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# Proposed Action

The Nez Perce–Clearwater National Forests (Forest) are proposing to revise their land management plans (current forest plans). This document describes the proposed action—the preliminary proposal for changes to the current forest plans. The proposed action includes preliminary identification of forestwide and management area desired conditions, objectives, standards, guidelines, and the suitability of lands for specific multiple uses, including those lands suitable for timber production. The proposed action includes preliminary identification of the long-term sustained yield and planned sale quantity. It includes a description of the plan area’s distinctive roles and contributions within the broader landscape, and the preliminary identification of priority restoration watersheds and proposed and possible actions that may occur on the plan area over the life of the plan. The proposed action identifies the need for development of additional required plan content such as the monitoring program. And because of high level of interest and diverse public views, the proposed action includes two preliminary options for areas to be recommended to Congress for inclusion in the Wilderness Preservation System.

The public is invited to comment on the proposals described in this document. Comments received on this proposed action will be considered to develop alternatives for analysis as the Forest Service prepares the environmental impact statement (EIS). The EIS will display and compare alternative strategies for managing the Forest and describe the physical, biological, social, and economic effects of each alternative.

Comments may be sent via e-mail to [fpr\\_npclw@fs.fed.us](mailto:fpr_npclw@fs.fed.us), or via facsimile to 208-935-4275. Send or deliver written comments to Nez Perce–Clearwater National Forests Supervisor’s Office, Attn: Forest Plan Revision, 903 3rd Street, Kamiah, ID 83536.

Comments on the proposed action will be most valuable if received within 60 days of the publication of this notice in the Federal Register, and should clearly articulate the reviewer’s opinions and concerns. Comments received in response to this notice, including the names and addresses of those who comment, will be part of the public record. Comments submitted anonymously will be accepted and considered. However, only those individuals and entities who have submitted substantive formal comments related to plan revision during the opportunities provided for public comment will be eligible to file an objection (36 CFR 219.53(a)).

Refer to the Forests’ Web site (<http://www.fs.usda.gov/detail/nezperceclearwater/landmanagement/planning/?cid=stelprdb5447338>) for more revision information and to learn when additional public meetings will be scheduled for refining the proposed action and identifying possible alternatives to the proposed action.

Contact Timory Peel, Forest Planner, Nez Perce–Clearwater National Forests, 903 3rd Street, Kamiah, ID 83536, 208-983-2513 or at [fpr\\_npclw@fs.fed.us](mailto:fpr_npclw@fs.fed.us) for further information. Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday.

To help set the context for the proposed action, the next section contains information about the primary decisions made in forest plans, public involvement and input to date, and the preliminary identification of the need for change.

## Nature of the Decision Made in a Forest Plan

Forest plans are strategic in nature, making general decisions that are often referred to as programmatic decisions. They provide the framework for integrated resource management and guidance for subsequent project and activity decision making on the Forest.

The revised plan will describe desired ecological, social, and economic conditions of the Forest and provide plan component direction that will focus management activities towards maintaining or achieving

those conditions over time. The proposed plan components are designed to provide for the maintenance and restoration (where needed) of the ecological integrity of terrestrial and aquatic ecosystems and watersheds, to guide the Forest's contribution to social and economic sustainability, and to meet the Forest Service's responsibility to American Indian tribes in relation to trust responsibilities and treaty resources.

Historically, many forest communities developed strong natural resource based economies in the mining, logging, agricultural, and grazing industries. Over time, other values have become increasingly important such as protecting water quality and quantity, providing recreational settings that support tourism, and providing for functioning and intact ecosystems. Forest planning today seeks to balance these public values and expectations. When making decisions for the revised plan, we will examine the potential ecological and biological impacts, as well as the economic and social impacts to the Nez Perce Tribe, local counties, the broader regional level, and the nation.

## Forest Plan Revision

The National Forest Management Act (NFMA) requires all national forests to develop plans that direct resource management activities. These plans must be revised when conditions have changed significantly, or around a 10- to 15-year cycle.

The existing plans for the Nez Perce and Clearwater National Forests were completed in 1987, and have been amended several times. Revised Forest Service policies, congressional direction, court decisions, new or updated conservation agreements and recovery plans, and new scientific findings have all highlighted that current plans are outdated and not very responsive to change. To respond to the outdated nature of the current plans, the Forest is currently revising their forest plans. As the Nez Perce and Clearwater National Forests are now administratively combined, there will be a single revised plan for the Forest.

The revised forest plan will incorporate changes in the natural environment, new scientific understandings and social trends, and will satisfy regulatory requirements.

Eight primary decisions are made in forest plans:

1. Forestwide components to provide for integrated social, economic, and ecological sustainability, and ecosystem integrity and diversity, while providing for ecosystem services and multiple uses. Components must be within Forest Service authority and consistent with the inherent capability of the plan area (36 CFR 219.7 and CFR 219.8–219.10).
2. Recommendations to Congress (if any) for lands suitable for inclusion in the National Wilderness Preservation System and/or rivers eligible for inclusion in the National Wild and Scenic Rivers System (36 CFR 219.7(2)(v) and (vi)).
3. Identification or recommendation (if any) of other designated areas (36 CFR 219.7 (c)(2)(vii).
4. Identification of suitability of areas for the appropriate integration of resource management and uses, including lands suited and not suited for timber production (36 CFR 219.7(c)(2)(vii) and 219.11).
5. Identification of the maximum quantity of timber that may be removed from the plan area (36 CFR 219.7 and 219.11 (d)(6)).
6. Identification of geographic or management area specific components (36 CFR 219.7 (c)(3)(d).
7. Identification of watersheds that are a priority for maintenance or restoration (36 CFR 219.7 (c)(3)(e)(3)(f).
8. Plan monitoring program (36 CFR 219.7 (c)(2)(x) and 219.12).

Many other laws and regulations apply to the management of the national forests, including, but not limited to, the National Trails Act, the Clean Air Act, the Clean Water Act, and the Endangered Species Act. These laws are generally not repeated or referenced in the language of the forest plan unless there is an issue that merits a reference to the direction of the law.

Additional direction for managing National Forest System lands comes from a variety of sources, including Executive Orders, the Code of Federal Regulations (CFRs) and the Forest Service directive system, which consists of the Forest Service Manual (FSM) and the Forest Service Handbook (FSH). This direction does not need to be restated in the revised forest plan and will not be found in the following proposed action.

## Public Input to Date

In the fall of 2012, the Forest co-hosted five community meetings with County Commissioners in Orofino, Grangeville, Moscow, and Lewiston, ID, and Lolo, MT. These meetings were designed to inform the public of the Forest's efforts to initiate plan revision, gain input to the assessment, and begin the collaborative public process to develop a revised forest plan. Following the initial meetings, the Forest again partnered with the County Commissioners to host a 3-day Forest Plan Summit in Orofino, ID. The summit, designed and facilitated by the University of Idaho, provided a workshop environment to design and initiate the forest plan revision collaborative process. Subsequently, from November 2012 through May 2014, 11 full-day collaborative workshops were held to develop and refine the assessment while soliciting input on draft plan components across various resource areas. Five additional check-in meetings were held in February 2013 to provide the communities of Orofino, Grangeville, Moscow, and Lewiston, ID, and Lolo, MT an update on the revision process.

The plan revision collaborative process was designed to gather input from a diversity of interested participants who lived in the small, remote communities "imbedded" within the Forest, as well as those interested participants residing in larger local, regional, and national communities and cities. The full-day workshops allowed resource working groups, comprised of locally based participants and regionally-based conference participants from the Missoula, MT and Boise, ID areas, and facilitated by Forest Service staff, to share local knowledge and scientific information to provide management recommendations considering multiple interests and values. In addition, the Forest provided e-collaboration tools such as an online mapping tool and a comment inbox to solicit information to share with all interested participants, including those not able or interested in participating in the full-day workshops. Online discussion groups hosted on the Google Groups platform allowed participants to blog with each other regarding revision topics.

Youth engagement was initiated in January of 2014 through an agreement with the University of Idaho as a graduate student started outreaching to local school classrooms, community youth groups, and camp programs. The University hosts a youth-targeted social media site giving interested youth an opportunity to blog about their personal interests related to management of the Nez Perce-Clearwater National Forests.

Tribal outreach has been initiated through cooperative agreements for a Nez Perce Tribal liaison to participate in the collaborative workshops, the presentation of preliminary Tribal concerns and desired conditions at the May 10, 2014 workshop, and a Tribal technical staff and FS resource staff interdisciplinary meeting. An invitation to initiation formal government to government tribal consultation was sent early July 2014.

An initial draft assessment was released to the public in September 2013 with an updated version released in June of 2014. The assessment, 20 months of collaborative public input, and other sources of information have helped identify the need for change and have informed the content of this proposed action.

## **Preliminary Need for Change**

In developing a proposed plan revision, the responsible official “shall review relevant information from the assessment and monitoring to identify a preliminary need to change the existing plan and to inform the development of plan components and other plan content” (36 CFR 219.7 (c)(2)(i)).

The need to change a plan should be predicated on the status of key ecosystem characteristics, the needs and opportunities for restoration or maintenance of these characteristics, and the potential for plan components to promote ecological integrity within the terrestrial, riparian, and aquatic ecosystems, relevant to the plan area. The assessment of ecosystem integrity and status of at-risk species in the plan area should be reviewed to identify and evaluate opportunities for the plan area to maintain ecological sustainability and the diversity of plant and animal communities.

Similarly, the responsible official’s identification of the need to change the plan should identify opportunities for the plan area to contribute to the social and economic sustainability of the plan area and affected communities.

## **Administrative Consolidation and Age of Current Plans**

In February 2013, a 5-year effort to consolidate leadership and programs across the Nez Perce and Clearwater National Forests culminated in a decision to combine the forests as a single administrative unit called the Nez Perce-Clearwater National Forests. The need for change approach analyzes both the Nez Perce and Clearwater National Forests existing plans (as amended) in their entirety and proposes changes where adjustments are necessary. The two individual 1987 Forest Plans provide different management strategies for some resources such as recommended wilderness or elk habitat. Monitoring and evaluation of implementation of the existing plans have identified management concerns. Additionally, the 2014 Nez Perce–Clearwater National Forests Assessment (2014 Assessment) and input from collaborative public outreach has identified new information that contributes to the need for change.

The NFMA includes a provision to “revise forest plans from time to time when the Secretary finds conditions in a unit have significantly changed, but at least every fifteen years” (16 U.S.C. 1604(f)(5)(A)). The 1987 Forest Plans were developed under planning regulations completed in 1979 and amended in 1982 (1982 Planning Rule). Since that time, much has changed regarding our understanding of land management planning including improved understanding of science and sustainability, as well as a better understanding of the values and benefits public lands provide citizens. The current plans limit the pace and scale of restoration and are slow to respond to the challenges of changing conditions such as climate change or recreation demand. In May of 2012, the Forest Service began implementation of new planning regulations (2012 Planning Rule) to guide collaborative and science-based revision of land management plans that promote the ecological integrity of national forests while considering social and economic sustainability.

- There is a need to revise the two 1987 Forest Plans under the provisions of the 2012 planning regulations to provide the combined forests consistent, adaptable management guidance in consideration of best available scientific information, while continuing to provide a range of social, economic, and ecological benefits for the present and into the future.

## **Integrated Restoration**

Current forest plan monitoring, the 2014 Assessment, the 2014 Climate Change Vulnerability Assessment, and the 2011 Watershed Condition Assessment identify integrated restoration needs across the Forest to address forest health (including resiliency to stressors such as insects and disease, drought, and climate change), wildfire risk, aquatic and terrestrial wildlife habitat, invasive species, soil productivity and function, and road management. In February 2012, the Secretary Tom Vilsack released

the Increasing the Pace of Restoration and Job Creation on Our National Forests report. It describes the need to increase the pace and scale of restoration of the Nation's forests to improve both the ecological health of our forest ecosystems and the economic health of forest-dependent communities. The report outlines management actions that land managers can utilize to step up the pace and scale of restoration activities on the ground.

- There is a need to revise the 1987 Forest Plans to emphasize integrated restoration of terrestrial and aquatic resources to restore vegetation composition, structure, and landscape patterns, reduce fuel loading, and improve watershed conditions to support wildlife and other resource values while contributing to the social and economic sustainability of local and regional communities.

## **Updates Related to Other Law, Regulation, or Policy**

In addition to updated planning regulations since development of the 1987 Plans, laws and other regulations have changed and additional species have been listed as threatened or endangered under the Endangered Species Act.

- There is a need to revise the 1987 Forest Plans based on best available scientific information to update direction from the Inland Native Fish Strategy (INFISH) and PACFISH strategies with forest-specific aquatic conservation strategies and update lynx habitat boundaries from the 2007 Northern Rockies Lynx Management Direction. In addition, there is a need to incorporate direction established in the Idaho Roadless Rule.

## **Best Available Scientific Information**

Inventory information about forest land and water resources is more comprehensive than it was in 1987 as a result of continued updates and new data management tools. The Forest Service now has geographic information system (GIS) technology, which greatly enhances assessment, analysis, and monitoring. Research and monitoring has increased our knowledge of the physical, biological, and social processes occurring on the Forest during the last quarter of a century. Using science in planning provides the responsible official with the knowledge, methods, and resource expertise needed to make an informed decision. To ensure that the revised plan helps contribute to sustainable stewardship of the nation's national forests, the Forest has used the best available scientific information to inform the 2014 Assessment and the development of the proposed plan components.

- There is a need to revise the plans to incorporate new and emerging information in plan direction.



# Chapter 1—Introduction

## Organization and Forest Plan Components

This proposed action is organized in several parts: Chapter 1—Introduction, Chapter Two—Preliminary Forestwide Direction, and Chapter 3—Preliminary Management Area Direction. There is a placeholder for Chapter 4—Monitoring Program, which at this point describes the intent of forest monitoring and how you may provide comments that will be most helpful with its development.

Appendix A provides a glossary of acronyms and terms used in the proposed action. Appendix B identifies the proposed watersheds that are a priority for maintenance or restoration. Appendix C describes potential scenic integrity objectives for recreation travel corridors. Appendix D describes a preliminary list of possible actions that may occur over the life of the plan. Appendix E describes partnership opportunities that could be considered during plan implementation to help the Forest achieve desired conditions and improve overall resource management.

There is an important distinction between plan components such as desired conditions, objectives, standards, guidelines, and suitability, and other elements of the plan. A plan amendment is required to add, modify, or remove one or more plan components, or to change how or where one or more components apply to all or part of the plan area (including management areas or geographic areas) (36 CFR 219.13(a)).

Other elements of the forest plan that are not plan components provide information and/or background material integral to the successful implementation of the forest plan. As conditions change, this information can be updated with administrative changes.

## Desired Conditions

A desired condition is a description of specific social, economic, and/or ecological characteristics of the plan area, or a portion of the plan area, toward which management of the land and resources should be directed. Desired conditions must be described in terms that are specific enough to allow progress toward their achievement to be determined, but not include completion dates (36 CFR 219.7(e)(1)(i)).

These are the social, economic, and ecological attributes that will be used to guide management of the land and resources of the Plan area. They may apply to the entire plan area, or to specific geographic or management areas. Desired conditions are not commitments or final decisions approving projects and activities. The desired condition for some resources may currently exist, or for other resources may only be achievable over a long time period. The Forest may need to make adjustments in the desired conditions if monitoring results indicate they are not achievable in the long term. Desired conditions will only be found in the section of the Plan labeled “Desired Conditions.”

## Objectives

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 (36 CFR 219.7(e)(1)(ii)).

Objectives describe the focus of management in the plan area within the plan period. Objectives that are defined as occurring “over the life of the Plan” are referring to the first 15 years of plan implementation. Objectives will only be found in the section of the plan labeled “Objectives.”



## **Standards**

A standard is a mandatory constraint on project and activity decisionmaking, established to help achieve or maintain the desired condition or conditions, to avoid or mitigate undesirable effects, or to meet applicable legal requirements (36 CFR 219.7(e)(1)(iii)).

Standards can be developed for forestwide application or for specific areas and may be applied to all management activities or selected activities. Standards will only be found in the section of the Plan labeled “Standards.”

## **Guidelines**

A guideline is a constraint on project or activity decisionmaking that allows for departure from its terms, so long as the purpose of the guideline is met. Guidelines are established to help achieve or maintain a desired condition or conditions to avoid or mitigate undesirable effects, or to meet applicable legal requirements (36 CFR 219.7(e)(1)(iv)).

Guidelines can be developed for forestwide application or for specific areas and may be applied to all management activities or selected activities. Guidelines will only be found in the section of the Plan labeled “Guidelines.”

## **Suitability**

Specific lands within the Forest will be identified as suitable for various multiple uses or activities based on the desired conditions applicable to those lands. The plan will also identify lands within the Forest as not suitable for uses that are not compatible with desired conditions for those lands. The suitability of lands need not be identified for every use or activity (36 CFR 219.7(e)(1)(v)).

Identifying suitability of lands for a use in the forest plan indicates that the use may be appropriate, but does not make a specific commitment to authorize that use. Final suitability determinations for specific authorizations occur at the project or activity level decisionmaking process. Generally, the lands on the Forest are suitable for all uses and management activities appropriate for national forests, such as outdoor recreation, range, or timber, unless identified as not suitable.

## **Management and Geographic Areas**

Management areas (MAs) and geographic areas (GAs) are spatially identified areas within the Forest. These areas are assigned sets of plan components such as desired conditions, suitable uses, and in some areas either standards or guidelines, or both.

This proposed action includes some preliminary management area delineations, but we are seeking your comments to assist with continuing to develop these components as well as potential identification of geographic areas.

## **Monitoring Program**

The plan monitoring program will set out the plan monitoring questions and associated indicators. We are seeking comment to assist with the development of the plan monitoring program to inform the management of resources on the plan area, including testing relevant changes, and

measuring management effectiveness and progress toward achieving or maintain the plan's desired conditions or objectives per 36 CFR 219.129(a)(2).

## Other Plan Content

Additional plan content can include information such as potential management approaches or strategies, partnership opportunities, coordination activities, or other information to support movement toward desired conditions. We are seeking your input to continue to develop this information for the revised plan.

## Consistency with Plan Components

As required by the NFMA, all projects and activities authorized by the Forest Service must be consistent with the forest plan (16 USC 1604 (i)) as described at 36 CFR 219.15. This is accomplished by a project or activity being consistent with all applicable plan components.

