fuel (vegetation) reduction methods include wildland fire management and prescribed burning. Prescribed burns are coordinated with appropriate partners (states of Utah and Wyoming) to reduce short-term smoke impacts.

04 Where there is evidence of annual exceedance in critical loads or levels of air pollutants on the Ashley National Forest, coordinate with State and Federal authorities to ensure Ashley National Forest management actions are compatible with regional air pollutant reduction strategies. Projects of a scope or scale, subject to State or Federal air quality rules and permitting, should incorporate emission controls and techniques to reduce potential effects to air quality. Keep current on accepted air quality best management practices and collaborate with State and Federal authorities on opportunities to reduce emissions from sources known to contribute to pollutant levels on the Ashley National Forest.

Soils

01 For all timber sales and timber management projects, review soil properties for potential problems with compaction and erosion before and after completion. Compaction of soils is the primary soil disturbance from the weight and vibration of equipment. Ripping is effective in breaking compaction and restoring infiltration. Encourage timber purchasers and timber management project leaders to do post-project ripping or scarification of roads and skid trails, where the rock content is low and this would not result in additional soil displacement. Work with existing availability of equipment and toward obtaining new equipment for ripping.

02 Work collaboratively with State and local governments, other Federal agencies, partners, conservation corps, volunteers and other groups on projects that maintain and restore soil quality, including: road and trail closures, reclamation, and seeding projects.

03 Update the soil data within the Lands System Inventory to provide information on soil properties and existing soil conditions for specific forest projects and broad-scale management planning.

04 Ground-disturbing activities should use current best management practices, soil and water conservation practices, and/or design criteria, or develop new project-specific best management practices where needed.

05 Reclamation measures should be used to check erosion and mass wasting of soil resources that result from wildfires and fuel reduction projects.

Watershed and Aquatic Ecosystems

01 Proactively respond to significant changes in habitat "quality" and structure that are observed during monitoring. Identify opportunities to improve habitat and structure for aquatic species.

02 Identify and protect all existing Colorado River cutthroat trout-occupied habitat.

03 Collaborate with State wildlife agencies to expand the range of Colorado River cutthroat trout on the planning unit.

04 Where appropriate, maintain or improve stream connectivity.

05 Collaborate with State wildlife agencies for opportunities to use beaver (relocation) as an aquatic restoration tool, where it would not conflict with other land uses and suitable habitat.

06 For protection of water quality and aquatic resources, project-specific best management practices should be used for management activities within riparian management zones. When developing project-specific best management practices, refer to general best management guidelines as they appear in documents (such as FS-990a National Best Management Practices for Water Quality on National Forest System Lands, FSH 2509.22 Soil and Water Conservation Handbook, and State non-point best management practice guidelines).

07 Where opportunities exist, aquatic and riparian restoration projects should accommodate natural processes and incorporate biotechnical design principals (such as large woody debris and native plantings) to achieve restoration objectives and minimize the need for long-term maintenance.

08 As projects occur in riparian management zones, non-system routes should be decommissioned, drainage restored, and native vegetation reestablished to move these areas toward their desired condition.

09 Structures in stream channels should be rehabilitated, stabilized, or removed if they are not necessary or functional.

Pinyon-Juniper Woodlands

01 Managed fire (planned and unplanned) should not be approved in pinyon-juniper woodlands where ecological function, integrity, and resilience have the potential to be compromised by invasive plants.

02 Where ecological function, integrity, and resilience have been compromised by invasive plants in burned pinyon-juniper woodlands, restoration treatments should be designed to reduce invasive plants, increase moderate to high valued perennial plants, initiate upward trend toward desired condition, and restore ecological function, integrity, and resilience. Treatments may include, but are not limited to, mechanical and nonmechanical treatments to reduce invasive plants and seedings to establish desirable plants with moderate to high resource value.

Forest Vegetation

01 Planned vegetation type conversion shall be justified by an analysis showing biological, economic, social, and environmental design consequences, and will include the relation of such conversions to the process of natural change integrating climate projection information.

02 During thinnings or other treatments that create green pine slash, incorporate recent recommendations from forest health protection staff to mitigate increases in pine engraver (*Ips* species) populations.

03 In fire or harvest treatments designed to naturally regenerate stands, consider seed fall distances from live tree seed sources in those species that do not regenerate readily from stand replacement events.

04 When regeneration is a desired outcome, favor the clearcut treatment method over other regeneration treatment methods in lodgepole pine stands with a high dwarf mistletoe infection (Hawksworth and Johnson 1989) to mitigate the spread of mistletoe to the developing regeneration.

05 In silvicultural practices should be used where possible, that maintain tree vigor, promote resistance to damaging agents, and increase forest resilience to changing environmental conditions.

06 Manage insect and disease outbreaks around eligible heritage resources (such as sheeptraps, wickiups, pole lodges, historic cabins, and other sites) in danger of destruction of falling trees.

Protection Fire Management Area

01 Firefighter and public safety is the first priority in every fire management activity.

02 When wildland fires occur, appropriate response strategies should be developed based on the risk considerations of life, safety and potential resource impacts and with the participation of other responsible agencies, authorities, and jurisdictions as appropriate.

03 Managers should use a wildland fire decision support process to define and document wildfire and prescribed fire decisions.

04 Outside of the Protection Fire Management Area, fire should use to achieve management objectives for other resources when conditions permit and are within acceptable risk limits. Fires within the Protection Fire Management Area can be used to achieve management objectives if assurances can be made for firefighter and public safety.

05 In areas not highly departed from desired conditions, wildland fires may be managed to burn with the intensity and frequency of the reference fire regime when fire weather conditions are appropriate and resources are available to successfully meet objectives.

06 Evaluate the risk of cheatgrass or other exotic species invasion. When there is a moderate to high risk of these types of invasion, mitigation measures should be developed. If adequate treatments are not available, or if they are cost-prohibitive, objectives to minimize the burned area should be developed.

07 Information, education, and transformational processes should be used to inform the public about fire danger and fire prevention. Providing public information and public prevention education is an integral part of the Ashley National Forest fire management program.

08 During development or updates to community wildfire protection plans, assessments, and management plans, agency administrators and fire managers will provide support to cooperators to mitigate negative impacts of wildfire. These plans should identify and prioritize areas for treatment based on input from communities and multiple stakeholders.

Wildlife

01 If white-nosed syndrome is detected within 50 miles of the Ashley National Forest or on adjacent national forests, preventative measures such as cave closures or decontamination procedures for those entering caves should be considered to minimize the risk of white-nosed syndrome spreading to bats on the Ashley National Forest.

02 Fences can present hazards to wildlife and restrict their movement across the landscape. Therefore, new fencing and reconstruction should be designed to minimize hazards to wildlife and barriers to wildlife movements.

03 Some wildlife species may become trapped in water developments, such as troughs. Therefore, new or reconstructed water developments or impoundments should be designed to prevent animal entrapment and to facilitate animal escape (for example wildlife escape ramps).