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

1. Modify the proposed project or activity to make it consistent with the applicable plan components
2. Reject the proposal or terminate the project or activity
3. Amend the plan so that the project or activity will be consistent with the plan as amended
4. Amend the plan contemporaneously with the approval of the project or activity so that the project or activity will be consistent with the plan as amended (36 CFR 219.15(c))

**Desired Conditions:** Because of the many types of projects and activities that can occur over the life of the plan, it is not likely that a project or activity can maintain or contribute to the attainment of all desired conditions, nor are all desired conditions relevant to every activity (i.e., recreation desired conditions may not be relevant to a fuels treatment project). Most projects and activities are developed specifically to maintain or move conditions toward one or more of the desired conditions of the plan. It should not be expected that each project or activity will contribute to all desired conditions in a plan, but usually to one or a subset.

To be consistent with desired conditions of the Forest Plan, a project or activity must be designed to meet one or more of the following conditions:

1. Maintain or make progress toward attaining one or more of the plan desired conditions or objectives without adversely affecting progress toward maintenance of other desired conditions or objectives
2. Be neutral with regard to progress toward attaining the plan's desired conditions or objectives
3. Maintain or make progress toward attaining one or more of the desired conditions or objectives over the long term, even if the project or activity would have an adverse but short-term effect on progress toward attaining, or maintenance of, one or more desired conditions or objectives
4. Maintain or make progress toward attaining one or more of the plan's desired conditions or objectives, even if the project or activity would have an adverse but negligible long-term effect on progress toward attaining, or maintenance of, other desired conditions or objectives

The project documentation will include a finding that the project is consistent with plan's desired conditions or objectives and briefly explain the basis for that finding. When a categorical exclusion applies and there is no project decision document, the finding and explanation will be in the project record (FSH 1909.12 22.35a).

**Standards:** A project or activity is consistent with a standard if the project or activity is designed in exact accordance with the standard. The project documentation must confirm that the project is consistent with applicable standards. Deviation from standards requires an amendment to the plan.

**Guidelines:** A project or activity must be consistent with all guidelines applicable to the type of project or activity and its location in the plan area. A project or activity is consistent with a guideline in either of two ways:

1. The project or activity is designed in accordance with the guideline
2. A project or activity design varies from the guideline but is as effective in meeting the intent or achieving the purpose of that guideline

The project documentation will describe how the project is consistent with the applicable guideline(s). When the project design varies from the exact wording of a guideline, project documentation must specifically explain how the project design is as effective in meeting the purpose of the guideline. Under this circumstance, a plan amendment is not required. However, if a project or activity is not designed to comply with the intent or purpose of a guideline, an amendment to the plan is required.

## Rights and Interests

The revised forest plan will provide a strategic framework that guides future management decisions and actions. As such, the plan will not create, authorize, or execute any ground-disturbing activity. The plan will not subject anyone to civil or criminal liability and will create no legal rights. The plan will not change existing permits and authorized uses.

## About the Nez Perce-Clearwater National Forests

The Nez Perce-Clearwater National Forests (Forest) are located in the heart of north-central Idaho, in a five-county region comprising Clearwater, Idaho, Latah, Lewis, and Nez Perce counties (Figure 1). The Forest Service is responsible for managing approximately 4 million acres across this landscape. The Clearwater River drains most of these acres in both forests, and rugged mountain ranges, pristine rivers and streams, and extensive forested landscapes combine to create diverse ecosystems that provide spectacular recreational opportunities; substantial fish and wildlife habitat; and forest, minerals, and range products.

The landscape of Forest is characterized by deep, rugged river canyons surrounded by either rolling hills or steep jagged mountains. Mixed conifer forests interspersed with small, but distinctive open meadows, grasslands, and pockets of deciduous trees and shrubs comprise most of the vegetative cover. Rivers, lakes, and streams are often framed by lush riparian vegetation that transition to open meadows. Western redcedars, western larch, western hemlock, Douglas-fir, grand fir, lodgepole pine, and ponderosa pine are the dominant conifer species', which drape the canyon walls and stretch to the uplands. Historically, western white pine and white bark pine were found throughout the area. Disturbance in the form of wildland fire and insect and disease are continually cycling through the landscape. These natural processes create a patchwork of openings with vegetation at all age classes found across the forest.

The rich heritage of the area is still visible. Native American use of the area dates back for millennia and the forest has been the home of the Nez Perce for centuries. Early travelers used routes through the Bitterroot Mountains to explore the far reaches of the country. These events have been remembered through the designation of the Lolo Trail Historic Landmark corridor and other historic routes that bisect the forest. Historic mining towns, log cabins, Forest Service facilities, and fire lookouts dot the landscape, adding to the unique scenic character of the area.

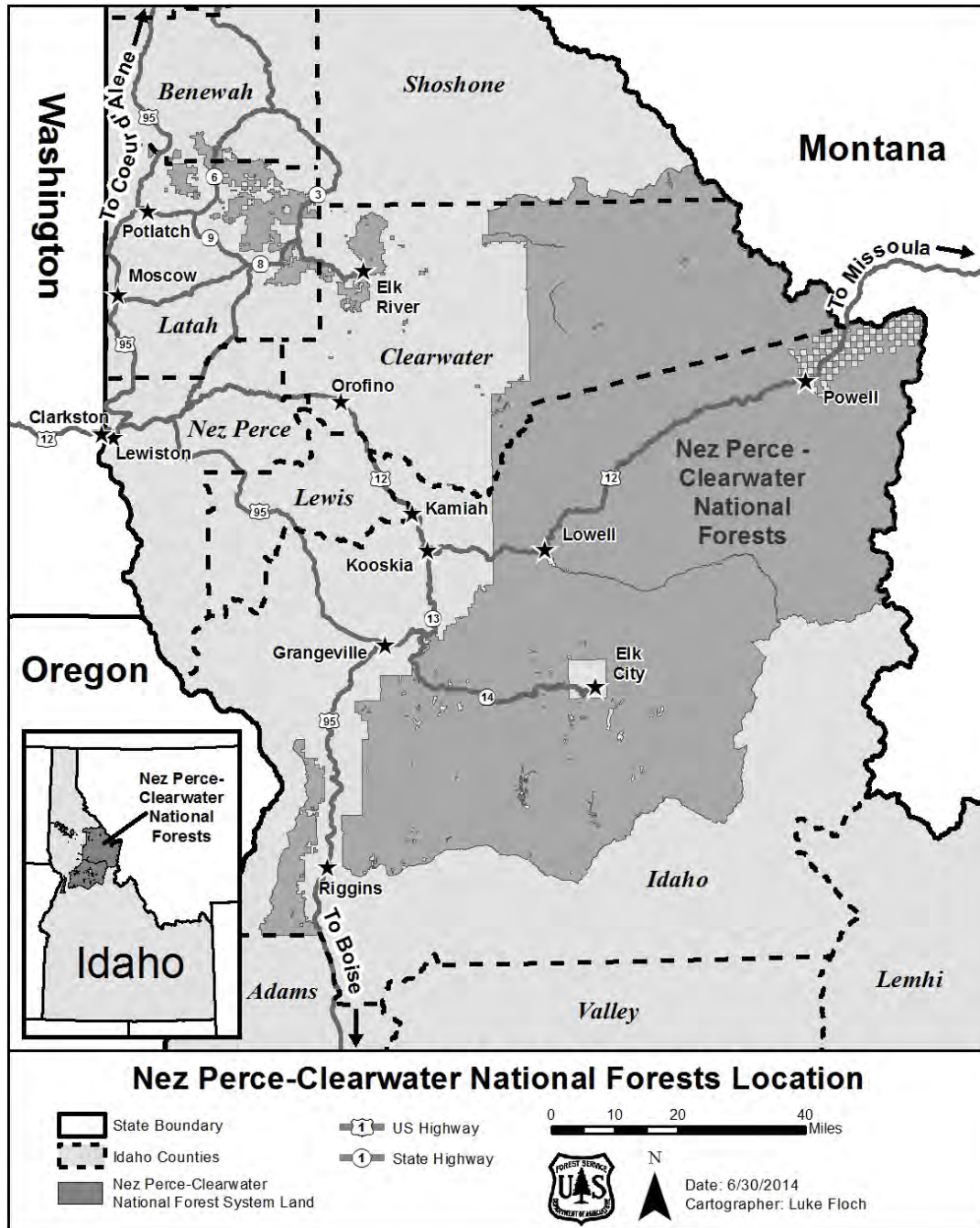


Figure 1. Vicinity Map

## **Distinctive Roles and Contributions**

The unique qualities of the Forest and its ability to provide ecosystem services characterize the roles and contributions of the area. These roles and contributions provide the basis for management direction and the foundation for realistic and achievable desired conditions.

In addition to the role of providing common National Forest ecosystem services such as clean air, clean water, nutrient cycling, and carbon sequestration, the Forest plays a distinctive role in the local area, the region, and the nation by uniquely contributing the following:

### **Outdoor Recreation**

The diverse landscapes and stunning scenery of the Forest provides extraordinary settings for recreational activities such as whitewater rafting, jet boating, and fishing on the world-renown Selway, Salmon, Clearwater, and Lochsa Rivers (145 miles of which are designated as Wild and Scenic). Unsurpassed year-round recreation opportunities can be found for those seeking the solitude of the unroaded backcountry or developed recreation in the front country. The Forest serve a unique national role providing vast, contiguous wildland areas including the Selway-Bitterroot, Gospel-Hump, and Frank Church-River of No Return Wilderness areas with regional linkages in the Hell's Canyon Wilderness area and Idaho Roadless Rule areas such as the Great Burn and Mallards-Larkin. Together these areas comprise the largest complex of unroaded lands in the lower 48 states.

Travel routes and corridors such as the Northwest Passage Scenic Byway, (U.S. Highway 12), the Lolo Trail corridor (a National Historic Landmark), the Magruder Corridor, and the Elk City Wagon Road trace the paths of the Nez Perce Tribe, Lewis and Clark, and early traders, providing recreation access and unique historical and cultural recreation experiences. The Forest's road and trail system provides a community backyard connection from the river valleys to the remote alpine elevations that is highly valued by residents and visitors. In addition, seven backcountry airstrips provide a distinct opportunity for access to the remote areas of the Forests.

### **Social and Economic Sustainability**

As the largest land jurisdiction in three counties, the Forest serves as the backdrop for residents and plays a key role in supporting the social and economic sustainability of local communities, the state of Idaho, the Nez Perce Tribe, and the broader region. The productive forest lands continue to support traditional lifestyles and generational ties to the land, provide commodities such as timber, grazing, and minerals for regional industry, and sustain an outfitter and guide recreation economy. The sport fisheries for spring and fall chinook salmon, westslope cutthroat trout, steelhead trout, and kokanee and big game hunting opportunities for elk, black bear, moose, and big horn sheep are important components supporting the area's economic vitality.

The Nez Perce Tribe has reserved treaty rights which entitle them to hunt, fish, gather, and graze livestock in the Forest. The tribe is involved in consultation regarding the management of the Forests and staffs from both organizations strive for a productive working relationship, particularly in efforts to support recovery of anadromous fisheries. In addition to being culturally and socially important to the tribe, healthy salmon runs are an important economic component for both the tribe and local communities.

## Cultural and Heritage Values

For millennia, the Forest has been uniquely situated at the crossroads of several American Indian cultural areas, each possessing their own characteristic lifeways, languages, customs, and traditions. The river systems that bisect this topographically and culturally diverse region have helped create a unique archaeological and historical record on national Forest System land. The Salmon River is exceptional as the longest undammed river system in the contiguous United States. Through the centuries, the river was home to countless American Indian peoples, Euro-American homesteaders and miners, as well as Chinese sojourners. While thousands of archaeological sites now lie inundated under dams on the Columbia Plateau, the Salmon River flows free and the archaeological record remains relatively intact.

The Forest's rugged landscape required the development of ancient trail networks. The two most important were the Southern Nez Perce Trail and the Nez Perce (Ne-Mee-Poo) National Historic Trail, which connected the Nez Perce homeland with buffalo country in Montana and the northwestern Plains, and facilitated the dramatic 1877 flight of the Nez Perce from the U.S. Army. These mountain routes were also important to other Great Basin and Plateau Indian groups, including the Coeur d'Alene, Shoshone, and Salish (Pend 'd Oreille and Flathead), who traveled and used the area for subsistence, trade and to maintain kinship ties and tribal alliances. Today, these Indian groups and descendant communities, including the Nez Perce, retain an on-going and vibrant culture with unbroken ties to this region.

The history of the Forests, especially that related to timber and mining, continues to influence local communities today. Mining began in the early 1860s around today's Elk City, Florence, and Pierce, Idaho. Together, these localities provided the political and financial impetus that culminated in Idaho statehood in 1890. Today, the ghost town of Florence is the oldest town site in Idaho on National Forest System land. The diverse landscape of the Forest contains an abundance of agriculture, industrial, and domestic ruins and standing structures that document and enhance local history and are important to the identity of many rural communities within and near the Forest's boundaries.

## Ecological Diversity

The Forest is located directly in the path of ash dispersal from three major Pacific Rim volcanic eruptions: Glacier Peak, Mount Mazama, and Mount Saint Helens, depositing an ash cap as deep as 36 inches in some depressions. The resulting soil fertility and water-holding capacity supports the Forest's highly productive ecosystems.

The Forest possesses a tremendous range and unusual diversity of habitats, from boreal and coastal elements in the north to extensive grasslands and pine forests in the south. The maritime influence of the Pacific Ocean also contributes to a unique coastal disjunct ecosystem with associated species uncommon to the Northern Rockies, such as the Coeur d'Alene and Idaho giant salamanders, deerfern, and Pacific dogwood. The local climatic transition caused by extreme terrain differences result in high floral diversity including endemic species like the evergreen kittentail, *Dasynotus*, Idaho barren strawberry, spacious monkeyflower, the federally listed Spalding's catchfly, and four species of pine. The three major river systems (Salmon, Clearwater, and Snake) and their accompanying tributaries provide important aquatic and riparian habitat for many species including bull trout, steelhead trout, westslope cutthroat trout, and chinook salmon. The Forests' substantial spawning and rearing habitat for steelhead trout and chinook salmon provides a large portion of the total returns of adult anadromous salmonids in the Snake and Columbia River basins.

In addition, the diverse vegetative communities on the Forest provide terrestrial habitats that host several regionally unique native wildlife populations. This includes native lineages of fisher and bighorn sheep, as well as mountain quail, white-headed woodpecker, and Harlequin duck. The extensive acreage of undeveloped lands both on the Forest and interconnected with neighboring public lands provide important habitat security and linkage for wide-ranging species such as lynx, wolverine, and other carnivores.

# Chapter 2—Preliminary Proposed Forestwide Direction

This chapter contains proposed direction that applies forestwide, unless more constraining direction is found for a specific management area in chapter 3. Forestwide direction includes desired conditions, objectives, standards, and guidelines. Other Forest Service direction including laws, regulations, policies, executive orders, and Forest Service directives (manual and handbook) are not repeated in the Forest Plan.

The chapter is organized by resource, under the following three major categories:

- Physical and Biological
- Humans Uses of the Forest
- Production of Natural Resources

The first category describes proposed forestwide direction for providing ecological sustainability and diversity of plant and animal communities (36 CFR 219.8 and 219.9).

The other two categories describe proposed forestwide direction for providing social and economic sustainability, including multiple uses (36 CFR 219.8 and 219.10).

All proposed direction is integrated across resources and with cross-references identified where needed for clarification.

## Physical and Biological Ecosystems

### Terrestrial Ecosystems

#### *Across the Landscape*

#### Desired Conditions

**FW-DC-TE-01.** Vegetation management supports native forest composition and structural diversity as described across biophysical settings in the face of changing climate conditions.

**FW-DC-TE-02.** The scenery of the Forest reflects the healthy, resilient landscapes described in FW-DC-TE-01. Management changes in the distribution and condition of vegetation attributes mimic those created by natural process and disturbance regimes.

**FW-DC-TE-03.** Uncommon habitat elements (mineral licks, talus slopes, fractured wet bedrock, rocky outcrops, scree slopes, caves, waterfalls, geologic inclusions) support and ensure persistence of associated wildlife and botanical species.

**FW-DC-TE-04.** In areas of tribal importance, vegetative conditions continue to provide a sustainable diversity of habitats necessary to provide desired levels of plant and animal species that are of cultural importance.

**FW-DC-TE-05.** Non-native invasive weeds comprise less than 5 percent of the plant species composition across the Forest. No new invasive weed species become established in any of the plant communities on the Forest.



## Standards

**FW-STD-TE-01.** Only certified “weed free” hay, feed, straw, and mulch shall be brought onto National Forest System lands to prevent introducing invasive weeds.

**FW-STD-TE-02.** Only certified “weed free” seed shall be used for restoration.

## Guidelines

**FW-GDL-TE-01. Scenic Character.** Management activities should be consistent with scenic integrity objectives (SIO) for the area. Management activities may result in short-term impacts (3–5 years) that are inconsistent with the SIO if those impacts are necessary in achieving the SIO over the long term.

## Forestlands

### Desired Conditions

#### Breaklands

**Idaho Batholith (approximately 639,000 acres)**

**FW-DC-FOR-01. Composition:** On southerly aspects, stands of ponderosa pine and Douglas-fir are most common with lesser amounts of grand fir. Grand fir or subalpine fir may occur on lower slopes and along streams. Western redcedar may occur on more moist sites in the Middle Fork Clearwater or Selway River drainages. Grasses, forbs, or shrubs form the understory.

On northerly aspects, stands of Douglas-fir, western larch, and grand fir are most common, with inclusions of ponderosa pine on ridgetops. Colder sites may include lodgepole pine. Western redcedar may occur on more moist sites in the Middle Fork Clearwater or Selway River drainages. Understory vegetation is often composed of tall mesic shrubs or may be very sparse under dense forest canopies.

After disturbance, these sites may be dominated by grass or shrub for decades. Desired dominance types for forested lands are summarized in Table 1.

**Table 1. Desired Dominance Types: Idaho Batholith Breaklands**

Dominance Type	Desired Range (%)
Ponderosa pine / mix	21–41
Douglas-fir	19–37
Lodgepole pine	3–7
Western larch / Douglas-fir	3–7
Grand fir / western redcedar	11–21
White pine	0
Subalpine fir / spruce mix	2–4
Seral grass / shrub	8–16

**FW-DC-FOR-02. *Structure:*** On southerly aspects, the forest is one- or two-storied. Younger trees occur as even-aged groups interspersed among the long-lived, shade-intolerant species. Disturbances promote an open canopy of large, old trees. Open canopies encourage an understory of grasses, forbs, and shrubs. Large trees, >20 inches in diameter, are common on these southerly slopes.

Northerly aspects tend to have complex stand structures with even-aged patches interspersed among two- to multi-storied forests. Forests are comprised of Douglas-fir and grand fir; western larch is found here, too. Ponderosa pine is less common than on southerly aspects. This composition reflects the mixed severity fire regime that was most common on these sites. Large, old trees tend to be found on upper slopes or ridgelines or in riparian areas. Those on the ridgelines are generally ponderosa pine or western larch, while the riparian forests are more often grand fir, spruce, or western redcedar.

On southerly aspects, large trees ( $\geq 20$  inches in diameter) are typically ponderosa pine with some Douglas-fir and grand fir, often found on midslopes and ridges. On northerly aspects, large trees of any species are most often found in riparian areas or, outside of riparian areas, in two-storied stands with a few large, old trees that survived fires. The desired size class distribution is summarized in Table 2.

**Table 2. Desired Size Distribution: Idaho Batholith Breaklands**

Size Class	Desired Range (%)
Non-forest	16
Seral grass / shrub	6–15
0–4.9 inches	3–7
5–14.9 inches	25–49
15–19.9 inches	10–20
$\geq 20$ inches	11–23

A portion of the  $\geq 20$  inches in diameter size class meets the description of old growth. On southerly aspects, forests of large trees are typically ponderosa pine with some Douglas-fir and grand fir, often found on midslopes and ridges. On northerly aspects, these large trees are often found in riparian areas, or as two-storied stands.

**FW-DC-FOR-03. *Density:*** On southerly aspects, stand densities are typical of open forest conditions (typically 25–100 large trees per acre), with basal areas at maturity of 80–150 square feet per acre ( $\text{ft}^2/\text{acre}$ ). On northerly aspects, stand densities are generally higher: 75–125 large trees per acre with basal areas of 100–200  $\text{ft}^2/\text{acre}$ .

**FW-DC-FOR-04. *Snags:*** On southerly aspects large ( $> 20$  inches in diameter), soft snags are uncommon. Northerly aspects have a more dynamic snag system, with longer intervals between high levels of snags. The complex stand structures lead to a wide range of snag sizes. Larger snags and down wood are preferred, if available, for longer persistence in the soil and enhanced wildlife habitat. Numbers of snags are 1 to 3 per acre in the  $> 20$  inches in diameter size class and 7–15 per acre in the 10–20 inch diameter size classes. Arrangement may vary from individual trees to groups. On southerly aspects, new snags are created every 10–25 years. On northerly aspects, snags numbers vary widely over time with the stand-replacing disturbance regime. Riparian habitats support the greatest density of large snags. Dead wood on the forest floor is described in the FW-DC-SOIL-01.

**FW-DC-FOR-05. Disturbances and Patch Size:** On southerly aspects, low-severity disturbances occur every 5–50 years, reducing trees per acre and retaining the larger trees. Steep slopes and narrow riparian habitats result in a disturbance interval in riparian and moist habitat inclusions that rarely exceeds 150 years. Patches of large trees are generally large, up to 3,000 acres, and are maintained by frequent, low-severity fires. On northerly aspects, a mix of lethal and mixed-severity disturbances occurs every 40–160 years, with stand-replacing disturbances occurring every 120–160 years. Following stand replacement on northerly aspects, the forest is generally comprised of large patches, up to 1,500 acres, of even-aged stands, that gradually develop a mixed composition and age class as mixed-severity disturbances affect portions of the larger patch. Stand-replacing disturbance boundaries generally follow topographic breaks, such as draws, ridges, and changes in aspect.

Insects and disease; western pine beetles, including mountain pine beetle, Douglas-fir beetle, and *Scolytus* beetle; and *Armillaria*, *Annosus*, and *Phellinus* root rots are at light-to-moderate endemic levels in the landscape, causing sporadic mortality in overstory trees.

#### **Bitterroot Mountains (approximately 764,000 acres)**

**FW-DC-FOR-06. Composition:** On southerly aspects, stands of Douglas-fir, grand fir, western larch, western white pine, and ponderosa pine dominance types are the most prevalent. Grand fir and western redcedar are often found on lower slopes along stream channels.

On northerly aspects, Douglas-fir, grand fir, western larch, and western white pine are the most common dominance types. They tend to occur in even-aged stands, often with older, large-diameter trees that survived fires.

Cedar and western white pine tend to be limited to deeper soils (any aspect) and moist draws (southerly aspects). Seral hardwood trees, such as birch and tall shrubs, are also a distinctive type that establish after fires and may be maintained by lack of tree seed source or root rots. Grand fir and western redcedar are the shade-tolerant species that may establish immediately after disturbance but will always fill in under the forest canopy over time. Mature western redcedar or western hemlock, although not common, may be found on lower slopes and in riparian habitats. The desired range of species composition is found in Table 3.

**Table 3. Desired Dominance Types: Bitterroot Mountains Breaklands**

<b>Dominance Type</b>	<b>Desired Range (%)</b>
Ponderosa pine / mix	9–19
Douglas-fir	14–22
Lodgepole pine	0
Western larch / Douglas-fir	13–20
Grand fir/western redcedar	9–17
White pine	10–25
Subalpine fir/spruce mix	0
Seral grass/shrub	8–15
Non-forest	10

**FW-DC-FOR-07. Structure:** On southerly aspects, young forests are commonly found as small (<10 acres), even-aged patches within a large forest patch that covers an entire hillside. The overall stand structure is often a large patch (3,000 acres) of two-storied or uneven-aged forest, with the smaller patches of young forest embedded within.

On northerly aspects, forests tend to be even-aged after stand-replacing disturbances. Forests that start out even aged usually develop several age classes due to small, low-to-mixed severity disturbances.

Isolated large, live trees (>20 inches in diameter and sometimes >30 inches in diameter) occur on ridges (western larch or ponderosa pine) and in riparian conservation areas (grand fir or western redcedar) at an average density of 2–5 trees per acre (ranging from 0 to covering 20 percent of the acreage), and persist indefinitely. These large size class trees ( $\geq 20$  inches) comprise 17 percent–33 percent of the landscape. These are most often found on ridgelines or in riparian areas. These large size class trees on the breaklands are composed of ponderosa pine, western larch, and grand fir dominance types on the ridges and side slopes. On lower slopes and riparian areas, these large size class trees are often grand fir or western redcedar dominance types. Desired size class distribution is found in Table 4.

**Table 4. Desired Size Distribution: Bitterroot Mountains Breaklands**

Size Class	Desired Range (%)
Non-forest	10
Seral grass / shrub	8–17
0–4.9 inches	6–13
5–14.9 inches	17–36
15–19.9 inches	16–33
$\geq 20$ inches	17–33

A portion of this large tree size class meets the description of old growth as described in *North Idaho Old Growth* (Green et al. 1992, 2011). Old growth on southerly aspects can be old ponderosa pine on hillsides or it could be mixed conifer or grand fir and cedar in riparian areas. On northerly aspects, old growth is often found in riparian areas or as two-storied stands with legacy trees outside of riparian areas.

**FW-DC-FOR-08. Density:** On northerly aspects, young stands may be dense, with over 1,000 stems per acre, or may be widely spaced (100–200 stems per acre) under a hardwood canopy. Dense stands rapidly decrease in density as the canopy closes and trees compete for available moisture. Southerly aspects, especially those with shallow soils, are slower to regenerate to forest cover, have fewer trees per acre, and may support a tall shrub layer for several decades. Typical densities within the large tree size class on the southerly aspect are 45–100 trees per acre.

**FW-DC-FOR-09. Snags:** Snag numbers on southerly aspects range from 0.2–1 per acre in the >20 inches in diameter size class and 1.5–8 per acre in the 10–20 inches in diameter size class. Northerly aspects have 2–5 snags per acre in the >20 inches in diameter size class and 10–20 snags per acre in the 10–20 inch in diameter size class. New snags are recruited frequently through insects, disease, or low-severity fires. A few large, standing (“legacy” or “relict”) live trees—1 to 3 per acre, ranging from 0 percent to 20 percent of the acreage—typically persist following stand-replacing events. Riparian conservation areas support the greatest density of large

snags and down wood (see FW-DC-SOIL-01). Larger diameters are desired, if available, for persistent and more effective wildlife habitat.

**FW-DC-FOR-10. *Disturbances and Patch Size:*** Disturbances tend to reduce Douglas-fir, grand fir, and cedar; result in more open-stand conditions (fewer trees per acre than before the disturbance); and favor retaining larger trees. Intermediate or mixed-severity disturbances are 3–5 times more common than stand-replacing disturbances. Typically, mixed-severity disturbances occur every 40–180 years, and stand-replacing fires occurs every 100–300+ years. Mixed severity disturbances reduce the number of trees per acre, favor shade-intolerant species, reduce canopy layers, and create openings in the stand.

Insects and disease are at low-to-moderate endemic levels on the landscape. If climate change develops as projected, these system drivers are expected to increase in extent and effect.

Following stand replacement on northerly aspects, the forest is generally comprised of patches up to 1,500 acres of even-aged stands, which gradually develop a mixed composition and mixed age classes as mixed-severity disturbances affect portions of the larger patch. Stand-replacing disturbance boundaries generally follow topographic breaks, such as draws, ridges, and changes in aspect. Patches on southerly aspects tend to be uneven-aged and up to 1,500 acres.

## ***Uplands***

### **Idaho Batholith (approximately 441,000 acres)**

**FW-DC-FOR-11. *Composition:*** Douglas-fir, western larch, ponderosa pine, and lodgepole pine form the majority of the seedlings that establish after disturbance. Colder, drier sites are likely to have nearly pure lodgepole pine stands or Engelmann spruce and subalpine fir; warmer or moister sites are usually a mix of species, including western larch, Douglas-fir, and ponderosa pine. Shrubs are prolific and diverse on these sites and may dominate the site for 30 years or more after a disturbance. Ponderosa pine is less common than on breaklands but is long lived and often an influential part of the stand. Grand fir is often the most common species. Grand fir and Engelmann spruce predominate on grand fir mosaic sites. Riparian habitats are often characterized by mature grand fir, western redcedar, or spruce. Desired dominance types are summarized in Table 5.

**Table 5. Desired Dominance Types: Idaho Batholith Uplands**

<b>Dominance Type</b>	<b>Desired Range (%)</b>
Ponderosa pine / mixed	11–23
Douglas-fir	11–23
Lodgepole pine	15–29
Western larch / Douglas-fir	3–7
Grand fir / western redcedar	21–41
White pine	0
Subalpine fir / spruce mix	2–4
Seral grass / shrub	3–7
Non-forest	4

**FW-DC-FOR-12. Structure:** The forest is commonly even-aged or two-aged and often has grand fir mixed with shade-intolerant species. As forests grow after stand-replacing disturbance, they begin to develop additional age classes due to low- or mixed-severity disturbances. For the largest size class, the typical forest character is 5–25 large, old ponderosa pine, Douglas-fir, or western larch trees per acre with a mix of small-to-large sized grand fir. The large size class is most widespread and persistent in riparian areas and adjacent uplands. Desired size class distributions are summarized in Table 6.

**Table 6. Desired Size Distribution: Idaho Batholith Uplands**

Size Class	Desired Range (%)
Non-forest	4
Seral grass / shrub	3–7
0–4.9 inches	6–13
5–14.9 inches	21–41
15–19.9 inches	25–47
≥20 inches	11–25

A portion of this large tree size class meets the description of old growth as described in *North Idaho Old Growth* (Green et al. 1992, 2011). The typical old growth forest character is dominated by large, old grand fir. Because the uneven terrain encourages low- and mixed-severity wildfires, patches of these large (>20 inches diameter) trees historically have been uneven-aged, shade-tolerant species residing in patches exceeding 300 acres. Smaller patches of large, old trees occur as “inclusions” where topography or microsites are sheltered from frequent fires.

**FW-DC-FOR-13. Density:** These stands are generally well stocked, except in the grand fir mosaic. Density varies as small openings develop in the stands over time. Typical basal areas at maturity are 150 to 200 square feet per acre. In the grand fir mosaic, densities in older stands are typically 100 to 200 square feet of basal area per acre.

**FW-DC-FOR-14. Snags:** Recommended numbers of snags that are >20 inches in diameter are 2 to 4 per acre, and an additional 10 to 24 per acre for snags that are 10 to 20 inches in diameter. These snags may be grouped in clumps or found as individuals. Riparian habitats support the greatest density of large snags and down wood (see FW-DC-SOIL-01). Larger material, if available, is preferred for long-term soil maintenance and greater value as wildlife habitat.

**FW-DC-FOR-15. Disturbances and Patch Size:** Mixed-severity disturbance occurs every 30 to 50 years, reducing stand density, removing smaller trees, and making openings in the canopy. At 120 to 200 years, stand replacement occurs, typically leaving about 20 percent of the overall canopy, mostly in riparian areas and isolated upland patches.

Root diseases, Douglas-fir beetle, western spruce budworm, and mountain pine beetle are the most common insects and pathogens. Most of the time, they act to move the forest toward climax stand conditions and maintain more open stands. Insects and disease should be at moderate endemic levels on the landscape.

Douglas-fir is only moderately long-lived on these sites due to root rot susceptibility. On more moist sites, it is often gone from the stand within 80 years of a stand-replacing disturbance. On the drier end, it may persist for over 150 years.

Lodgepole pine is perpetuated by stand-replacing disturbances every 100 to 150 years.

Patch sizes range from 5 to 800 acres.

**Bitterroot Mountains (approximately 339,000 acres)**

**FW-DC-FOR-16. Composition:** Dominance types are primarily western redcedar, grand fir, Douglas-fir, western larch, and western white pine. Ponderosa pine and lodgepole pine are less common seral species; ponderosa pine on southerly aspects and ridges, lodgepole pine on cooler sites. Riparian habitats are often mature western redcedar or grand fir dominance types. Western hemlock also occurs on the Palouse Ranger District and in portions of the North Fork Clearwater drainage. The grand fir mosaic forests are almost pure grand fir or subalpine fir with Engelmann spruce or western white pine. Desired species composition is found in Table 7.

**Table 7. Desired Dominance Types: Bitterroot Mountains Uplands**

Dominance Type	Desired Range (%)
Ponderosa pine / mixed	5–10
Douglas-fir	5–15
Lodgepole pine	3–7
Western larch / Douglas-fir	7–15
Grand fir / western redcedar	15–25
White pine	20–40
Subalpine fir / spruce mix	0–2
Seral grass / shrub	3–7
Non-forest	3

**FW-DC-FOR-17. Structure:** Younger forests are commonly even-aged, with legacy trees. Large, live trees (typically western white pine or western larch, occasionally ponderosa pine and Douglas-fir, on the uplands and western redcedar and grand fir in riparian habitats) persist in groups or as individuals, typically 1 to 3 per acre but varying from 0 trees to 20 percent of the disturbance area following stand replacement. These groups occur mostly as riparian stringers; individual trees are scattered across the hillside and on ridgelines. Old forests usually develop several age classes. The large size class, trees >20 inches in diameter, should be about 12 percent to 24 percent of the landscape and include stands of old forest. Desired size class distribution is found in Table 8.

**Table 8. Desired Size Distribution: Bitterroot Mountains Uplands**

Size Class	Desired Range (%)
Non-forest	3
Seral grass / shrub	3–7
0–4.9 inches	6–13
5–14.9 inches	21–41
15–19.9 inches	24–48
≥20 inches	12–24

A portion of this large tree size class meets the description of old growth as described in *North Idaho Old Growth* (Green et al. 1992, 2011). The typical old forest character is of two types. One

is large, old cedar and/or western hemlock with grand fir and scattered western larch, western white pine, or ponderosa pine. This type is often associated with riparian areas. The second type is comprised of large, old western white pine, western larch, and sometimes ponderosa pine. Smaller patches of old forest occur as “inclusions” where topography and/or local factors locally shelter sites from frequent fires.

**FW-DC-FOR-18. *Density*:** These sites are generally well stocked, except in the grand fir mosaic. Young stands often have up to 600 to 1,000 trees per acre or may be widely spaced (100 to 200 trees per acre) under a hardwood canopy. Dense stands rapidly decrease in density as the canopy closes and trees compete for available moisture. Typical basal areas at maturity (160+ years) are 150–250 square feet per acre. Grand fir mosaic sites have much lower densities, down to about 1/2 of the typical density on nonmosaic sites.

**FW-DC-FOR-19. *Snags*:** Number of snags >20 inches in diameter range from 2 to 5 per acre, and snags 10–20 inches in diameter range from 11 to 21 per acre. Snags are usually arranged in clumps of various sizes, with a few scattered individual snags. Riparian habitats can support the greatest density of large snags and down wood (see FW-DC-SOIL-01) due to extremely long fire return intervals.

**FW-DC-FOR-20. *Disturbances and Patch Size*:** Low and mixed-severity disturbances occur 2 to 3 times as often as stand-replacing disturbances, which occur every 250 or more years. The mixed-severity disturbances reduce the number of trees per acre; create openings in the stand; and favor shade-intolerant, fire-resistant species.

Douglas-fir is fairly short-lived on these sites due to root rot susceptibility. It is often gone from the stand 80 to 120 years after stand-replacing disturbance. Root disease, Douglas-fir beetle, mountain pine beetle, western spruce budworm, and white pine blister rust are the most common insects and pathogens. Most of the time, they act to move the forest toward climax stand conditions, but they also effectively maintain more open stand conditions. Insects and disease are at low-to-moderate endemic levels on the landscape. If anticipated climate change develops as projected, these system drivers (i.e., insects and pathogens) are expected to increase in extent and effect.

Landscape patches start as large expanses of single-storied or simple two-storied stands following stand-replacing events. As stands age, they develop increasing heterogeneity in species composition and size classes across the original disturbance area. Patch sizes range from 5 to 800 acres. Because the uneven terrain encourages low- and mixed-severity wildfires, patches of large (>20 inch diameter) trees historically have been uneven-aged, shade-tolerant species that reside in patches up to 800 acres. The more frequent disturbances tend to be smaller, with stand-replacing disturbances tending toward the larger sizes.

## ***Subalpine***

### **Idaho Batholith (approximately 1,245,000 acres)**

**FW-DC-FOR-21. *Composition*:** On more moderate sites within this setting, Douglas-fir, western larch, and lodgepole pine often form the majority of the stocking after disturbance. Colder, drier sites are likely to have nearly pure lodgepole pine stands; more moderate sites are usually a mix of species. Engelmann spruce, subalpine fir, and grand fir, with inclusions of western redcedar, are the shade-tolerant species that will become established in the understory or in small openings where larger trees have died. Subalpine fir is the most common understory species. Whitebark pine is common above 6,500 feet, either as pure stands or mixed with other species. Riparian habitats are often dominated by large spruce and subalpine fir. Shrubs are prolific and diverse on



these sites, and may dominate for 30 years after disturbance. Table 9 summarizes the desired dominance types for the subalpine setting.