04 Bighorn sheep habitat improvement projects should be located away from domestic sheep or goat allotments to entice bighorn sheep away from Forest Service domestic sheep and goat allotments.

Cultural and Historic Resources

01 The Ashley, through direction from FSM 2360 Heritage Program Management, will develop a heritage program plan. Close coordination with Tribal Historic Preservation Offices, the Wyoming and Utah State Historic Preservation Offices, and other interested parties during the development of the heritage program plan results in a plan that guides the protection and enhancement of heritage resources on the Ashley. The heritage program plan will be updated as necessary.

02 Ensure the cultural and historic resources on Ashley National Forest are adequately protected and effectively managed by implementing the forestwide Heritage Program Plan in accordance with Forest Service Manual 2360.

03 Conduct condition assessments on priority heritage resources (assets) on a 5-year cycle and assessing 20 percent of priority heritage assets annually until all priority assets have condition assessments on file dated no greater than five years in age.

04 Plan to survey at least 5 percent of lands burned by wildfires within 1 year of being burned.

05 When appropriate, heritage plan components or protocols should be incorporated into the statewide Programmatic Agreements or Memorandum of Understandings.

06 Heritage resource protection signs should be posted in areas where cultural resources are at risk to deter Archaeological Resources Protection Act violations.

07 The heritage program plan should provide Ashley-specific protocols such as: inadvertent discovery of heritage resources, including human remains and associated objects; prevention of, and response to, Archaeological Resources Protection Act violations; and prevention of the effects from wildland fire and post-fire looting.

08 The Forest will identify areas of high, moderate, and low probability for the presence of heritage resources.

09 The Forest will monitor site conditions and measure the success of mitigation efforts.

10 Partnerships with those interested in the Ashley's heritage resources are an integral part of the program and will be pursued. Memoranda of understanding and programmatic agreements are used to streamline consultation and improve the management of heritage resources.

11 Archaeological Resources Protection Act permits will be issued to facilitate research opportunities by qualified individuals associated with reputable institutions.

12 Forest Service collections are curated at professional facilities where official loan and/or curation agreements are in place, and these facilities will make them available to qualified researchers. Heritage information is maintained, improved, and shared with appropriate cooperators while following confidentiality regulations.

13 Heritage site location and condition data are maintained in the agency's corporate database and in a spatial database with restricted access.

14 Public awareness, involvement, and appreciation of heritage resources will be increased over time using tools such as site stewardship and the "Windows on the Past" program.

15 Ashley National Forest personnel will continue to work with permit holders to inform and educate them on Archaeological Resources Protection Act regulations and violation repercussions and incorporate Archaeological Resources Protection Act language into authorizations and annual operating instructions.

Energy and Minerals

01 Subject to valid existing rights, drilling and mining activities should not be allowed to intersect or take place within or immediately adjacent to known or suspected cave passages, karst features, or subsurface voids.

02 For drilling activities within known or suspected cave or karst areas, require operators to notify the authorized officer, and appropriate minerals staff, whenever voids greater than 12 inches are encountered by drilling operations.

Transportation and Infrastructure

01 The transportation system is maintained through volunteer, partnership, cooperative agreement, and agency resources.

02 Road maintenance activities should shape the road to drain off by blading either a crown or cross sloped road prism, fill ruts and potholes, clean ditches, and remove larger rocks. Do not leave a berm of graded material on the lower side on the road. Clean flare ditches and culvert inlets.

03 Maintain existing Schedule A Road Maintenance Agreements with Daggett, Duchesne, Sweetwater, and Uintah Counties. Roads will be added or removed from the agreements as determined by the Ashley National Forest and the individual county.

04 When decommissioning travel routes such as roads, skid trails, temporary roads, and trails, assure that drainage features are sufficient to avoid sedimentation and erosion of surrounding resources.

05 Stockpile and preserve topsoil for revegetation of disturbed areas.

06 Implement approved road sign programs and sign adverse conditions and hazards resulting from catastrophic events.

07 For snow plowing on existing roads, an inch of compacted snow should remain on the road during plowing operations to prevent damage to the road surface. Breaks should be placed in the snow berms to direct water off of the road.

08 Collect traffic data on selected roads to determine adequate design standards and maintenance levels.

09 Underground and overhead utilities such as powerlines, communication lines, waterlines and gas lines are located within the roadway corridor reducing the overall development footprint on the Ashley National Forest.

10 Materials sources are an important component of sustainable transportation system operations. Consider the economic cost, public safety, and the aesthetic effects in locating, operating, and reclaiming borrow pits.

11 Assure availability of water for use in Forest Service operations (such as developed recreation, administrative sites, road maintenance, livestock watering) while complying with applicable State and Federal laws and regulations.

Geologic Resources and Hazards

01 Roads, trails, other facilities, and activities should be located and designed to avoid, minimize, or mitigate potential geologic hazards.

02 Roads trails, other facilities, and activities should be located and designed so they do not adversely affect the natural hydrologic functioning of cave and karst streams, features, or

groundwater systems. Roads and trails should not drain directly into caves, active sinkholes, or other karst features.

03 Retain vegetation in the vicinity of entrances to designated significant caves to protect the cave's microenvironment (habitat, climate, vegetation, and airflow).

04 Allow public use of caves unless restrictions are necessary to protect values or resources present in significant caves. Work cooperatively with agencies, research institutions, cave interest groups, and the public in managing cave and karst resources.

05 To the extent reasonable, manage the majority of caves on the Ashley National Forest as "wild" caves with no on-site modifications or facilities to aid or impede use, and with no directed access or public disclosure of cave names, locations, or resources, except where gates or other devices may be needed for public safety or resource protection purposes.

Land Status and Ownership

01 Land ownership adjustments are made through purchase, donation, exchange, or other authority and are used to achieve resource management or protection objectives, provide needed access, consolidate ownership, or allow National Forest System lands to be managed more efficiently.

Flaming Gorge National Recreation Area

01 Encourage compliance with the Ashley National Forest Travel Plan designations and responsible motor vehicle use by working with sportsman's groups, volunteer groups, local schools, range permittees and other stakeholders to promote respect for the land and staying on legal roads and trails. Promote the use of educational tools that could include constructing kiosks, signs, developing brochures, leading fieldtrips, and using social media to inform the public on impacts from off-road motorized use.

02 Support and fund broadcast and drill seeding projects that apply information from research done by the Manila District with the Agricultural Research Service to reduce impacts of halogeton and cheatgrass. Communicate plans within the Forest Service and to the public for present and future research and field trials being done to protect rangelands in the Flaming Gorge National Recreation Area.

03 Manage forests using cultural methods that simulate the natural ecologic processes that insure diversity of plant and animal communities, and/or that protect recreational and scenic values. Forested stands will be generally managed on an uneven-aged basis.[13] The age spread may be attained by treatment (harvest) in small groups (1/4–1/2 acre) or single tree removal. Maximum tree size[14] will be relatively large (generally 20 inches diameter at breast height or greater for the ponderosa pine type and 12 inches diameter at root collar or greater for the pinyon-juniper type) and cultural entries may be on lengthier cycles than normal. The exception would be in lodgepole pine and Douglas-fir

[13] Stands will contain three or more age classes of trees.