**Table 9. Desired Dominance Types: Idaho Batholith Subalpine**

Dominance Type	Desired Range (%)
Ponderosa pine / mixed	0–0
Douglas-fir	4–7
Lodgepole pine	12–23
Western larch / Douglas-fir	3–6
Grand fir / western redcedar	0–0
Subalpine fir / spruce mix	16–31
Subalpine fir / whitebark pine	13–27
Seral grass / shrub	3–6
Non-forest	20

**FW-DC-FOR-22. Structure:** On the more moderate sites, young stands are commonly an even-aged mix of species, both shade tolerant and shade intolerant. There are often large (>20 inch diameter) old larch, Douglas-fir, subalpine fir, and spruce found in small groups or as scattered individuals. Starting about 50 years after stand-replacing disturbance, forests begin to develop additional age classes. The younger trees under a canopy of older trees or in small openings are characteristically subalpine fir, Engelmann spruce, or grand fir. The typical character of forests in the large tree size class is spruce and subalpine fir with larger, older western larch, Douglas-fir, or lodgepole pine, and is often multi-storied. It is most persistent in riparian areas but may also be found on slopes and ridges.

On the colder and drier sites, forest structure is quite patchy, with openings and a mix of size classes. This structure develops because of slow reforestation after disturbance on these harsh sites and continuing low-level disturbance.

As stands develop, mixed-severity disturbances occur, creating variable-sized gaps. As young stands age, they develop gaps up to a few acres in size. The result is increasing heterogeneity in species composition and size classes over time. Two or more canopy layers are common and provide snowshoe hare and lynx habitat in spruce-fir types. These diverse stands are the most common structure on the landscape. Streams and wet areas are important factors that often remain forested when surrounding forests have stand-replacing disturbance.

Desired size class distribution is summarized in Table 10.

**Table 10. Desired Size Classes: Idaho Batholith Subalpine**

Size Class	Desired Range (%)
Non-forest	20
Seral grass / shrub	3–6
0–4.9 inches	10–20
5–14.9 inches	23–47
15–19.9 inches	10–17

Size Class	Desired Range (%)
≥20 inches	4–6

A portion of the 15–20 inch and ≥20 inch size classes meet the description of old growth as described in *North Idaho Old Growth* (Green et al. 1992, 2011). Old growth is of two types: 1) lodgepole pine can be found in the 15–20 inch size class and comes and goes on the landscape as mountain pine beetle and fire affect it and 2) mixed conifer old growth is quite variable but may be a mix of larch and Douglas-fir or multi-storied subalpine fir and Engelmann spruce, as well as other types. Whitebark pine may also persist and form old growth stands.

**FW-DC-FOR-23. *Density*:** On mesic sites, and at young ages, these stands may have many trees per acre, or they may be slow to regenerate and have few trees per acre for decades. Density varies as the stand ages and disturbances create small openings in the stand or remove understory layers. Higher elevation, colder sites, where whitebark pine may be found, have lower stocking levels, down to 1/2 of the levels found on mesic sites and take longer to reforest following disturbance. Typical basal areas for the large tree size class are 130–200 square feet per acre. Wetter sites, including much of the grand fir mosaic, often have the lower basal areas, with a rich, diverse shrub and forb layer.

**FW-DC-FOR-24. *Snags*:** Snag presence is very dynamic and the amount of standing dead wood varies widely over time. Large expanses of snags are created about every 100 years. Those snags are the larger sizes (>20 inches in diameter), and as they fall, snags numbers decline sharply. Between these periods of extensive snag distribution, snags would be present at lower numbers, about 1 to 3 per acre for snags >20 inches in diameter, and an additional 17 to 28 per acre that are 10–20 inches in diameter. The higher numbers would generally be found after fire events. In lodgepole pine stands, snags >20 inches in diameter are uncommon, less than 1 per acre, while snags 10–20 inches in diameter are much more common, 4 to 13 per acre.

**FW-DC-FOR-25. *Disturbances and Patch Size*:** Low- and mixed-severity disturbances occur frequently (every 30–50 years), reduce stocking levels, and create openings that range from <1 acre to 5 acres. Less frequently (120 to 175 years) stand-replacing disturbances initiate a new even-aged forest. Remnants of the previous stand cover up to 20 percent of the area, usually in riparian areas and isolated patches. Drier sites tend to have mostly stand-replacing disturbances, while moist sites have more mixed disturbances.

Root disease, Douglas-fir beetle, spruce budworm, and mountain pine beetle are the most common insects and pathogens. Most of the time, they act to move the forest toward uneven-aged, climax stand conditions, but they also maintain more open stand conditions. Lodgepole pine across the landscape represents a variety of size and age classes so that not all of it is susceptible to mountain pine beetle at the same time.

Patch sizes range from 10 acres to 1,000 acres.

#### **Bitterroot Mountains (approximately 501,000 acres)**

**FW-DC-FOR-26. *Composition*:** On more moderate sites within this setting, Douglas-fir, western larch, western white pine, and lodgepole pine are important shade-intolerant species that are the primary dominance types after stand replacement. Engelmann spruce, subalpine fir, and mountain hemlock are the shade-tolerant/climax species. These species may codominate with the shade-intolerant species following disturbance or may gradually establish under the canopy of seral species. Which species dominate depends on the time since stand replacement, microclimatic conditions, and seed availability. Riparian habitats are dominated by mature Engelmann spruce,

mountain hemlock, subalpine fir, grand fir, and western redcedar. Elevations above 6,500 feet may support whitebark pine and alpine larch. Desired species composition is found in Table 11

**Table 11. Desired Dominance Types: Bitterroot Mountains Subalpine**

Dominance Type	Desired Range (%)
Ponderosa pine / mix	0–0
Douglas-fir	7–13
Lodgepole pine	18–38
Western larch / Douglas-fir	4–8
Grand fir / western redcedar	0–0
White pine	5–9
Subalpine fir / spruce mix	8–18
Subalpine fir / whitebark pine	11–20
Seral grass / shrub	6–12
Non-forest	14

**FW-DC-FOR-27. Structure:** Young forests (<5 inches in diameter) are commonly even-aged with large tree relicts surviving from previous disturbances. Those relicts may cover up to 20 percent of the area and may occur as individual trees or in clumps. Riparian zones have less frequent stand-replacing disturbance and are dominated by climax species. Starting about 50 years after stand-replacing disturbance, forests begin to develop additional age classes and are multi-storied. The younger trees under a canopy of older trees or in small openings are characteristically subalpine fir, Engelmann spruce, or grand fir. The typical mature forest, comprised of large trees, includes large, old western larch and Douglas-fir with scattered lodgepole pine; whitebark pine; or mature subalpine fir, Engelmann spruce, or mountain hemlock. Old forests usually develop several age classes. Desired size class distribution is found in Table 12.

**Table 12. Desired Size Classes: Bitterroot Mountains Subalpine**

Size Class	Desired Range (%)
Non-forest	14
Seral / grass shrub	11–23
0–4.9 inches	3–5
5–14.9 inches	39–79
15–19.9 inches	7–14
≥20 inches	4–8

A portion of this large tree size class meets the description of old growth as described in *North Idaho Old Growth* (Green et al. 1992, 2011). Old growth is of two types: 1) lodgepole pine can be found in the 15–20 inch size class and comes and goes on the landscape as mountain pine beetle and fire affect it and 2) mixed conifer old growth is quite variable but may be a mix of larch and Douglas-fir or multi-storied subalpine fir and Engelmann spruce, as well as other types. Whitebark pine may also persist and form old growth stands, although they are less common now that blister rust has affected this species.

**FW-DC-FOR-28. *Density*:** The mesic (i.e., more moist) sites are generally well stocked, although density varies over time. Higher elevation, colder sites have lower densities, typically one-half of the density expected on the mesic sites. Young stands often have 600–1,000 or more trees per acre, especially in lodgepole types. Typical basal areas after 120 or more years are 100–200 square feet per acre.

**FW-DC-FOR-29. *Snags*:** The amount of standing dead wood (i.e., snags) varies widely over time, and large expanses of snags are created at about 100-year intervals. Large-diameter snags fall over relatively quickly. The remaining snags in the stands, 30–75 years after disturbance, are relatively small-diameter snags. Snag numbers are 1–3 per acre for snags >20 inches diameter, except in lodgepole pine stands where the number is <1 per acre. Snag numbers are 16–28 per acre for snags that are 10–20 inches in diameter, except in lodgepole pine stands where the number is 4–12 snags per acre in this size range. Riparian habitats support higher densities of large snags and down wood (see FW-DC-SOIL-01).

**FW-DC-FOR-30. *Disturbances and Patch Size*:** Root disease, Douglas-fir beetle, fir engraver beetle, spruce beetle, mountain pine beetle, and white pine blister rust are the most common insects and pathogens. Typically, insects and pathogens act to move the forest toward climax stand conditions but also maintain more open stand conditions. Lodgepole pine between 80 and 110 years old is readily susceptible to mountain pine beetle outbreaks and provides a fluctuating supply of snags for wildlife use.

Disturbances tend to be stand replacing. Patch sizes for the seral shrub and seedling/sapling sizes are generally <100 acres, but approximately 30 percent of the patches may exceed 1,000 acres. As young stands age, they develop gaps up to a few acres in size. Stand structure becomes more complex over time. Two or more canopy layers are common and provide snowshoe hare and lynx habitat in spruce-fir types.

### ***Across Biophysical Settings***

**FW-DC-FOR-31.** The forestland biophysical setting desired conditions provide diverse habitats for wildlife. Old forest habitats are well represented across the landscape in amounts and distribution that provide connectivity for wildlife species. The average percentage of old forest in a geographic area varies over time; however, the total percentage of old forest is within the natural range of variability.

**FW-DC-FOR-32.** Wildlife species associated with snag habitat find large diameter snags and logs, fallen branches, and other forms of coarse woody debris, as well as areas with thick leaf-litter.

**FW-DC-FOR-33.** Forest stand structural characteristics provide microhabitat and microclimate conditions capable of supporting species diversity consistent with desired conditions for wildlife and soils.

**FW-DC-FOR-34.** Aspen (*Populus tremuloides*) persist over time at appropriate sites across its range on the Forest.

### **Objectives**

**FW-OBJ-FOR-01.** Every 10 years, treat vegetation on about 100,000 acres of the **Idaho Batholith breaklands** (13 percent of the total breaklands acreage) using a combination of prescribed fire, timber harvest, and wildland fire in order to favor drought-tolerant, disease-resistant, shade-intolerant species. These treatments will initiate the restoration process.

Restoration activities will favor ponderosa pine on southerly aspects and Douglas-fir, ponderosa pine, and western larch on northerly aspects.

**FW-OBJ-FOR-02.** Every 10 years, treat vegetation on about 84,000 acres the **Bitterroot Mountains breaklands** (7 percent of the breaklands) through a combination of timber harvest, prescribed fire, or wildland fire. These treatments will initiate the restoration process. Restoration activities will be designed to favor ponderosa pine, western white pine, and western larch where appropriate.

**FW-OBJ-FOR-03.** Every 10 years, treat vegetation on about 16,000 acres of the **Idaho Batholith uplands** (3 percent of the total uplands), using a combination of timber harvest, prescribed fire, or wildland fire to restore seral species (ponderosa pine, western larch, and lodgepole pine) and reduce grand fir dominance. These treatments will initiate the restoration process. Restoration will include establishing additional trees of those species; conserving existing large, old trees; or favoring retention of these species when thinning.

**FW-OBJ-FOR-04.** Every 10 years, treat vegetation on about 22,000 acres **Bitterroot Mountains uplands** (3 percent of the uplands) through a combination of timber harvest, prescribed fire, or wildland fire. These treatments will initiate the restoration process. Restoration activities will be designed to favor western white pine on moist sites; conserve existing large, old ponderosa pine on drier sites or establish additional ponderosa pine; and conserve large, old western larch where it occurs while establishing additional larch on appropriate sites. Restoration may also include favoring the desired species when thinning young stands.

**FW-OBJ-FOR-05.** Every 10 years, treat vegetation on about 47,000 acres the **Idaho Batholith subalpine setting** (5 percent of the subalpine acreage) using a combination of timber harvest, prescribed fire, or wildland fire. These treatments will initiate the restoration process. Restoration activities will favor whitebark pine at higher elevations and ponderosa pine, western larch, and Douglas-fir on more moderate sites or reestablish young lodgepole pine stands. Restoration may also be designed to encourage development of multi-storied, subalpine fir stands to provide snowshoe hare habitat.

**FW-OBJ-FOR-06.** Every 10 years, treat vegetation on about 89,000 acres of the **Bitterroot Mountains subalpine setting** (10 percent of the subalpine setting) through a combination of timber harvest, prescribed fire, or wildland fire. These treatments will initiate the restoration process. Restoration will be designed to favor whitebark pine at higher elevations and western larch and Douglas-fir on more moderate sites or reestablish young lodgepole pine stands. Restoration may also be designed to encourage development of multi-storied subalpine fir stands.

**FW-OBJ-FOR-07.** Over the life of the plan, treat 500 acres of aspen habitat with prescribed fire or vegetative manipulation to maintain and restore the species.

## Guidelines

**FW-GDL-FOR-01.** The oldest forests, particularly very large ( $\geq 30$  inch) western redcedar, grand fir, ponderosa pine, and western larch should be retained when planning management activities.

**FW-GDL-FOR-02.** To ensure sufficient organic materials to maintain nutrient cycling and soil biology, and to provide habitat structure for various terrestrial wildlife, the levels (tons/acre) listed in Table 13 of downed coarse woody material (greater than 3 inches) should be maintained onsite after harvest or fuels management activities.

**Table 13. Coarse Woody Material to Maintain by Habitat Type Group**

Habitat Type Group	Regeneration Harvest (tons/acre)	Intermediate Harvest and Fuels Reduction (tons/acre)
Warm/Dry	5–13	3–8
Moderately Warm/Dry	7–14	4–9
Moist Mixed Conifer	17–33	10–20
Cool, Wet/Moist Subalpine Fir	7–18	4–11
Cool/Cold Dry Upper Subalpine	7–24	4–15

## **Grasslands and Shrublands**

### **Desired Conditions**

**FW-DC-GS-01.** Grassland plant communities are dominated by native bunchgrasses, and conifers are absent or occur as scattered individuals. Non-forested breakland vegetation is dominated by bluebunch wheatgrass, Idaho fescue, prairie junegrass, and Sandburg’s bluegrass, along with a variety of native forbs, including arrowleaf balsamroot, lupine, cinquefoil, geranium, lomatium, phlox, and yarrow. Lower elevation grasslands also include sand dropseed, three-awn, and needle-and-thread grass.

**FW-DC-GS-02.** Mid-to-high elevation grassland and dry meadow communities are dominated by native species, including Idaho fescue, mountain brome, blue wildrye, and western needlegrass and by assorted sedges and forbs. Conifers do not encroach on riparian meadows, upland meadows, grasslands, or climax shrub communities. Subalpine grasslands are dominated by native grasses, sedges, and forbs.

**FW-DC-GS-03.** Shrubland plant communities on cool, moist, and northerly exposure sites are dominated by ninebark, ocean spray, alder, maple, snowberry, menziesia, and huckleberry, as well as native grasses, sedges, and forbs. On warm, dry sites, mountain mahogany (primarily a nonsprouting species), hackberry, and smooth sumac comprise the dominant shrub vegetation, while the understory is comprised of a variety of native grasses, sedges, and forbs. Cold subalpine shrublands support a variety of native shrubs, including heather and grouse whortleberry, as well as native grasses, sedges, and forbs.

**FW-DC-GS-04.** Riparian meadows on all settings are dominated by native species, such as water sedge (*Carex aquatilis*) and other riparian grasses, sedges, forbs, and shrubs. They are primarily maintained in an open condition by a seasonally high water table and by fire or mechanical treatment of encroaching trees.

### **Botanical Species**

**FW-DC-GS-05.** The threatened species, Spalding’s catchfly (*Silene spaldingii*) is naturally found infrequently on the Forest but persists over time in grassland habitats dominated by Idaho fescue and prairie June grass that generally support a diverse array of forbs on well-developed soils. The threatened species, MacFarlane’s four o’clock (*Mirabilis macfarlanei*) persists over time in low elevation, dry canyon grasslands dominated by bluebunch wheatgrass, sand dropseed, and red-threawn that also may support mountain mahogany, hackberry, and smooth sumac. The unique habitat features for MacFarlane’s four o’clock is very limited on the Forest and no occurrences

have been found; however, populations do occur very near to the Forest boundary. Habitat for these threatened species continues to be protected and/or conserved, enabling individual plants to reproduce and existing populations to potentially expand.

**FW-DC-GS-06.** Dasynotus (*Dasynotus daubenmirei*) and Pacific dogwood (*Cornus nuttallii*) persists in transitional shrubland and forested habitats throughout their ranges in the Middle Fork Clearwater River and its major tributaries.

**FW-DC-GS-07.** Douglas clover (*Trifolium douglasii*) and sticky goldenweed (*Pyrrocoma hirta* var. *sonchifolia*) persists in seasonally moist meadows over basalt on the Palouse Ranger District, particularly in the headwaters of the Potlatch River.

**FW-DC-GS-08.** Spacious monkeyflower (*Mimulus ampliatus*) persists in seeps and on seasonally moist ground in bunch grasslands, primarily in the lower Salmon River Canyon.

**FW-DC-GS-09.** Hazel’s prickly phlox (*Linanthus pungens* ssp. *hazeliae*) persists in open grasslands and rocky slopes in the Rapid River and lower Salmon River canyons.

## Objectives

**FW-OBJ-GS-01.** To maintain existing meadows and grasslands, reduce conifer encroachment into meadows and grasslands (500 acres/year).

**FW-OBJ-GS-02.** Over the life of the Plan, treat invasive species in or adjacent to all known populations of Spalding’s catchfly.

**FW-OBJ-GS-03.** In the range of Dasynotus and Pacific dogwood, treat 15,000 acres of forest or decadent shrublands over the life of the Plan to maintain habitats utilized by these species.

**FW-OBJ-GS-04.** Over the life of the Plan, reestablish appropriate hydrologic function to restore 100 acres of meadow habitat suitable for Douglas clover and sticky goldenweed.

**FW-OBJ-GS-05.** Over the life of the Plan, maintain or improve at least 3 acres of camas habitat at Musselshell Meadows and restore 3 acres of camas habitat at McComas Meadows.

## Guidelines

**FW-GDL-GS-01.** To protect huckleberry plants, non-destructive berry harvesting methods should be used.

## Soil Quality and Productivity

### Desired Conditions

**FW-DC-SOIL-01.** Long-term soil productivity and soil quality in the productive land base is not impaired and supports desired conditions for terrestrial and aquatic ecosystems. Soil functions provide resources, ecological processes, and ecosystem services in perpetuity.