[14] In uneven aged management, the maximum tree size is the diameter of the largest tree left (other than reserves) after treatment. "Reserves" are trees retained in a dispersed or aggregated manner after the regeneration period to help meet other resource objectives.

types that may be managed using the two-aged system (such as shelterwood[15]) to maintain continuous forest cover.

04 Promptly investigate and, where appropriate, minimize insect, disease, and other damage.

05 Schedule livestock grazing outside of the Memorial Day to Labor Day high visitor use period in areas of heavy public use. Normally, livestock will not be allowed in designated recreation sites.

High Uintas Wilderness

01 The High Uintas Wilderness is managed according to the most recent High Uintas Wilderness Management Plan.

02 The existing irrigation impoundments, dams, and essential hydro-meteorological measuring devices are maintained using minimum necessary actions to administer the High Uintas Wilderness, for the purposes of the Wilderness Act of 1964 and the Utah Wilderness Act of 1984.

National Scenic Byways

01 The National Scenic Byways on the Ashley National Forest are managed according to their corridor management plans.

Swett Ranch

01 The Swett Ranch is staffed on weekends between Memorial Day and Labor Day each year for the life of the plan to provide tours and interpretation of the historic ranch.

02 Swett Ranch buildings, fences, and farm equipment are inspected every five years to determine maintenance and preservation needs.

03 Preservation and maintenance activities on Swett Ranch are completed in accordance with an approved historic preservation plan.

Ute Mountain Fire Lookout Tower

01 The Ute Fire Tower is staffed on weekends between Memorial Day and Labor Day each year for the life of the plan to provide tours and interpretation of the historic fire tower.

02 The Ute Fire Tower, outbuildings, and historic weather station are inspected every 5 years to determine maintenance and preservation needs.

[15] An even-aged silvicultural system in which, in order to provide a source of seed and/or protection for regeneration, the old crop (the shelterwood) is removed in two or more successive cuttings, the first of which is ordinarily the seed cutting (though it may be preceded by a preparatory cutting) and the last is the final cutting.

Historic Ranger Stations

01 A brochure or booklet describing the history of each ranger station is provided for visitor use in each historic ranger station that is a part of the recreational cabin rental program on the Ashley National Forest.

02 Historic ranger stations, outbuildings, fences, and related facilities are inspected every 5 years to determine maintenance and preservation needs.

03 Historic ranger stations are available year-round for recreational rental. The ranger stations are maintained in a clean, healthy, and aesthetically pleasing manner to ensure visitors have an enjoyable stay. Visitor feedback and concerns are addressed in a quick and responsible way.

Carter Military Road

01 Directional signs indicating the location of the historic Carter Military Road are installed on at least 1 mile of the historic route each year for the life of the plan until the entire route has been signed.

02 Segments of the Carter Military Road that maintain historic integrity are inspected every 5 years to determine historic preservation needs.

03 Preservation and trail maintenance activities on the Carter Military Road are completed in accordance with the Carter Military Road Management Plan.

Appendix C. Timber Suitability and Proposed and Possible Actions

This appendix describes lands suitable for timber production on the Ashley National Forest and quantities of timber, wood products and salvage harvest predicted for the first and second decades of the plan. **The sustained yield limit is 20,539 Hundred cubic feet (CCF) or 9,684 thousand board feet (MBF).** See appendix D, figure 3 for a map of land that may be suitable for timber production.

Table 22. Planned wood product output for the first and second decades of the plan

Timber Products[1]	First Decade	First Decade	First Decade	Second Decade	Second Decade	Second Decade
A. Lands suitable for timber production	**CCF***	**MBF***	**Tons**	**CCF**	**MBF**	**Tons**
A1. Saw-timber	2,692	1,346	8,075	2,725	1,363	8,176
A2. Other products (post, poles, etc.)	1,883	0	5648	1,883	0	5,648
B. Lands not suitable for timber production	**CCF**	**MBF**	**Tons**	**CCF**	**MBF**	**Tons**
B1. Saw-timber	22	11	67	27	13	80
B2. Other products (post, poles, etc.)	0	0	0	0	0	0
C. Projected Timber Sale Quantity (PTSQ) (A1+A2+B1+B2**)**	**4,597**	**1,357**	**1,3790**	**4,635**	**1,376**	**13,904**
D. Other Estimated Wood Products[2]	**CCF**	**MBF**	**Tons**	**CCF**	**MBF**	**Tons**
D1. Fuelwood	61	0	184	61	0	184
E. Projected Wood Sale Quantity (PWSQ) (C+D1)	**4,658**	**1,357**	**13,974**	**4,696**	**1,376**	**14,087**
F. Salvage (Not included in PTSQ, PWSQ, or constrained by SYL)[3]	**CCF**	**MBF**	**Tons**	**CCF**	**MBF**	**Tons**
F1. Saw-timber	2,382	1,191	7,147	2,084	1,042	6,252
F2. Other products (post, poles, etc.)	0	0	0	0	0	0
F3. Fuelwood	12	0	37	12	0	37
F4. Personal Use Fuelwood	5,204	0	15,612	5,204	0	15612
Total Salvage	**7,598**	**1,191**	**22,795**	**7,300**	**1,042**	**21,900**
Grand Total (PWSQ plus Salvage)	**12,256**	**2,548**	**36,769**	**11,996**	**2,418**	**35,988**

1. Volumes other than salvage or sanitation volumes that meet timber product utilization standards
2. Fuelwood, biomass, and other volumes that do not meet timber product utilization standards; CCF = hundred cubic feet; MBF = thousand board feet
3. PTSQ = potential timber sale quantity; PWSQ = potential wood sale quantity; SYL = sustained yield limit
4. See Table 11 (characteristics of timber volume metrics) for further explanation on SYL, PTSQ and PTWQ