**Table 14. Soil Ecological Functions with Attributes and Indicators of Long-term Soil Productivity**

Soil Function	Selected Attributes	Soil Quality Indicator	Desired Condition	
Biological	Roots and Aeration	Root growth	Root growth, both vertically and laterally, is unimpeded by compaction.	
		Root Distribution	Root distribution and depth is expected for vegetation type and successional stage or desired plant community.	
		Porosity	Macro and micro-pores are as expected for soil texture and type.	
	Plant Community Potential and Thermodynamics	Plant Community Composition	The soil is capable of supporting a distribution of desirable plant species by vegetative layer (i.e. trees, shrubs, herbaceous) as identified in the potential plant community. The site has not transitioned to an undesirable state.	
		Canopy Cover and Soil Cover	Soil temperature and moisture is maintained in conditions to support desired floral and faunal communities.	
Hydrologic	Infiltration	Surface Structure	Surface structure is as expected for the site (e.g. granular, subangular blocky, single grain).	
		Surface Pore Space	There are common to many tubular pores with high vertical continuity.	
		Surface Crusting	Surface crusting is as expected for the site.	
	Water Absorption and Storage	Available Water	Site water is as expected for the soil type or has been improved.	
	Water Transmission	Subsurface Flow Connectivity	Maintain subsurface flow connectivity with the streams (i.e. subsurface flow is not obstructed or intercepted).	
Nutrient Cycling	Organic Matter Composition	Forest or Rangeland Floor	Forest and rangeland floor is distributed and the composition is appropriate for vegetation type and successional stage. Rangeland to be determined by Ecological Site Descriptions (ESD) specific to soil type.	
		Fine Woody Material (less than 3 inches)	Fine woody material is on site in various stages of decay in amounts appropriate for habitat type.	
		Coarse Woody Material (Greater than 3 inches)	Coarse woody material is on site in various stages of decay and size classes in amounts appropriate for habitat type.	
			Forest Habitat Type	Tons/Ac
			Warm/Dry	3 - 8



Soil Function	Selected Attributes	Soil Quality Indicator	Desired Condition	
			Mod. Warm/Dry	4 - 9
			Moist Mixed Conifer	10 - 20
			Cool, Wet/Moist Subalpine	4 - 11
			Cool/Cold Dry Upper Subalpine	4 - 15
	Nutrient Availability	Surface (A) horizon or mollic layer	“A” horizon is present, well distributed, not fragmented. The depth of the A horizon is within expected range.	
		Nutrient Deficiency	Soil nutrients are maintained at levels to support desired vegetation.	
		Ash Cap	Soil ash cap is intact and as expected for the site.	
Support and Stability	Stability	Surface erosion (wind, rill, or sheet)	Erosion is occurring at natural levels or not evident. Bare ground is within expected ranges.	
		Site stability (mass erosion, landslide prone)	Site stability potential is unchanged or stability has been improved.	
	Deposition	Soil deposition	Deposition is at natural levels and recent depositional material is vegetated.	
Filtering and Buffering	Filtering	Soil contamination	Soil is free of chemical pollutants or industrial contamination.	

**FW-DC-SOIL-02.** The total soil resource commitment (TSRC) is no more than 5 percent of watersheds at the 6<sup>th</sup> HUC level. The soil stability and support function (see Table 14) is maintained within the TSRC.

## Objectives

**FW-OBJ-SOIL-01.** Within the first decade, initiate restoration on 2,500 acres of areas with impaired soil functions. Restoration activities include, but are not limited to, decompaction by actions such as scarification or ripping, organic matter amendments such as mulching or coarse woody debris, or restoration of native plant communities.

## Guidelines

**FW-GDL-SOIL-01.** Areas mapped as landslide-prone should be field verified at the project level for suitability.

## Fire

### Desired Condition

**FW-DC-FIRE-01.** Wildland fire occurs as an essential ecological process in maintaining healthy, resilient ecosystems, as appropriate for the vegetation type and other resource objectives. Fire disturbance contributes to vegetation diversity across the landscape. Fire disturbances generally range from a small spot-fire, to thousands of acres.

**FW-DC-FIRE-02.** Fire occurs at smaller scales in areas where resource objectives and infrastructure limit the desirability of a wildland fire event. Hazardous fuels are reduced within the wildland urban interface and other areas where values are at-risk. Fuel conditions in the wildland urban interface would limit crown fire potential and allow for safe, effective fire management opportunities.

**FW-DC-FIRE-03.** Fuel characteristics allow for the full range of management response to wildland fire. Fuel levels adjacent to the wildland urban interface, other infrastructure, or historic or cultural resources provide fire managers with safe, feasible opportunities to achieve protection measures.

**FW-DC-FIRE-04.** Natural fuels emulate the structure, species mix, spatial pattern, extent and resiliency of the natural fire regime for the particular planning area.

**FW-DC-FIRE-05.** Fuel conditions within the wildland urban interface provide opportunities to safely achieve the specific protection measures identified for the area/resource through vegetation management, and outreach is conducted to potentially affected publics on creating defensible space on private lands.

## Objectives

**FW-OBJ-FIRE-01.** Over the life of the plan, treat 2,000-4,000 acres of fuels within the wildland urban interface.

**FW-OBJ-FIRE-02.** Annually, treat 10,000-15,000 acres of fuels outside the wildland urban interface.

**FW-OBJ-FIRE-02.** Within 5 years of plan approval, remove or reduce the volume of hazardous fire fuels in municipal watersheds such that the risk of high-severity fire is low.

## Standards

**FW-STD-FIRE-01. Riparian Habitat.** Mechanical fuel treatments proposed in RCAs with the specific objective of reducing fire behavior immediately adjacent (40 meters) to Forest Service administrative sites and communities at risk may be conducted only where existing stream conditions are maintained, and adverse effects to threatened and endangered aquatic species, species of conservation concern, and their habitats are avoided. To achieve desired fuel conditions where available data indicate desired conditions in FW-DC-RHAS-11, Table 15, are not being met, the proposed activities should include an aquatic restoration component.

**FW-STD-FIRE-02.** To meet aquatic ecosystem desired conditions when planning prescribed fire projects see FW-STD-RHAS-03 and FW-STD-TBR-14.

## Guidelines

**FW-GDL-FIRE-01. Riparian Habitat.** Fire suppression strategies should recognize the role of fire in ecosystem function and identify those instances where fire suppression actions could be damaging to long-term ecosystem function.

**FW-GDL-FIRE-02. Riparian Habitat.** Minimum Impact Suppression Tactics (MIST) should be used inside of RCAs.

**FW-GDL-FIRE-03. Riparian Habitat.** Incident bases, camps, helibases, helispots, staging areas, and other centers for incident activities should be located outside of RCAs, unless no other alternatives exist.

**FW-GDL-FIRE-04. Aquatic Species.** When drafting water from streams, pumps should be screened to prevent fish entrainment. All equipment used in water should be treated to prevent the introduction of aquatic invasive species and aquatic borne diseases.

**FW-GDL-FIRE-05. Aquatic Species.** To meet aquatic ecosystem desired conditions when planning fuels projects, see FW-GDL-TBR-08.

**FW-GDL-FIRE-06. Scenic Character.** To maintain scenic character, naturally occurring fuel breaks should be used instead of constructed fire line to minimize manmade contrasts where possible on the landscape. All constructed firelines in areas with high or very high SIO should be rehabilitated within 3 years to reduce created contrasts to the desired scenic character.

## Aquatic Ecosystems

### *Physical Integrity*

#### Desired Conditions

**FW-DC-WTR-01.** Watersheds<sup>1</sup>, stream channels, and floodplains are functioning properly (i.e., transporting and storing natural loads of water, sediment, and woody material) and stable. Channels maintain their proper dimension (width-to-depth ratio), pattern (sinuosity), profile (slope/gradient), sediment load, sediment substrate composition, and woody material composition<sup>2</sup> for a given ecosubsection (as defined in FW-DC-RHAS-11). Floodplains are hydrologically connected to stream channels by either flowing water from the hillside through the floodplain to the channel or by passing flood discharges.

**FW-DC-WTR-02.** Surface water (e.g., instream flows) supports riparian and aquatic ecosystems and habitats (as described in FW-DC-RHAS-01); maintains the stability and effective function of stream channels (as described in FW-DC-WTR-01); and provides for downstream uses. The timing, magnitude, duration, and spatial distribution of the range of instream flows are within the natural range of variation<sup>3</sup>.

**FW-DC-WTR-03.** The timing, variability, and duration of floodplain inundation are within the natural range of variation. The distribution of channels with floodplain connectivity is close to that found in reference watersheds of similar size and geology.

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<sup>1</sup> For this plan component, the term *watershed* refers specifically to 6<sup>th</sup>-level hydrologic unit code (HUC-6) scale watersheds, unless otherwise indicated. The 6<sup>th</sup>-level HUC is correctly identified as a sub-watershed scale.

<sup>2</sup> Woody material ‘composition’ is described by the spatial and temporal distribution of wood within and adjacent to stream channels and the size, shape, and volume of material in relation to channel size.

<sup>3</sup> Stream channels, floodplains, water quality, sediment regimes and streamflows can be significantly altered by natural events like floods, landslides, and fires. Although these effects are dramatic and often much greater than changes resulting from management activities, these events are beyond our ability to control. When such events occur, changes to the aquatic system are considered to be within the natural range of variability.

**FW-DC-WTR-04.** The sediment regime<sup>4</sup> for all stream channels is within the natural range of variation. Sediment delivery to streams is of the types, quantities, and rates that support the natural instream sediment transport rates and instream sediment substrate composition.

**FW-DC-WTR-05.** Streams with adjacent, forested riparian areas have large woody debris recruited into the system at an amount and distribution required to maintain physical and biological complexity (see FW-DC-RHAS-11, Table 15).

**FW-DC-WTR-06. Water Quality.** Surface water quality<sup>5</sup> for domestic, agriculture, recreational uses, aesthetics, and instream flows meets<sup>6</sup> or exceeds State of Idaho water quality standards for designated and existing beneficial uses, where attainable. No Clean Water Act Section 303(d) State-listed impaired or threatened water bodies occur on National Forest System lands. No documented lands/areas are delivering water, sediment, nutrients, chemical pollutants that would result in water pollution that is significantly and/or permanently above natural or background levels.

**FW-DC-WTR-07. Water Quality.** Access routes to and vehicle parking at dispersed campsites do not contribute sediment to nearby water, compact or expose tree roots, or impact other cultural resources. Motor vehicle use and parking associated with cross-country travel for the purpose of dispersed recreation does not result in adverse effects to water quality or impede attainment of aquatic habitat desired conditions.

**FW-DC-WTR-08. Groundwater.** Groundwater quality meets State of Idaho water quality standards and fully supports designated and existing beneficial uses, where attainable. The Forest has no documented lands or areas that are delivering water, sediment, nutrients, and/or chemical pollutants that would result in groundwater pollution that violates the State of Idaho's drinking water quality standards and/or is permanently above natural or background levels. The timing, variability, and water table elevation in groundwater aquifers is within the natural range of variability and is not measurably altered by management activities.

**FW-DC-WTR-09. GDE.** Groundwater Dependent Ecosystems (GDEs), including peatlands, bogs, fens, wetlands, seeps, springs, riparian areas, groundwater-fed streams and lakes, and groundwater aquifers, persist in size, seasonality (and annual) timing, and water table elevation within the natural range of variability.

## Objectives

**FW-OBJ-WTR-01.** Within 10 years of plan approval, restore 2 miles of stream and adjacent floodplain that have been modified (i.e., have channel dimensions, patterns, profiles, and/or

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<sup>4</sup> Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.

<sup>5</sup> 'Water quality' as is used in this component is a measure of the physical chemical properties of water that compares existing quantities of pollutants (e.g., bacteria) to maximum (by Idaho State Standards) quantities of pollutants allowed while still attaining desired beneficial uses.

<sup>6</sup> For restoration projects that disturb stream channels or soils adjacent to stream channels (e.g., culvert repair/replacement or instream aquatic habitat restoration), a short-term departure from State water quality standards (e.g., turbidity) may occur provided such activities have no long-term threat of impairment to water quality or the beneficial uses of water. The term 'short-term' is the time required for water quality to return to pre-project conditions, and this length of time varies by project type and construction period length.

sediment regimes outside the natural range of variation) by past activities per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-02.** Beginning 2 years after plan approval, implement 5 projects annually that improve water quality in water bodies that are pollutant impaired per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-03.** At recreational, administrative, or livestock handling facilities where water quality is impaired by excess delivery of chemical, sediment, nutrient, or biological pollutants, repair or relocate these facilities within 2 years<sup>7</sup> of identification of needing repairs per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-04.** Within 10 years of plan approval, complete all essential projects within 2 watersheds that have approved watershed restoration action plans (WRAPs), such that watershed condition class is improved (i.e., rating level is decreased from a ‘3’ to a ‘2’ or from a ‘2’ to a ‘1’) per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-05.** Within 10 years of plan approval, complete restoration projects within 10 watersheds, such that the attribute score of one Watershed Condition Class attribute is improved (i.e., rating level is decreased from a ‘3’ to a ‘2’ or from a ‘2’ to a ‘1’) per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-06.** Implement at least 500 acres of soil, water, and watershed improvements each year<sup>8</sup>. Improvements include (but are not limited to) road and trail decommissioning; road, trail, and airstrip reconstruction, relocation, or improvement; skid trail and landing decompaction; abandoned mine land reclamation; stream-channel, floodplain, wetland, and riparian area reconstruction; burned area rehabilitation; treatment and/or reforestation of areas impacted by wildfire or insect and disease infestations; and invasive species treatments per the Aquatic Restoration Strategy in Appendix B.

**FW-OBJ-WTR-07.** Implement the following for roads, trails, airstrips, and linear features<sup>9</sup> that have been assessed by an interdisciplinary team of resource specialists and have been determined by a responsible official to be contributing to the degradation of a watershed (e.g., excess sediment, water, or pollutants are being delivered to waterbodies):

- a) Decommission, reconstruct, or relocate an average of 25 miles of National Forest System roads and trails each year
- b) Decommission, or convert to a specified NFS road or trail, an average of 25 miles of unauthorized roads and trails each year
- c) Hydrologically disconnect the drainage system on an average of 100 miles of NFS and unauthorized roads, trails, linear features, and airstrips each year.<sup>10</sup>

<sup>7</sup> The 2-year time period is for planning and design work to be completed and to have construction/reconstruction work started. Actual construction work may require more than 2 years to complete.

<sup>8</sup> Restoration projects in this objective do not include projects that are implemented specifically to mitigate adverse impacts of other Forest management projects (e.g., timber sales).

<sup>9</sup> Linear features include powerline right of ways and utility corridors

<sup>10</sup> The measurement is from the installed drain to either the next upslope drainage feature, or the nearest reverse in grade, whichever comes first.

**FW-OBJ-WTR-08.** Improve 10 acres<sup>11</sup> of flood plains, wetlands and/or riparian vegetation each year per the Aquatic Restoration Strategy in Appendix B. Improvements can include, but are not limited to, the following:

- a) Planting vegetation selected specifically for a site
- b) Constructing, reconstructing, or improving barriers that restrict livestock access and/or damage
- c) Constructing, reconstructing, or improving barriers that restrict user access, where such access has resulted in resource damage.
- d) Treating invasive plant infestations to repopulate with native plant communities.

**FW-OJB-WTR-09.** Within 10 years of Plan approval, restore one GDE that was damaged or degraded by previous management activities (e.g., abandoned mines, dredging).

## Guidelines

**FW-GDL-WTR-01.** To maintain State of Idaho water quality standards, all land management activities should incorporate best management practices appropriate to that activity.

**FW-GDL-WTR-02.** To maintain stream channel stability, large woody debris should not be cut and/or removed from stream channels unless it threatens critical infrastructure<sup>12</sup>.

## *Riparian Habitat and Aquatic Species*

### Desired Conditions

**FW-DC-RHAS-01.** Vegetation in streamside riparian conservation areas (RCAs) is composed of a diverse structure of plant communities that perpetuate the distribution of woody debris, soil cover, streambank stability, and thermal control characteristic of resilient aquatic and riparian ecosystems, while providing habitat structure and components for wildlife. Forested RCAs are comprised of a multi-storied canopy, with abundant large trees in the overstory, abundant large snags, and a well-developed understory of shade tolerant trees and shrubs. Non-forested RCAs are comprised of native grasses, forbs, and shrubs that contribute to streambank stability, stream shading, and development of undercut streambanks. Ground cover includes organic litter, shrubs, downed wood, grasses, and forbs, sufficient to provide sediment buffering from soil moving off of upslope areas. Measured by stream reach, exposed mineral soil does not exceed 5 percent.

**FW-DC-RHAS-02.** Periodic floods, low-to-moderate severity fire, and wind-throw are the primary disturbance factors shaping vegetation patterns in RCAs. RCAs are periodically affected by wildfires, which result in pulsed disturbances that contribute to long term productivity of streams. Fuel composition in upland and riparian areas supports ecosystem processes and disturbance regimes characteristic of historic conditions. Fires within RCAs predominately burn at low to moderate severity, with high severity not exceeding 10 percent of total RCA acres within a fire perimeter.

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<sup>11</sup> These acres can be, but are not necessarily, included in the acres improved for soil, water, and watershed improvements in FW-OBJ-WTR-02.

<sup>12</sup> When natural log jams are a threat to infrastructure (e.g., roads, bridges, culverts) and the failure of these structures would result in channel instability, removing large woody debris would be a possible action to maintain stream channel stability.

**FW-DC-RHAS-03.** Less than 30 percent of streamside RCAs in Potential Population Stronghold watersheds are affected by persistent development (e.g., streamside roads, developed recreation sites, administrative sites), and less than 10 percent in Population Stronghold watersheds, thus providing resilience to the effects of natural disturbances to stream temperature, sediment delivery, and streambank and streambed stability.

**FW-DC-RHAS-04.** Native fish species present in the North Fork Clearwater subbasin include but are not limited to westslope cutthroat trout, interior redband trout, and bull trout, and these species are widely distributed within the mainstem river and all tributaries with suitable habitat. Native fish species present in the Forest’s portion of the Lower Clearwater, Middle Fork Clearwater, Lochsa, Lower Selway, Upper Selway, and South Fork Clearwater subbasins include but are not limited to fall chinook salmon, spring/summer chinook salmon, steelhead trout, bull trout, westslope cutthroat trout, interior redband trout, and Pacific lamprey. Watershed and habitat conditions in these subbasins are consistent with goals identified in Idaho Department of Fish and Game 5-year management plans, NOAA Fisheries Snake River Recovery Plan for steelhead trout in the Clearwater basin, and the U.S. Fish and Wildlife Service’s bull trout recovery plan.