Proposed and Possible Actions

MORE INFORMATION COMING SOON

Appendix D. Maps

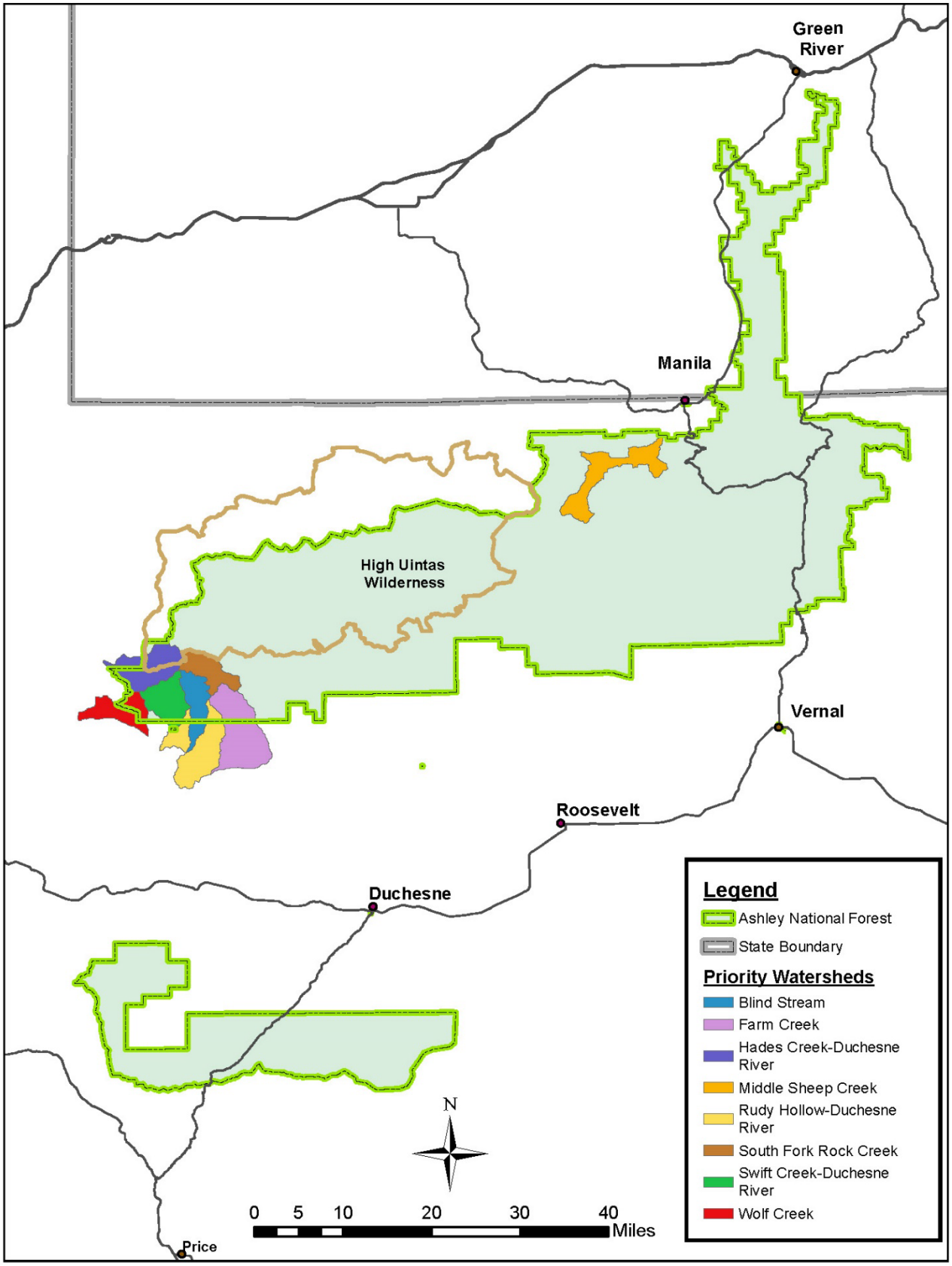

Figure 2. Location of priority watersheds on the Ashley National Forest

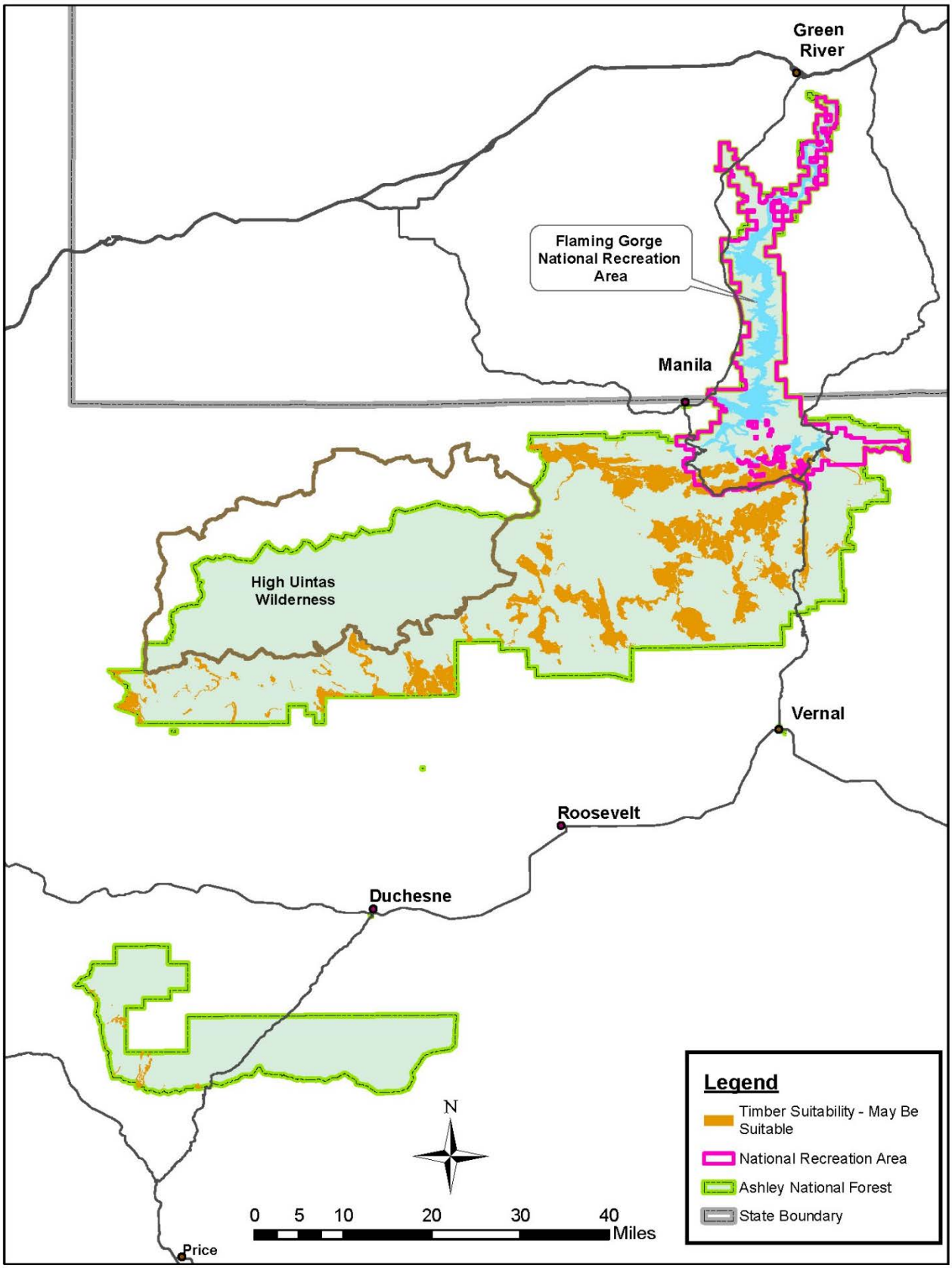