**FW-DC- RHAS-05.** Native fish species present on the Nez Perce/Clearwater National Forest’s portion of the Lower Salmon, Little Salmon, and Middle Salmon—Chamberlain subbasins include but are not limited to fall chinook salmon, spring/summer chinook salmon, sockeye salmon, steelhead trout, bull trout, westslope cutthroat trout, interior redband trout, and Pacific lamprey. Habitat conditions in these subbasins are consistent with goals identified in Idaho Department of Fish and Game species’ management plans, NOAA Fisheries Snake River Recovery Plan for steelhead trout and spring/summer chinook salmon in the Salmon basin, and the U.S. Fish and Wildlife Service’s bull trout recovery plan.

**FW-DC-RHAS-06.** Management efforts work to eliminate or minimize the adverse effects of activities or non-essential facilities on the Nez Perce-Clearwater National Forests that worsen or prolong conditions limiting the production or recovery of Snake River steelhead trout, Snake River spring/summer chinook salmon, Snake River fall chinook salmon, Columbia River bull trout, and species of conservation concern.

**FW-DC-RHAS-07.** Robust populations of western pearlshell mussels are present in the Clearwater, Lochsa, Selway, South Fork Clearwater, and Salmon Rivers and all tributaries with suitable habitat.

**FW-DC-RHAS-08.** Known sites and habitat for the threatened species water howellia (*Howellia aquatilis*) persist over time in special aquatic habitats of vernal pools and backwaters in larger, low elevation valleys.

**FW-DC-RHAS-09.** Conserving Population Stronghold Watersheds and establishing additional Population Stronghold Watersheds provide resilience to watershed scale disturbances and anticipated changes associated with climate change (e.g. earlier runoff and reduced summer streamflows). Native aquatic populations associated with these strongholds exhibit genetic integrity and life history strategies necessary to assure self-sustaining populations, and are strong, well-distributed, and well-connected, forming metapopulations in each river subbasin that can expand and be resilient to natural disturbances. Human-caused migration barriers are absent unless they are needed to prevent invasions by non-native species.

**FW-DC-RHAS-10.** Aquatic invasive species are absent from most or all water bodies. Non-native brook trout populations have not expanded and have reduced abundance in streams and lakes where their presence is causing undesirable effects to native species.

**FW-DC-RHAS-11.** Specific desired conditions related to riparian function, streams, and aquatic

species at the stream reach scale are as follows:

- Life stage desired water temperatures for salmonids include the following<sup>13</sup>:
  - For streams supporting chinook salmon, steelhead trout, westslope cutthroat trout, and redband trout summer rearing: desired temperatures are between 10° and 16°C
  - For streams supporting chinook salmon, steelhead trout, westslope cutthroat trout, and redband trout spawning and incubation: desired temperatures are below 14 °C
  - For streams supporting juvenile bull trout summer rearing: desired temperatures are less than 12 °C
  - For streams supporting bull trout spawning, desired temperatures are between 4 and 9 °C
  - For streams supporting bull trout egg incubation: desired temperatures are between 2 and 5 °C
- Instream habitats are characterized by the numeric values in Table 15<sup>14</sup>.

**Table 15. Desired Condition of Instream Habitat Features**

Habitat Feature	Rosgen Channel Type			
	A	B	C	E/G
Bankfull Width:Depth <sup>a</sup> ratio	<10	<20	<40	<7 E, <9 G
Large Woody Debris (pieces per mile) <sup>b</sup>	Exceeds or meets reference	Exceeds or meets reference	Exceeds or meets reference	Exceeds or meets reference
Percent Surface Fines—spawning <sup>c</sup>	<10	<10	<20	<20
Percent Fines by Depth—spawning <sup>c</sup>	<10	<10	<20	<20
Percent Cobble Embeddedness—rearing <sup>3</sup>	<20 in A <sup>b</sup> , A <sup>c</sup>	<20 in B <sup>b</sup> , B <sup>c</sup>	<30 in C <sup>b</sup> , C <sup>c</sup>	<30 in E <sup>c</sup> , G <sup>b</sup> , G <sup>c</sup>
Lower Bank Angle (mean within any stream reach) <sup>d</sup>	n/a	n/a	<90	<90
Bank Stability (within 80% of any stream reach) <sup>e</sup>	>95	>95	>90	>90

<sup>a</sup> From PIBO reference site data and local data from Nez Perce–Clearwater National Forests stream surveys. Width:depth is a ratio.

<sup>b</sup> “Exceeds or meets reference” – number is determined using PIBO reference data and/ or data collected via other accepted protocol, across the Interior Columbia River basin and locally, where available. This variable is expected to vary both by stream type and over time. At the project level, rationale for the desired condition number is expected to be provided, where project actions could affect large woody debris.

<sup>13</sup> From: North Central Idaho Clearwater Matrix of Pathways and Indicators, Nez Perce–Clearwater National Forests, 1998

<sup>14</sup> The dynamic nature and complexity of aquatic systems can result in a wide range of values that make selecting precise target values difficult, and these habitat features may not all occur within a specific stream segment all of the time, even in those not affected by recent disturbance. These habitat features should, however, be achievable through time and represented within the watershed.



<sup>c</sup> Sediment desired conditions based on stream survey data from reference and managed reaches on the Nez Perce–Clearwater National Forests and North Central Idaho Level 1 Team Matrix of Pathways and Indicators (1998).

<sup>d</sup> Value for C and E/G channel types based on data from grazed and ungrazed stream reaches on the Nez Perce–Clearwater National Forests

<sup>e</sup> Based on stream survey data from grazed and ungrazed stream reaches on the Nez Perce–Clearwater National Forests, following PIBO protocols (Meredith et al. 2012).

## Standards

**FW-STD-RHAS-01.** Riparian Conservation Areas (RCAs) widths are defined as follows:

**Category 1, Fish-bearing streams**—RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the 100 year floodplain, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

**Category 2, Permanently flowing non-fish bearing streams**—RCAs consist of the stream and the area on either side of the stream extending from the edges of the active channel to the top of the inner gorge, or to the outer edges of the riparian vegetation, or to a distance equal to the height on one site-potential tree, or 150 feet slope distance (300 feet, including both sides of the stream channel), whichever is greatest.

**Category 3, Ponds, lakes, reservoirs, and wetlands greater than 1 acre**—RCAs consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of the seasonally saturated soil, or to the distance of the height of one site-potential tree, or 150 feet slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs, or from the edge of the wetland, pond, or lake, whichever is greatest.

**Category 4, Seasonally flowing or intermittent streams, wetlands less than 1 acre, and lands identified as landslide prone**—This category includes features with high variability in size and site-specific characteristics. At a minimum, the RCA must include: (1) the intermittent stream channel and the area to the top of the inner gorge; (2) the intermittent stream channel or wetland and the area to the outer edges of the riparian vegetation; (3) for Population Stronghold or Potential Population stronghold watersheds, the area from the edges of the stream channel, wetland, or landslide prone terrain to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest; or (4) for watersheds not identified as Population Strongholds or Potential Population Strongholds, the area from the edges of the stream channel, wetland, or landslide prone terrain to a distance equal to the height of one-half site potential tree, or 50 feet slope distance, whichever is greater.

**FW-STD-RHAS-02.** RCA widths may be increased where necessary to move toward desired aquatic conditions, or decreased where widths are not needed to attain desired aquatic conditions. Proposals to decrease RCA widths shall be made where adverse effects to aquatic threatened or endangered species or aquatic species of conservation concern are avoided, and the following conditions are met:

- a) In 6th HUC watersheds where threatened or endangered aquatic species are present, any changes in RCA widths are made in consultation with NOAA Fisheries and the U.S. Fish and Wildlife Service.
- b) In all cases, any changes to RCA widths, the rationale supporting the change, and the effects of the change are documented.

**FW-STD-RHAS-03.** Activities in RCAs shall be designed to restore or maintain the physical and biological characteristics of the RCA and may not degrade aquatic conditions. Limited short-term effects from activities in RCAs may be acceptable when outweighed by the long-term benefits to the RCA, desired stream conditions in FW-DC-RHAS-11, Table 15 and other aquatic desired conditions.

## **Guidelines**

**FW-GDL-RHAS-01.** Trees felled inside RCAs for safety reasons should be left on-site and directionally felled towards or into streams, where it is safe and practical to do so.

**FW-GDL-RHAS-02.** Refueling, equipment maintenance, and storage of fuels and other toxicants should be avoided in RCAs.

**FW-GDL-RHAS-03.** To maintain the integrity of peatlands and fens, they should be buffered by 600 feet from management activities that disturb soil, vegetation, and/or water chemistry, unless site-specific information, such as topography, drainage features, and rare plant associations, supports smaller or larger buffers.

**FW-GDL-RHAS-04.** In all watersheds, sediment yield from past management activities should be reduced long term, where substrate fine sediment (cobble embeddeness, percent surface fines, and/or percent fines by depth) does not meet desired conditions in FW-DC-RHAS-11, Table 15.

## **Wildlife**

### ***Desired Conditions***

**FW-DC-WL-01.** The amount, characteristics, and successional stages of plant associations as described in the terrestrial ecosystems desired conditions provide wildlife habitats that are spatially and temporally present to maintain viable native wildlife species, providing for reproduction, security, forage, dispersal, shelter, and territorial needs. Wide-ranging species are able to move freely across and between habitats, allowing for dispersal, genetic interaction, and species recruitment.

**FW-DC-WL-02.** Riparian habitats described in FW-DC-RHAS-01 support native riparian-obligate wildlife species, including mountain quail, neotropical migratory birds, and bats.

**FW-DC-WL-03.** Nests, den sites, other important birthing, rearing, and wintering areas for at-risk species are relatively free of human disturbance during the period at-risk species are active at these sites. Individual animals that establish nests or den sites near areas of pre-existing human use (e.g., developed recreation sites, open roads) are assumed to be accepting of that existing level of human use at the time animals establish occupancy.

**FW-DC-WL-04.** Habitat conditions on the Forest support the recovery of threatened and endangered species through cooperation and coordination with the U.S. Fish and Wildlife Service, State agencies, other federal agencies, tribes, and interested groups.

**FW-DC-WL-05.** Forest management contributes to wildlife movement within and between disparate National Forest System (NFS) land parcels. Movement between NFS parcels separated by other ownerships is facilitated by managing the NFS portions of linkage areas identified through interagency cooperation. Federal ownership is consolidated when opportunities arise to improve habitat connectivity and facilitate wildlife movement.

**FW-DC-WL-06.** Habitat management supports **ungulates (elk, deer, moose, bighorn sheep and mountain goats), furbearers, black bear, mountain lion, and wolf** populations at levels meeting Idaho Department of Fish and Game (IDFG) species management plan objectives and Nez Perce Tribe treaty rights, and the Forest’s trust responsibilities.

**FW-DC-WL-07.** On breaklands, preferred browse less than 15 years old occurs on mapped **elk** winter range consistent with the vegetative natural range of variability.

**FW-DC-WL-08.** **Bighorn sheep** populations are sustained with sufficient distribution to be resilient and adaptable throughout core herd home range habitat and are not exposed to pathogens common to domestic sheep and goats.

**FW-DC-WL-09.** Pacific yew plant communities and timbered areas with 100-year-old or older yew-wood thickets provide **moose** winter habitat.

**FW-DC-WL-10.** Caves, mines, and snags with loose bark provide areas for roosting, hibernation, or maternity sites for various species of **bats**. Caves and mines providing suitable habitat that are closed for safety are still accessible to bats. Where possible, old structures that are important for maternity roosts and hibernacula are stabilized and conserved.

## **Objectives**

**FW-OBJ-WL-01.** Every 5 years, prescribe burn 25,000 acres of mapped winter range to promote germination and re-sprouting of preferred winter elk browse species.

**FW-OBJ-WL-02.** To support the sustainability and distribution of snowshoe hare, promote the development of 15,000 acres of snowshoe hare winter habitat over the plan period.

## **Standards**

**FW-STD-WL-01.** **Canada lynx** habitat shall be managed in accordance with the Northern Rockies Lynx Management Direction (2007) and ROD, and any amendments, updates, or new direction forthcoming.

**FW-STD-WL-02.** **Bat** friendly closures shall be installed when closing mines or caves, unless surveys indicate bats are not present or habitat is unsuitable.

**FW-STD-WL-03.** Buildings shall be inspected prior to removal or demolition to identify **bat** use. When bats are present, building removal shall not begin until bats have left for the season or have been removed.

**FW-STD-WL-04.** Domestic sheep or goat grazing or trailing, and goat packing shall not occur in **bighorn sheep** home ranges.

## **Guidelines**

**FW-GDL-WL-01.** In fisher habitat, regeneration harvest prescriptions should provide clumps of mature trees in proximity and/or connected to riparian zones.

**FW-GDL-WL-02.** Prescribed fire shall not be used in **mountain quail** habitat from April 30 to August 1.

**FW-GDL-WL-03.** Security areas, to be determined at the project level, should be provided in critical ungulate habitat (e.g., calving areas or winter range) or where wildlife management is a high priority as determined through coordination with IDFG. The size and distribution of security

areas is to be determined site-specifically and will vary by terrain, topography, and vegetative condition.

**FW-GDL-WL-04.** Winter motorized access on elk winter range may be restricted on an as-needed basis during severe winters at the recommendation of IDFG.

**FW-GDL-WL-05.** New fence projects should be located and designed to allow for wildlife passage across the landscape, and should be designed to reduce the risk for entanglement by wildlife.

**FW-GDL-WL-06.** Management activities such as timber harvest, fuels reduction, or road or trail construction/reconstruction should minimize disturbance at uncommon habitat elements described in FW-DC-TE-03.

## **Air Quality**

### ***Desired Condition***

**FW-DC-AIR-01.** Air quality supports human and ecosystem health and quality of life. . It enhances visibility and the visual aesthetics of the planning area, drawing recreation and wilderness visitors to the area and contributing to the economic sustainability of the local economy.

### ***Guidelines***

**FW-GDL-AIR-01.** Coordination with local and regional partners should occur to minimize cumulative air quality impacts during the active burning season.

## **Human Uses of the Forest**

### **Cultural Resources**

#### ***Desired Conditions***

**FW-DC-CR-01.** The integrity of significant archaeological resources, such as camps and villages along major river drainages and in forested uplands, remain intact for present and future generations. These places connect communities with ancient places having a deep history. Archaeological research contributes to knowledge about ancient American Indian history and provides a valuable perspective on past climate and environment. Traditional cultural properties, cultural landscapes, sacred sites, and other culturally significant areas identified by tribes and local communities provide tangible links to historically rooted beliefs, customs, and practices.

**FW-DC-CR-02.** Historic cultural resources including, but not limited to, trails and travel ways; bridges; backcountry airstrips; homesteads; mining camps and ruins; railroad logging sites; Forest Service administrative sites and facilities; Depression-era relief programs' sites and features; and historical landscapes across the forest exist to provide a greater understanding and appreciation of local history and the recent past. Sites listed on the National Register of Historic Places add to the inventory of significant historical sites in Idaho. Restored historic buildings placed on the Forest Service facility rental program add to forest recreation program capacity and diversity and generate revenue. Historic Forest Service administrative buildings are maintained to reflect agency history, identity, and function.

## ***Objectives***

**FW-OBJ-CR-03.** Complete one public outreach or tribal partnership project annually that protects, preserves, stabilizes, rehabilitates, restores, interprets, or researches cultural resources of the Forest.

## **Municipal Watersheds**

### ***Description***

This section applies to municipal watersheds, as designated by the Idaho Department of Water Resources. While no formal, written agreements exist between the Forest Service and municipalities, three municipal watersheds are recognized by the Forest: Wall Creek (serving the Clearwater Water Association); Big and Little Elk Creek (serving the Elk City, Idaho, area); and Elk Creek (serving the town of Elk River, Idaho).

### ***Desired Condition***

**FW-DC-MWTR-01.** Lands that contribute municipal watersheds<sup>15</sup> and source water protection<sup>16</sup> areas provide clean surface water that meets or exceeds State of Idaho water quality standards and meets the supply needs of users. Municipal watersheds are not Clean Water Act Section 303(d) State-listed as impaired or threatened for any pollutant. Vegetation is similar in structure, function, and composition as stated in the Terrestrial Ecosystems Plan components, scaled to the size of each municipal watershed. Vegetation is vigorous and resistant to insect attacks. Fuel loadings and stand structure are at levels and arrangements that would not support a large stand-replacing fire event. The transportation system is hydrologically disconnected from streams. Recreational facilities are designed and maintained such that water quality is not impaired. No documented lands/areas exists that are delivering water, sediment, nutrients, or chemical pollutants that would result in water pollution that is significantly and/or permanently above natural or background levels.

### ***Standards***

**FW-STD-MWTR-01.** New construction or reconstruction of public toilets or waste disposal facilities shall be located at least 500<sup>17</sup> feet from points of diversion and intake facilities for public or municipal water supplies.

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<sup>15</sup> The definition does not include communities served by a well or a confined groundwater aquifer that is unaffected by Forest Service activities.

<sup>16</sup> Source water areas include watershed areas not specifically designated as municipal watersheds that provide untreated water from streams, rivers, or lakes that is used to supply public drinking water.

<sup>17</sup> This distance is to be consistent with the Idaho State Water Quality regulations for public drinking water systems (IDAPA 58.01.08, Section 504, Part 07(b)(vi)). This regulation does not require an exclusion zone but requires that the drinking water facility plan include, “Location of all known existing and potential sources of pollution within five hundred (500) feet of water sources or underground treated storage facilities.”

## ***Guidelines***

**FW-GDL-MWTR-01.** To allow for long-term benefits to source water areas (designated as special, public, or municipal water supply watersheds), activities may have limited short-term adverse effects when long-term benefits are identified.

**FW-GDL-MWTR-02.** To maintain water quality within safe drinking limits for bacterial contamination, exclude livestock grazing within RCAs and livestock watering within streams 500 feet upstream from points of diversion for public or municipal water supplies.

## **Recreation**

### ***Desired Conditions***

#### **Scenic Character**

**FW-DC-REC-01.** The unique and distinctive attributes and scenic resources that make up the landscape character contribute to the recreation settings and sense of place for community residents and visitors. These attributes reflect healthy and resilient landscapes (see FW-DC-TE-02).

#### **Recreation Opportunity Spectrum (ROS)**

**FW-DC-REC-02.** The Forest's spring, summer and fall (non-winter) recreation settings range from primitive and unroaded backcountry areas that offer solitude and quiet recreation, to roaded settings that connect communities to the forest and offer visitors the opportunity to roam vast distances or gather and socialize with family and friends. Historic trails, old mining towns, log ranger stations, and fire lookouts, offer visitors opportunity to learn about and experience the rich heritage of Native Americans and early Euro-American settlers. Magnificent rivers traverse the Forest, drawing boaters, fishermen, and those simply wanting to relax near water with mountain vistas. The social, managerial, and physical attributes of the forest's recreation settings are managed to ensure these incredible opportunities are available for future generations to enjoy.

**FW-DC-REC-03.** Recreation settings change as snow blankets Forest's landscapes. While some settings become less accessible and more remote, others change from non-motorized to accommodating over-snow vehicles. Although the full range of settings are still present, their location, distribution, and percentages change significantly during the winter months. Primitive and Semi-primitive non-motorized backcountry settings offer solitude and quiet recreation for those accessing the forest on skis, snowshoes, or snow boards. Semi-primitive motorized settings cover large expanses of the forest, offering snowmobilers the opportunity to explore areas of the forest that are often non-motorized in the summer months. Roaded Natural and Rural settings continue to serve as convenient connections to surrounding communities and easy access to visitors. Fewer facilities are operated to provide user comfort. Groomed motorized and non-motorized trails offer users the opportunity to get outside for a quick day trip or take longer, cross-country excursions.

**FW-DC-REC-04.** Recreation activities across the seasonal settings contribute to jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area.

**FW-DC-REC-05.** Desired non-winter recreation settings and opportunities are distributed across the Forest as displayed in the desired summer ROS map and in Table 16.

**Table 16. Summer Recreation Opportunity Spectrum (ROS)**

ROS*	Acres	Total Percentage (%)
Primitive	1,137,600	29
Semi-primitive Nonmotorized	1,576,700	40
Semi-primitive Motorized	553,700	14
Roaded Natural	562,400	14
Roaded Modified	102,400	3
<b>Grand Total</b>	<b>3,932,800</b>	<b>100</b>

\*See glossary for ROS class definitions

**FW-DC-REC-06.** Desired winter recreation settings and opportunities are distributed across the Forest as displayed in the desired winter ROS map and in Table 17.

**Table 17. Winter Recreation Opportunity Spectrum (ROS)**

ROS Class*	Acres	Total Percentage (%)
Primitive	917,600	23
Semi-primitive Nonmotorized	813,800	21
Semi-primitive Motorized	1,691,200	43
Roaded Natural	347,100	9
Roaded Modified	161,200	4
<b>Grand Total</b>	<b>3,930,900</b>	<b>100</b>

\*See glossary for ROS class definitions

## Access

**FW-DC-REC-07.** Forest visitors use a designated system of roads (consistent with FW-DC-INF-01), trails, rivers, and backcountry airstrips to access recreation settings.

**FW-DC-REC-08.** Forest visitors use areas designated for motor vehicle use per the Forest's motor vehicle use maps (MVUM) for any off-route motorized off-highway vehicle (OHV) activity.

**FW-DC-REC-09.** Management of recreational access minimizes conflicts between users.

**FW-DC-REC-10.** Trailheads are located primarily along scenic travel routes and major travel corridors and access motorized, non-motorized, and interpretive trails, including national recreation trail systems (NRTS). These trailheads are generally located within 20 miles of forest communities.

**FW-DC-REC-11.** Access to and interpretation of National Historic Trails (NHT) is available to forest visitors.

**FW-DC-REC-12.** OHV recreational cross-forest routes are available to connect southern Idaho communities to northern Idaho communities and Washington and Oregon communities to Montana communities.

**FW-DC-REC-13.** Winter recreation trailheads are generally located within 50 miles of communities or major travel corridors to contribute to economic sustainability of Forest communities offering recreationists opportunities to use designated cross-country ski trails, snowshoe trails, and snowmachine routes on the Forest.

**FW-DC-REC-14.** Winter recreation fee areas provide safe access to a designated system of groomed motorized and non-motorized routes to prevent incompatible modes of travel.

**FW-DC-REC-15.** Groomed snowmobile routes connect communities, and groomed and ungroomed routes provide north/south and east/ west routes across the Forest and at least one high-elevation, open-riding environment available on the Forest.

**FW-DC-REC-16.** Forest visitors use a system of river portals to access recreation river settings. The portals are signed to designate motorized, non-motorized, or mixed use to minimize conflict of use on river segments.

**FW-DC-REC-17.** Airstrips serve the land management and public needs and purpose of the Forest. The seven<sup>18</sup> existing backcountry airstrips for airplane and helicopter access to the Forest's backcountry do not expand in size but are maintained to historical site conditions to provide safe and functioning airstrips for backcountry access.

## Developed Recreation

**FW-DC-REC-18** Recreation facilities including primitive toilets, cabins, trailheads, river portals, airstrips, developed campgrounds and visitor centers are maintained to standard to protect forest resources and provide visitor experiences commensurate with the ROS setting. Construction and reconstruction of recreation facilities should also meet universal standards for accessibility.

**FW-DC-REC-19.** The development scale of recreation facilities is consistent with the desired ROS settings and with recreation corridor, river management, scenic byway, or trail management plans.

## Dispersed Recreation

**FW-DC-REC-20.** Areas permitting dispersed camping off designated roads and trails as described on the Forest's motor vehicle use maps are free of litter and human waste.

**FW-DC-REC-21.** Dispersed recreation sites in areas of concentrated use are located consistent with other resource requirements, do not unreasonably degrade the natural environment, and do not increase in size over time. Forest visitors use existing dispersed sites and the access routes to them.

**FW-DC-REC-22.** Recreation special uses meet land management and public needs and contribute to small business opportunities. Outfitters and guides provide quality experiences as an extension of the agency and are available to provide a variety of year-round guided services to the recreating public.

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<sup>18</sup> The seven airstrips at the time of plan development include: Cayuse (non-wilderness); Orogrande (non-wilderness); Dixie (non-wilderness); Fish Lake (wilderness); Moose Creek (wilderness); Shearer (wilderness); Wilson Bar (wilderness)



## ***Standards***

**FW-STD-REC-01. ROS.** No new motorized routes or areas shall be constructed or designated in desired primitive or semi-primitive non-motorized settings.

## ***Guidelines***

**FW-GDL-REC-01. Air Strips.** Management and maintenance of all airstrips should follow Idaho Aeronautics Network (IAN) recommendations to provide for safe and functioning airstrips.

**FW-GDL-REC-02. Scenic Character.** Management activities should be consistent with scenic integrity objectives (SIO) for the area. Management activities may result in short-term impacts (3–5 years) that are inconsistent with the SIO if those impacts are necessary in achieving the SIO over the long term.

**FW-GDL-REC-03. Scenic Character.** The scenic integrity objective for specific high-value scenic travel routes and recreation use areas are described in appendix D.

**FW-GDL-REC-04. Scenic Character.** The construction or reconstruction of Forest Service facilities should be consistent with the Built Environment Image Guide (USDA Forest Service, per current update) to ensure consistency with the scenic character of the Rocky Mountain Region.

**FW-GDL-REC-05. Riparian Habitat.** Recreation facilities, including trails, bridges, fords, trailheads, and campgrounds, should be designed, constructed, maintained, and managed in a manner that does not prevent meeting desired stream conditions in FW-DC-RHAS-11.

## **Interpretation and Education**

### ***Desired Conditions***

**FW-DC-ED-01.** Interpretation and education opportunities enhance the visitor’s understanding and appreciation for the rich natural and cultural history of the Forest. Interpretive and educational themes focus on Nez Perce Native History and Wild Mountains; early exploration, mining, trapping, and settlement; and Raging Rivers.

**FW-DC-ED-01.** Interpretation is place based and instills an appreciation for the significance of the cultural and natural resource values on the Forest. Outfitter and guides assist the forest in delivering interpretation and education that instills an appreciation for the natural and cultural resources of the Forest and promotes conservation and stewardship.

**FW-DC-ED-01.** Visitor information is available on the internet, at Forest Service offices, at key forest portals, and at destination recreation facilities.

### **Objectives**

**FW-OBJ-ED-01.** Within 10 years of Plan approval, establish a minimum of one entrance portal per district to provide recreation and travel planning information to cultural, scenic, and recreation destinations.

## Infrastructure

### *Desired Condition*

**FW-DC-INF-01.** The road system serves land management and public needs and purposes. It is interconnected with federal, state, and local public roads to provide access to lands, infrastructure, and inholdings where appropriate. Although roads maintained for passenger cars meet public road safety standards, roads maintained for high clearance vehicles may have hazards and require operator judgment and skill to negotiate. Road management objectives (RMOs) are identified and kept current for all roads. Roads are maintained in accordance with RMOs.

**FW-DC-INF-02.** Roads not needed to serve management and public needs and purposes are decommissioned and removed from the system.

**FW-DC-INF-03.** Administrative facilities serve land management needs and purposes of the forest in an economical and cost effective manner. The size, number, and location of facilities meet management needs; are affordable, safe, and energy efficient; and meet appropriate level of accessibility. Facilities are included in the facilities master plan, which is kept current. Facilities not needed are transferred to other uses/ownership or decommissioned.

### *Objectives*

**FW-OBJ-INF-01.** Over the life of the plan, decommission approximately 300 miles of unneeded road.<sup>19</sup>

**FW-OBJ-INF-02.** Over the life of the plan, construct, reconstruct, or relocate approximately 400 miles of NFS roads.

**FW-OBJ-INF-03.** Over the life of the plan, reduce the road mileage maintained for passenger cars (reduce ML 3 or above to ML 2) by 100 miles to respond to budget limitations.

**FW-OBJ-INF-04.** Annually, meet maintenance level requirements on 15 percent of operational maintenance level 3, 4, and 5 roads.

**FW-OBJ-INF-05.** Every 2 years, complete one facilities project to improve energy efficiency or safety.

**FW-OBJ-INF-06.** Within 7 years of plan approval, remove and rehabilitate abandoned communication sites to provide for scenic character values.

### *Standards*

**FW-STD-INF-01. Water Quality.** During dust abatement applications on roads, chemicals shall not be applied directly to watercourses; water bodies (e.g., ponds, lakes); or wetlands.

### *Guidelines*

**FW-GDL-INF-01.** Motorized access inconsistent with MVUM designations may be authorized in writing through special use permits, contracts, or other written authorizations.

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<sup>19</sup> FW-OBJ-INF-01 and 02 may also meet objective measures for aquatic ecosystems.

**FW-GDL-INF-02. Scenic Character.** When locating new roads, structures, utility corridors, communication sites, or other above-ground facilities, consider scenic integrity objectives and avoid areas in very high scenic integrity area landscapes.

**FW-GDL-INF-03. GDE.** To maintain quality and quantity of water flows to, within, or between groundwater dependent ecosystems (GDE), groundwater use developments (e.g., recreation and administrative sites, drinking water wells, waste water facilities) should not:

- a) Be developed in RCAs;
- b) Measurably lower river flows, lake levels, or flows to wetlands or springs (e.g., change springs from perennial to intermittent, or eliminate springs altogether); and/or
- c) Discharge pollutants directly to groundwater.

**FW-GDL-INF-04. GDE.** To maintain the quantity of water flows to, within, or between GDEs, new or renewing groundwater developments (e.g., recreation and administrative sites, drinking water wells, waste water facilities) should have water flow meters installed and operating for the following:

- a) All drinking-water systems that withdraw water from aquifers on NFS lands and that are classified as community water systems (those that serve 25 year-round residents or have 15 or more service connections)
- b) All wells on NFS lands that provide groundwater that is later sold to consumers or used for industrial or commercial purposes
- c) All injection wells with discharge pipes that have a 4-inch or larger inside diameter

**FW-GDL-INF-05. Water Quality.** New and reconstructed solid and sanitary waste facilities should be located outside of RCAs.

**FW-GDL-INF-06. Water Quality.** To maintain the hydrologic integrity of watersheds, NFS roads, trails, linear features, and airstrips should have a water drainage system that is hydrologically disconnected from delivering water, sediment, and pollutants to water bodies.

**FW-GDL-INF-07. Water Quality.** To maintain and/or improve watershed ecosystem integrity, and reduce road-related mass wasting and sediment delivery to watercourses, new and relocated road, trail, (including skid trails and temporary roads) linear features, and airstrip construction should avoid lands with high mass wasting or subsurface erosion hazard or landslide prone areas.

**FW-GDL-INF-08. Water Quality.** To reduce sediment and water delivery to watercourses, new, reconstructed, and relocated road and trail segments (including skid trails and temporary roads) should be hydrologically disconnected from streams to the fullest extent practicable; except at designated stream crossings.<sup>20</sup>

**FW-GDL-INF-09. Water Quality.** To maintain free-flowing streams, new, replacement, and reconstructed stream crossing sites (culverts, bridges and other stream crossings) should:

- a) Accommodate at least a 100-year recurrence interval flood flow, including associated bedload and debris, and
- b) Prevent diversion of stream flow out of the channels in the event the crossing is plugged or has a flow greater than the crossing was designed.

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<sup>20</sup> There will be road segments that cross watercourses where it will be impossible to completely hydrologically disconnect the road from the watercourse.

**FW-GDL-INF-10. Water Quality.** To maintain channel stability and reduce sediment delivery to watercourses, trails crossing streams should harden the stream bed, banks, and approaches.

**FW-GDL-INF-11. Water Quality.** To reduce sediment delivery to watercourses, soil should not be side-cast into watercourses. Care should be taken when plowing snow so as not to include road soil.

**FW-GDL-INF-12. Water Quality.** To prevent delivering chemicals to water bodies during dust abatement applications, treatments should be applied during weather conditions that promote the binding of chemicals to road surface material.

**FW-GDL-INF-13. Water Quality.** To maintain and/or improve channel stability, the following should be implemented at stream crossings when placing road segments in intermittent stored service<sup>21</sup>:

- a) Hydrologically disconnect road features from streams to the fullest extent practicable
- b) Replace or remove the culverts or drainage structures that do not meet size or capacity requirements (as described in in FW-GDL-INF-09)
- c) Construct armored overflow channels if culverts are retained
- d) Excavate to natural stream grade if removing a culvert
- e) Excavate side slopes to natural gradient or 1:1, whichever is less, if removing a culvert
- f) Stabilize areas prone to erosion and/or cut and fill failure

**FW-GDL-INF-14. Water Quality.** To reduce sediment and water delivery to watercourses the following should be implemented when decommissioning road and trail segments or rehabilitating skid trails, temporary roads, and unauthorized roads and trails:

- a) Hydrologically disconnect the segments from streams
- b) Remove all drainage systems that concentrate water
- c) Recontour at stream crossings
- d) Recontour areas prone to erosion and/or cut and fill failure
- e) Decompact remaining roadway

**FW-GDL-INF-15. Water Quality.** New roads, including temporary roads, and new motorized trails should not be constructed in RCAs. When there are no alternative locations for a temporary road, follow FW-GDL-INF-06, 07, 08, 09, and 11.

**FW-GDL-INF-16. Water Quality.** New roads, including temporary roads, should avoid stream crossings. When no alternative exists, follow FW-GDL-INF-06, 08, and 09.

**FW-GDL-INF-17. Aquatic Species.** New, replacement, and reconstructed stream crossing sites should be designed to provide and maintain fish passage where native fish, or other desired aquatic organisms, are present.

**FW-GDL-INF-18. Aquatic Species.** Where roads and trails are proposed for reconstruction or reconditioning, activities should avoid long-term adverse effects to watershed and stream

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<sup>21</sup> Roads closed to vehicle traffic for longer than 1 year, but identified as needed for the long-term transportation network may be placed in intermittent stored service. A road in intermittent stored service is in a condition that there is little resource risk if maintenance is not performed.

conditions, and short-term effects should be off-set by long-term improvements (e.g. include but are not limited to, hydrologically disconnecting road or trail segments, reducing sediment yield).

## **Lands**

### ***Desired Condition***

**FW-DC-LND-01.** Land ownership is adjusted (acquired or conveyed) to provide reasonable access, efficient management of NFS lands, and/or resource protection as opportunities arise.

**FW-DC-LND-02.** Land acquisitions and conservation easements are sought to meet forest plan desired conditions and facilitate restoration of habitat for at-risk fish and wildlife species.

**FW-DC-LND-03.** NFS property boundaries adjacent to private lands are surveyed and clearly posted. Boundaries of areas with special management direction, such as designated Wilderness, are clearly marked where encroachment is likely to occur.

**FW-DC-LND-04.** Rights of way and easements provide reasonable public and administrative access

**FW-DC-LND-05.** A network of designated communication sites provides communication for the Forest and other government entities and to meet other public needs. Designated communication sites have approved communication site plans.

**FW-DC-LND-06.** Lands special use authorizations meet land management and public needs.

## **Objectives**

**FW-OBJ-LND-01.** Annually, a minimum of one right-of-way to NFS lands is acquired.

**FW-OBJ-LND-02.** Every 5–10 years, one inholding is acquired, as opportunities arise.

## **Guidelines**

**FW-GDL-LND-01.** Communication facilities (except those with non-ground-disturbing temporary facilities that are in place for less than 1 year) are located in designated communication sites.

## **Production of Natural Resources**

### **Timber**

Per the NFMA and planning rule regulations, the quantity of timber that may be sold must be less than or equal to the long-term sustained capacity (LTSYC). However, a departure from LTSYC (a higher harvest) may occur to respond to certain circumstances such as accelerating vegetation restoration to move toward desired conditions.

To clearly display the intended timber program and to assure compliance with this requirement, the plan must identify the timber sale program quantity (TPSQ) and the planned sale quantity (PSQ).

Initial Spectrum modelling efforts indicate the LTSYC is approximately 254 million cubic feet (MMCF) of timber sold per decade (135 million board feet annually (MMBF)). Additional modelling calculates a PSQ of approximately 181 MMCF per decade (96 MMBF annually)

would move vegetation toward size class and species composition desired conditions as attainable while considering multiple resource objectives. A departure from non-declining even flow for the first two decades was also assessed and calculates a PSQ of approximately 282 MMCF (150 MMBF annually) in the first decade and 226 MMCF (120 MMBF annually) in the second decade would also meet those desired vegetation conditions, while accelerating vegetation restoration opportunities in the short term.

Another important consideration during the analysis of the proposed action and potential alternatives is the fiscal capability and organizational capacity of the Forest to achieve the desired conditions and objectives in the plan for the plan period. Within current budget levels, the model calculates the Forest could offer a sale quantity of approximately 58 MBF annually, which is similar to the current timber sale program offered on the Forest.