Figure 3. Location of areas that may be suitable for timber production

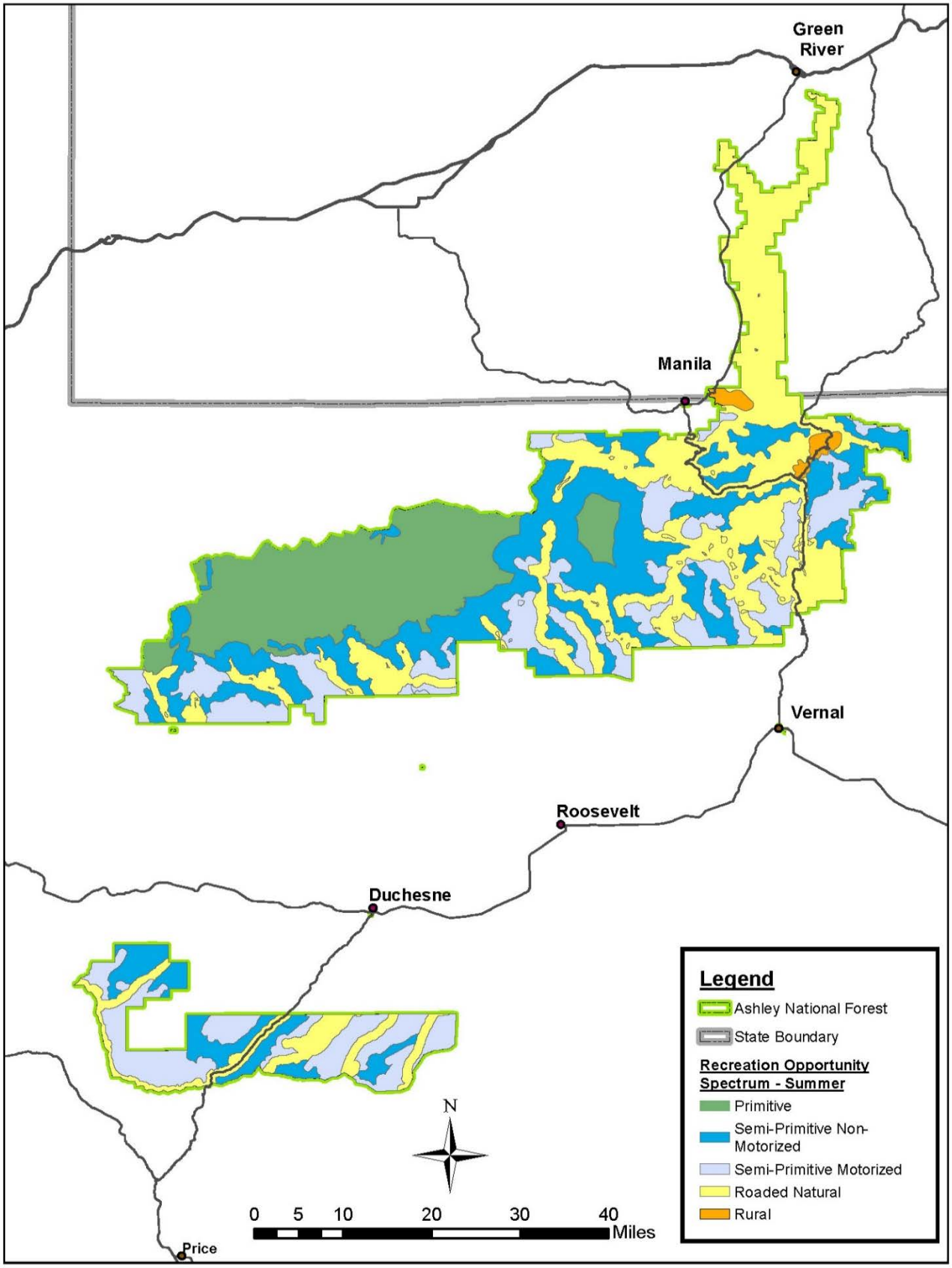

Figure 4. Location of recreation opportunity spectrum settings in summer

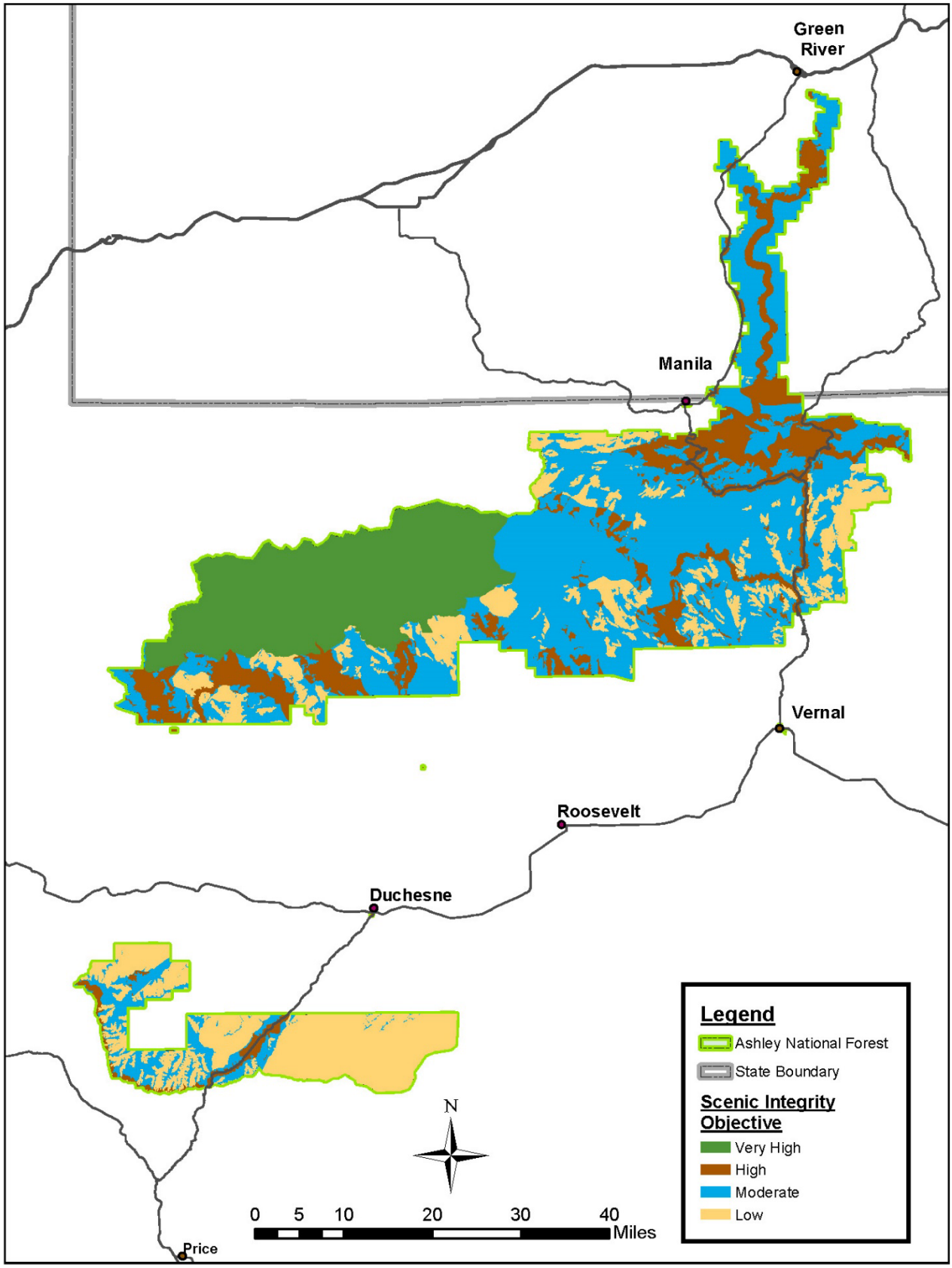

Figure 5. Location of various scenic integrity objective levels

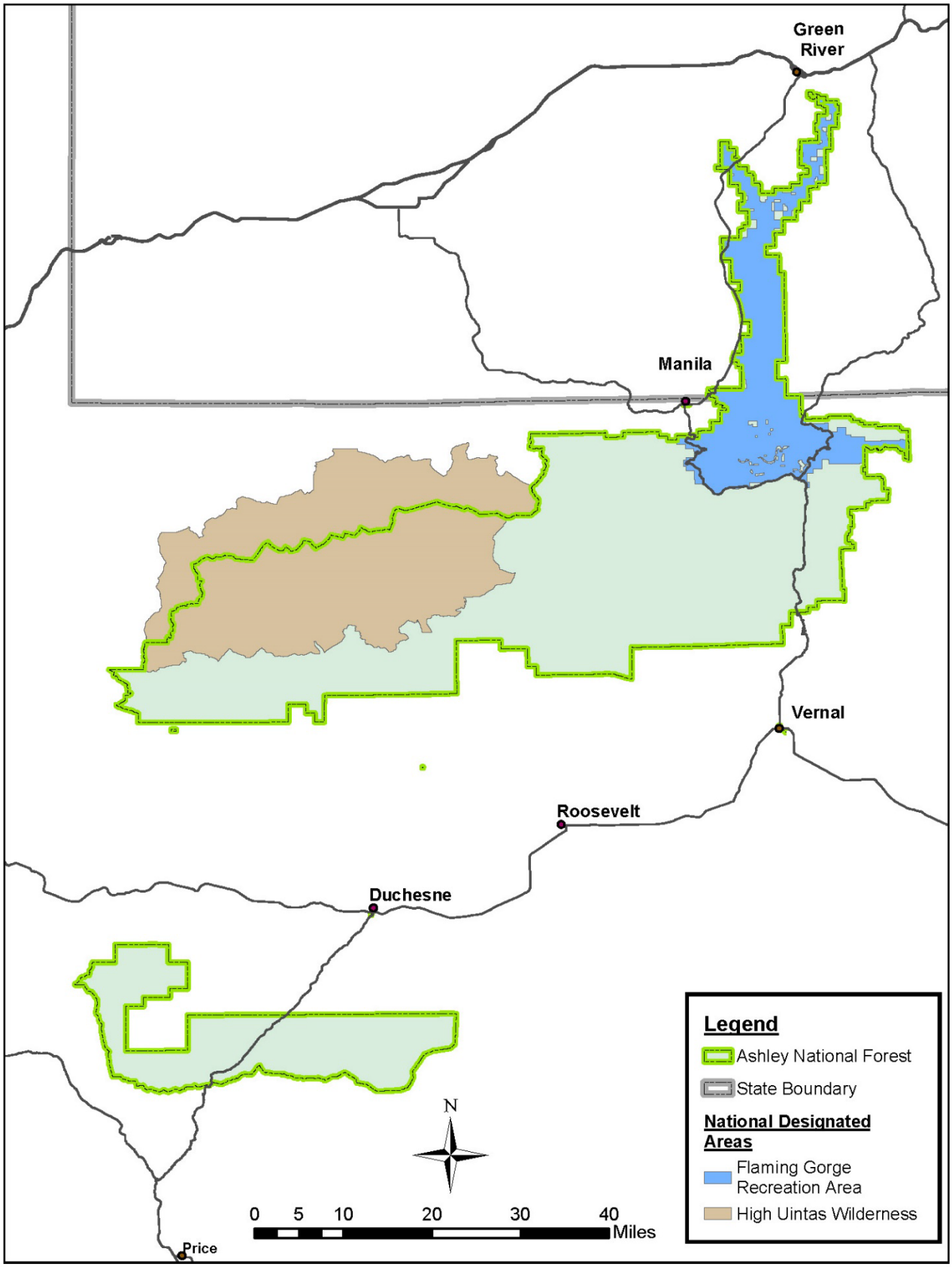

Figure 6. Location of the Flaming Gorge Recreation Area and the High Uintas Wilderness

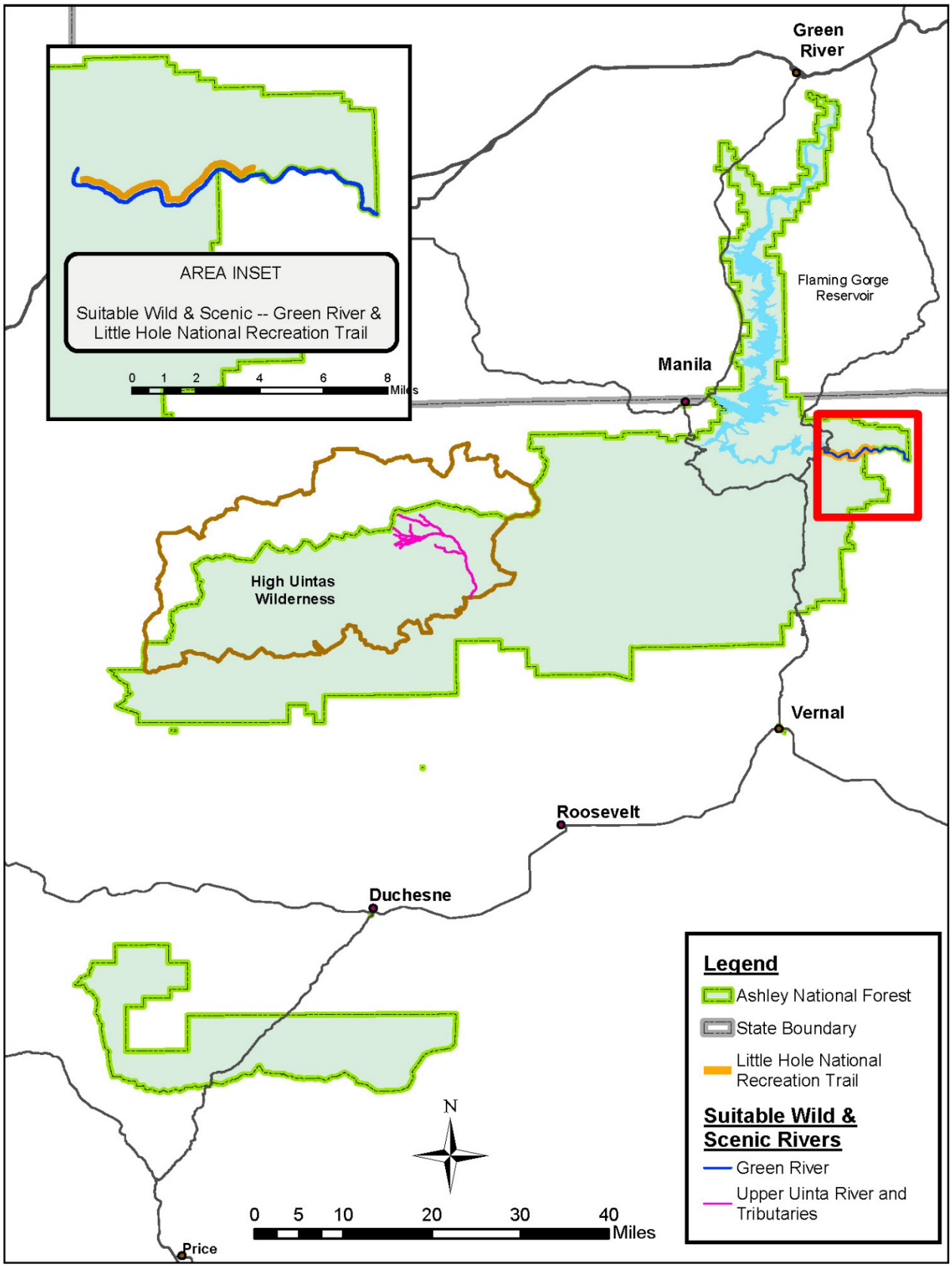

Figure 7. Location of suitable wild and scenic rivers and Little Hole National Recreation Trail

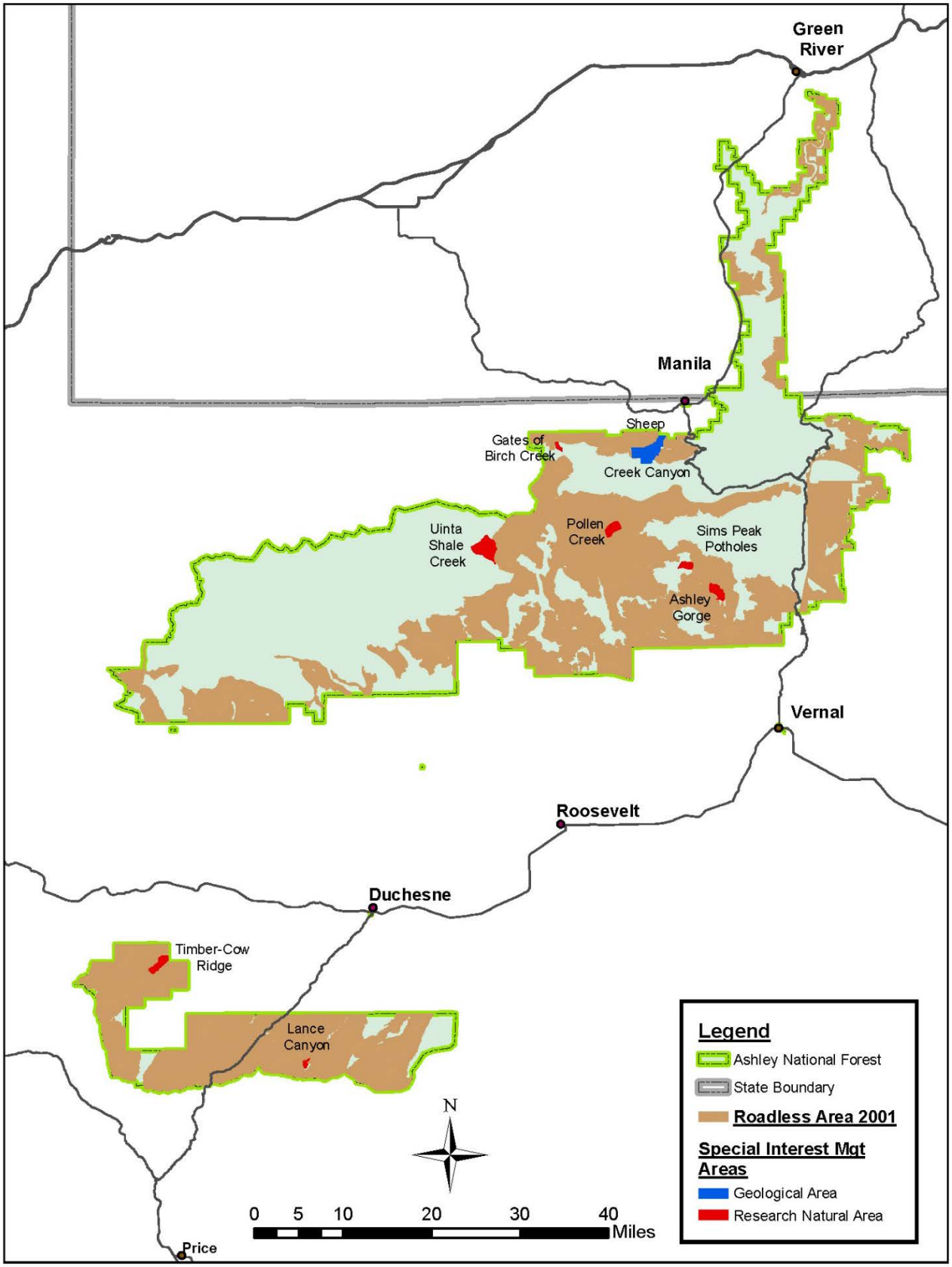

Figure 8. Location of roadless areas, research natural areas, and a geologic area

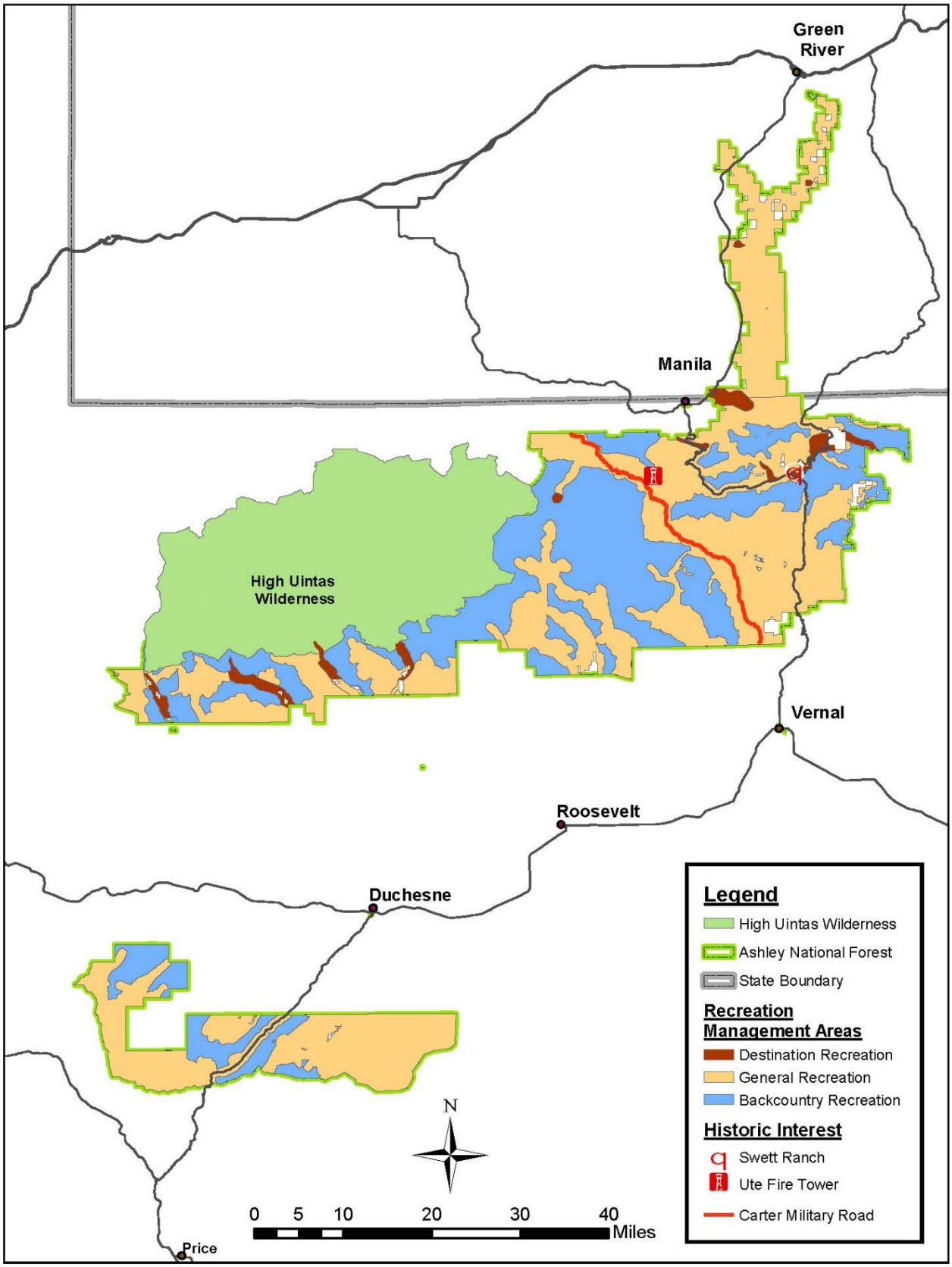

Figure 9. Location of recreation management areas and historic interest areas

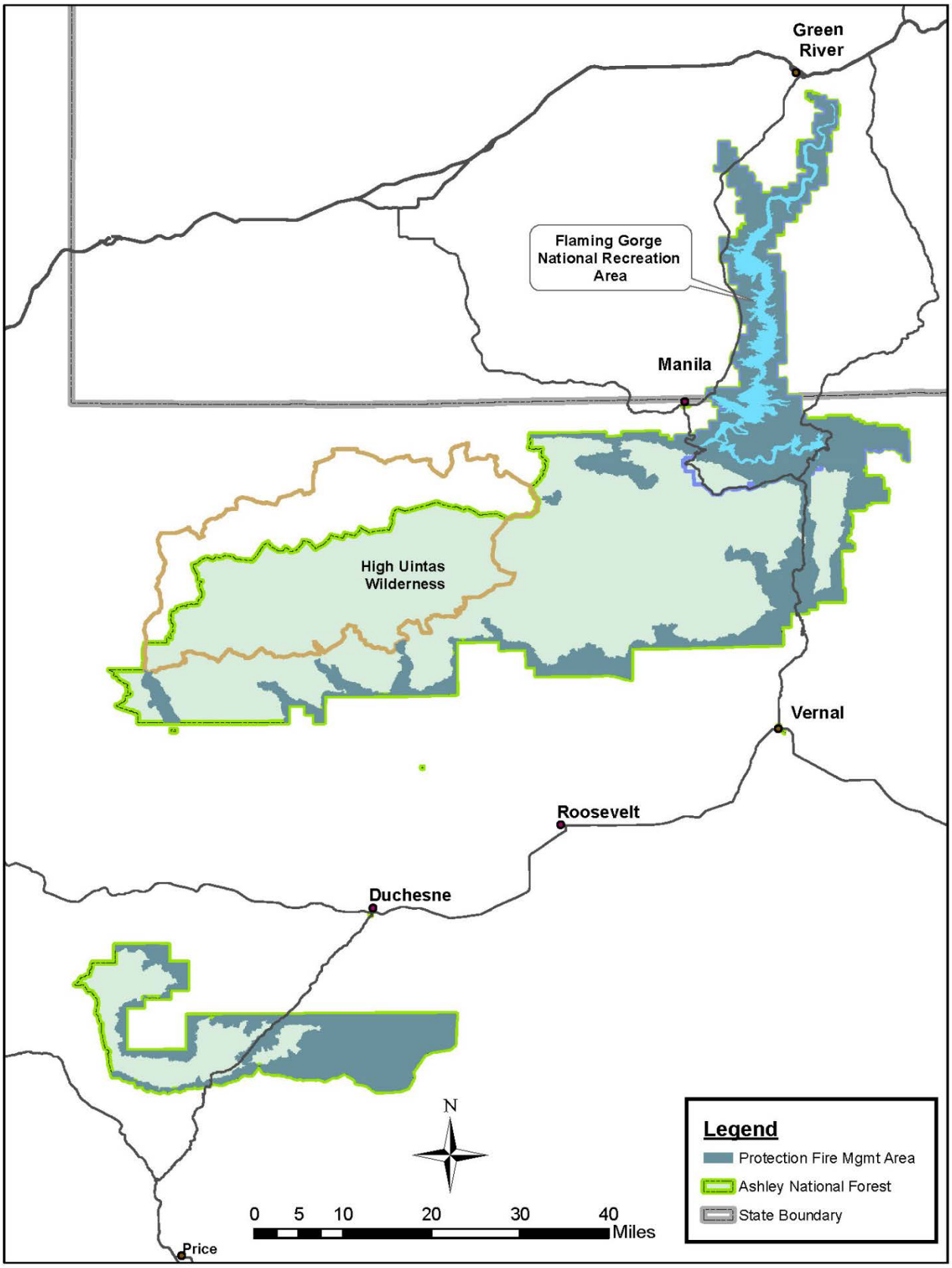

Figure 10. Location of Protection Fire Management Areas