The proposed action therefore reflects a range of alternative PSQ levels for analysis between 58 and 150 MBF. This will allow for analysis to display the ecological and socioeconomic effects of a range of harvest levels, while also disclosing the funding levels needed to best meet desired conditions across the plan area.

### ***Desired Conditions***

**FW-DC-TBR-01.** The sustainable flow of commodities from the National Forest System lands of the Nez Perce-Clearwater National Forests is a result of treatments used to move the current vegetation pattern to a desired vegetation pattern.

**FW-DC-TBR-02.** Restoration treatments and timber harvesting opportunities contribute to business and employment opportunities. Productive timber lands continue to support traditional lifestyles and generational ties to the land. A sustainable mix of timber products (including both sawtimber and non-sawtimber) is offered under a variety of harvest and contract methods in response to market demand.

**FW-DC-TBR-03.** In areas suitable for timber production, dead or dying trees (due to fire, insect outbreaks, or disease) are salvaged to recover the economic value.

**FW-DC-TBR-04.** Harvests, including even-aged or two-aged regeneration harvests, reflect the scale of natural disturbances and are designed to reach desired conditions, such as size class distribution, species composition, patch size, and fuel reduction, and provide checks on the spread of insect outbreaks and disease.

**FW-DC-TBR-05.** Harvests in the wildland urban interface, whether regulated timber production or timber harvest for multiple use resource values, are designed to reduce fuel loads and limit the risk of wildfire affecting the adjacent urban areas.

**FW-DC-TBR-06.** Lands suitable for timber production are managed to limit wildfire losses to the timber resource.

### ***Objectives***

**FW-OBJ-TBR-01.** Annually, offer timber for sale at an average planned sale quantity (PSQ) of 58 to 150 million board feet.

**FW-OBJ-TBR-02.** Annually, offer commercial timber and other products for sale at an average timber sale program quantity (TSPQ) *to be determined through scoping and further analysis.*

## Standards

**FW-STD-TBR-01.** Harvest activities on lands not suitable for timber production are designed to enhance the desired conditions of those lands and are not designed for the purpose of timber production.

**FW-STD-TBR-02.** Timber will not be harvested on lands where soil, slope, or other watershed conditions may be irreversibly damaged, as identified in project-specific findings.

**FW-STD-TBR-03.** Within 3 years of completion of vegetation management activities, at least 85 percent of land within activity area boundaries has all five soil ecological functions in a functioning condition; or if previous activities resulted in impaired soil function, current project activities result in a trend toward improved soil functions.

**FW-STD-TBR-04.** Where clearcutting, seed tree cutting, shelterwood cutting, or other cuts designed to regenerate an even-aged or two-age stand of timber are used, an exception to the 40-acre maximum size for openings that may be cut in one harvest operation is as identified in Table 18.

**Table 18. Maximum Opening Size that May be Cut in One Harvest Operation**

Conditions	Average Opening Size (acres)	HRV Opening Size (acres)	Maximum Opening Size (acres)
Breakland Types	60	1,500	150
Upland Mesic Conifers (GF/C/DF/WP/WL)	60	800	80

Note: GF = grand fir, C = western redcedar, DF = Douglas-fir, WP = western white pine, WL = western larch, AF = subalpine fir, ES = Engelmann spruce, LP = lodgepole pine

**FW-STD-TBR-05.** The maximum size for openings to be cut in one harvest operation shall not apply to the size of openings harvested as a result of natural catastrophic conditions, such as fire, insect and disease attack, or windstorm.

**FW-STD-TBR-06.** These size limits can be exceeded on an individual timber sale basis after 60-days public notice and review by the regional forester.

**FW-STD-TBR-07.** Timber harvest activities shall only be used when there is reasonable assurance of restocking within 5 years after final regeneration harvest. Restocking level is prescribed in a site-specific silvicultural prescription for a project treatment unit and is determined to be adequate depending on the objectives and desired conditions for the Plan area. In some instances, such as when lands are harvested to create openings for fuel breaks and vistas or to prevent encroaching trees, it is adequate not to restock.

**FW-STD-TBR-08.** Harvesting systems shall be selected based on their ability to meet desired conditions and not strictly on their ability to provide the greatest dollar return.

**FW-STD-TBR-09.** Even-aged or two-aged prescriptions other than clearcutting (e.g., seed tree, shelterwood) shall be used when appropriate to meet Forest Plan direction.

**FW-STD-TBR-10.** Timber harvest activities shall be reviewed by an interdisciplinary team, including the potential environmental, biological, aesthetic, engineering, and economic impacts on the sale area, as well as the consistency of the sale meeting Forest Plan direction. Harvest activities shall be shaped and blended to the natural terrain to the extent practicable.

**FW-STD-TBR-11.** The quantity of timber that may be sold per decade (except for salvage or sanitation harvesting of timber stands that are substantially damaged by fire, windthrow, or other catastrophe or which are in imminent danger from insect or disease attack) will be less than or equal to the long-term sustained-yield capacity (LTSYC). Salvage harvest of trees substantially damaged by fire, windthrow, or other catastrophe or in imminent danger from insect or disease attack may be harvested over and above the LTSYC.

**FW-STD-TBR-12.** Even-aged stands shall generally have reached or surpassed culmination of mean annual increment (95 percent of CMAI, as measured by cubic volume) prior to regeneration harvest, unless the following conditions have been identified during project development:

- a) When such harvesting would assist in reducing fire risk within the wildland-urban interface (WUI) or the community protection zone (CPZ).
- b) When harvesting of stands will trend landscapes toward vegetation desired conditions.
- c) When harvest is thinning, stand improvement, or uneven-aged systems that do not regenerate even-aged or two-aged stands.
- d) When harvest is for sanitation or salvage of timber stands that have been substantially damaged by fire, wind-throw, or other catastrophe or which are in imminent danger from insect or disease attack.
- e) 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.

**FW-STD-TBR-13. Riparian Habitat.** Timber harvest and salvage logging may be conducted in RCAs where needed to restore, protect, or enhance the physical and biological characteristics of the RCA, including desired stream conditions in FW-DC-RHAS-11, Table 15.

**FW-STD-TBR-14. Riparian Habitat.** Silvicultural practices not resulting in impaired soil function (e.g., precommercial thinning and planting) and/or prescribed burning may be conducted in RCAs to move toward vegetation and fuels management desired conditions where existing aquatic ecosystem conditions can be maintained or improved, and adverse effects to threatened or endangered aquatic species, or species of conservation concern, are avoided.

## ***Guidelines***

**FW-GDL-TBR-01.** Timber harvest on lands other than those suitable for timber production may occur for such purposes as salvage, fuels management, insect and disease mitigation, protection or enhancement of biodiversity or wildlife habitat, or to perform research or administrative studies, or recreation and scenic-resource management consistent with other management direction.

**FW-GDL-TBR-02.** In order to ensure successful regeneration of harvested stands in the grand fir mosaic, ground-based harvesting systems should only be used where no cable or aerial system is feasible.

**FW-GDL-TBR-03. Scenic Character.** To maintain or enhance scenic character, openings created by management activities should emulate natural processes and disturbance regimes.

**FW-GDL-TBR-04. Soils.** Coarse woody debris should be retained following vegetation management activities per FW-GDL-FOR-02.



**FW-GDL-TBR-05. Soils.** To maintain soil support and stability, ground-based harvest equipment should be limited to slopes less than 40 percent.

**FW-GDL-TBR-06. Water Quality.** To reduce stream channel scouring and stream bank erosion due to increased water yield, when evaluated at the subwatershed scale (HUC-6), timber harvesting should not increase average annual peak flows greater than 15 percent; in subwatersheds where an aquatics (fisheries) restoration/maintenance priority exists, timber harvesting should not increase average annual peak flows greater than 10 percent. The maximum expected change in peak flows should not persist longer than 2 years. The evaluation of peak flows should:

- a) Include effects from all events that change overstory canopy composition, including wildfires, prescribed fires, timber harvests, and natural mortality; and
- b) Include events described in (a), all lands within the subwatershed, regardless of ownership.<sup>22</sup>

**FW-GDL-TBR-07. Water Quality.** When evaluated at the subwatershed scale (HUC-6), timber harvesting and new road construction (both temporary and permanent), reconstruction, or reconditioning projects<sup>23</sup> should not significantly<sup>24</sup> increase sediment loads. Where insignificant but observable sediment delivery to watercourses is occurring, sediment delivery should not persist longer than 5 years<sup>25</sup>.

**FW-GDL-TBR-08. Water Quality.** To minimize the amount of sediment that is generated and delivered to watercourses from areas where vegetation management (including timber harvest and fuels reduction) is conducted, projects should:

- a) Avoid tractor skidding within RCAs;
- b) Avoid constructing or locating skid trails within RCAs;
- c) Locate log landing, processing, and handling areas outside of RCAs;
- d) Locate burn piles outside of RCAs;
- e) Where feasible, reuse existing log landings, temporary roads, and skid trails left from previous management activities (to reduce new road construction), unless one of these features would adversely affect water resources;
- f) For existing roads, log landings, and skid trails in the project area with sediment erosion and delivery to watercourses: repair those that are to be used for project implementation and consider restoring those that are not to be used for project implementation;
- g) Use sediment control BMPs (e.g., straw bales, rock check dams, slash filter windrow mats, mulch, and/or silt fence) in ditch lines along haul route or in areas where the ground

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<sup>22</sup> This guideline directs the Forest hydrology specialist to assess the effects of all treatments on all lands within the given subwatershed regardless of ownership. The guideline does not apply to non-Forest Service managed lands.

<sup>23</sup> In this context, projects do not include road decommissioning or reconstruction/relocation for the purpose of reducing hydrologic connectivity.

<sup>24</sup> ‘Significantly’, as used here, indicates “statistically significantly different from pre-project conditions”.

<sup>25</sup> This time period allows for the ‘typical’ duration of activities within a timber sale area boundary.

is disturbed and sediment has the potential for delivery to streams (i.e., direct overland or channelized flow into a stream); and

- h) Rehabilitate skid trails and temporary roads within 3 years of completing vegetation management activities<sup>26</sup>.

**FW-GDL-TBR-09 Riparian Habitat.** To reduce chronic sediment delivery in Potential Stronghold Watersheds with streams that are not meeting the desired conditions in FW-DC-RHAS-11, Table 15, timber harvesting and road construction projects (including temporary roads) should be off-set by long-term watershed improvement project elements (e.g., road decommissioning and hydrologically disconnecting road segments).

### ***Suitability—Timber Production***

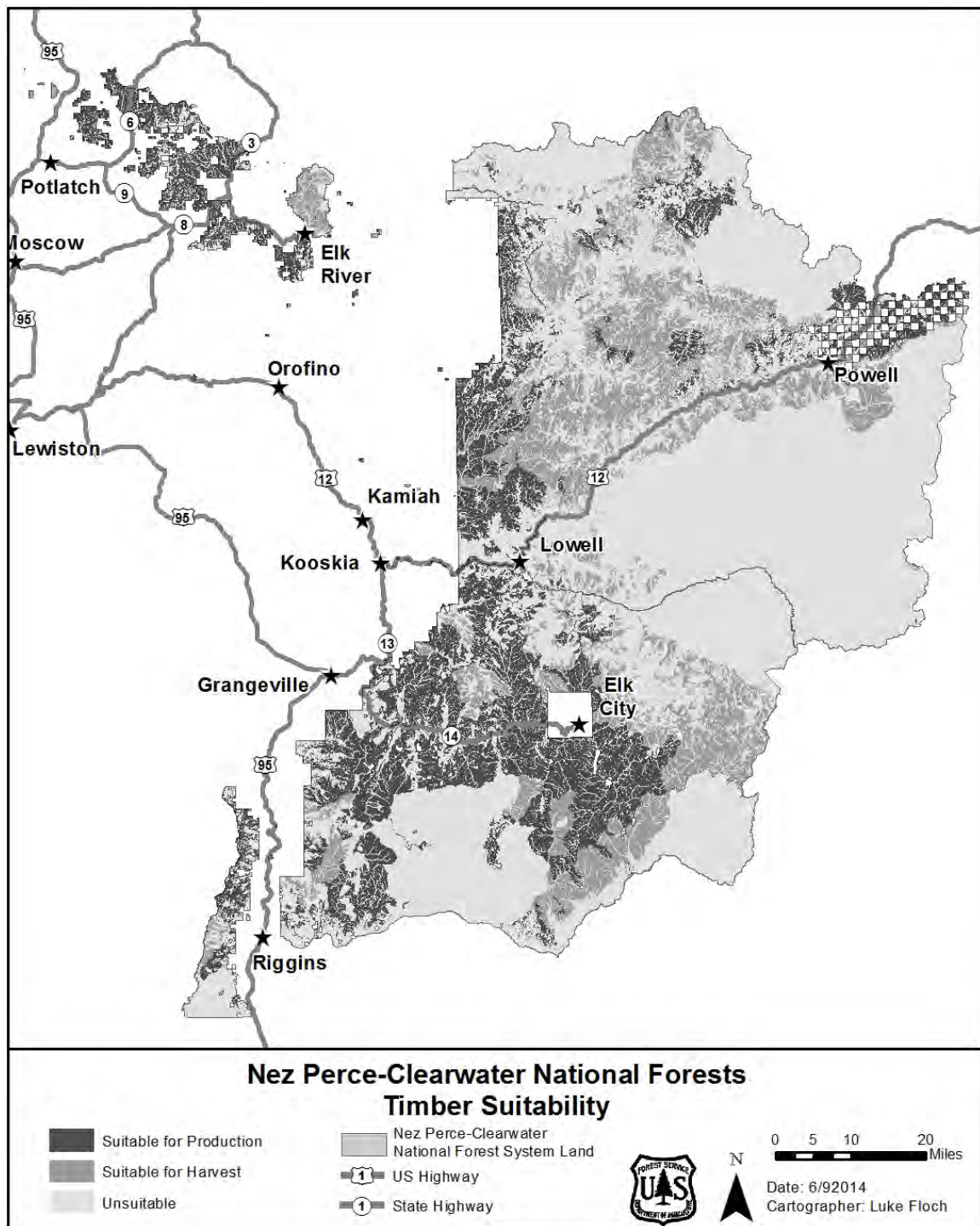
Table 19 summarizes the review of all National Forest System lands suitable for timber production. Lands in Category 4 and some lands in category 2 (specifically RCAs), may be suitable for harvest for the purpose of maintaining or restoring other resource values (e.g., maintaining a healthy, visually pleasing forest in the recreation segment of a Wild and Scenic River corridor or reducing fire hazard in the wildland urban interface or riparian conservation areas).

**Table 19. Timber Production Suitability Classification**

<b>Land Classification Category</b>	<b>Acres</b>
1. Total National Forest System lands	3,934,010
2. Lands not suited for timber production due to legal availability or technical considerations (harvest for other resource objective may occur in some areas such as riparian conservation areas per plan component descriptions) Includes: <ul style="list-style-type: none"> <li>• Designated Wilderness (sec. 61.11)</li> <li>• Idaho Roadless Area – Wildland Recreation Theme (sec. 61.11)</li> <li>• Wild River segments (sec. 61.11)</li> <li>• Established Research Natural Areas (sec. 61.11)</li> <li>• Riparian Conservation Areas (sec. 61.11)</li> <li>• Lands not able to reforest (sec. 61.14)</li> <li>• Non-forested (sec. 61.15)</li> <li>• Potentially landslide-prone lands (sec. 61.13)</li> </ul>	2,589,341
3. Lands that may be suited for timber production (line 1 minus line 2)	1,344,669
4. Lands not suited for timber production because timber production is not compatible with the desired conditions and objectives established by the plan (harvest may occur in some areas for other resource objectives per plan component descriptions) Includes: <ul style="list-style-type: none"> <li>• Idaho Roadless Rule – SAHTS and Primitive and Backcountry Restoration Themes (sec. 61.12)</li> <li>• Lolo Trail National Historic Landmark (sec. 61.12)</li> </ul>	618,075

<sup>26</sup> This guideline refers to project-specific vegetation management activities (e.g., harvest, site preparation, replanting, and any project associated restoration activities) that are conducted as part of a single silvicultural step; this guideline does not refer to activities in subsequent silvicultural steps.

Land Classification Category	Acres
<ul style="list-style-type: none"> <li>• Scenic and Recreation River segments (sec. 61.12)</li> <li>• Proposed Research Natural Areas (sec. 61.12)</li> <li>• Municipal Watersheds (sec. 61.12)</li> <li>• MM McCrosky State Park Area (sec. 61.12)</li> </ul>	
<b>5. Lands suited for timber production (sec. 62.2) (line 3 minus line 4)</b>	<b>726,594</b>
6. Total lands not suited for timber production (sec. 61.1). (line 2 plus line 4)	3,207,416



**Figure 2. Lands Potentially Suitable for Timber Production or Timber Harvest for Other Resource Values (Large scale color map available online at: [www.fs.usda.gov/main/nezperceclearwater](http://www.fs.usda.gov/main/nezperceclearwater))**

## Energy and Minerals

### *Desired Conditions*

**FW-DC-EM-01.** Locatable minerals are available for prospecting, exploring, developing, and producing, contributing to local employment opportunities, as well as supporting traditional lifestyles and generational ties to the land.

**FW-DC-EM-02.** Lands are reclaimed in an appropriate manner following exploration, development, and production activities. Abandoned mines that present a physical or chemical hazard to humans are identified and inventoried and reclaimed in an appropriate manner.

**FW-DC-EM-03.** Saleable materials are available and accessible to support resource management (e.g., road surfacing or protective rip-rap); personal uses (e.g., landscape rock); and local government and commercial uses and the lands are reclaimed in an appropriate manner. Saleable rock sources for internal use are developed to minimize haul distances.

**FW-DC-EM-04.** Nonenergy leasable minerals are available for prospecting, exploring, developing, and producing and the lands are reclaimed in an appropriate manner.

**FW-DC-EM-05.** Energy resources in the form of biofuels are available and contribute to market demands where possible.

**FW-DC-EM-06.** Energy resources, such as geothermal, are available for lease.

### *Objectives*

**FW-OBJ-EM-01. Water Quality.** Two years after plan approval, begin restoring or reclaiming one abandoned mine site identified as causing water quality impairment, every 2 years (1 year for planning, 1 year for implementation).

### *Guidelines*

**FW-GDL-EM-01.** Notify mining claimants and leaseholders of impending Forest Service actions that may affect their claims or leased lands to minimize disruption of mining operations.

**FW-GDL-EM-02.** Vegetation projects will be evaluated for biofuels and contribute to market demand where practicable.

**FW-GDL-EM-03. Botany and Wildlife.** Potential and existing rock sourcing operations used for road or trail construction, reconstruction, or maintenance with botanical or wildlife species of conservation concern should be closed, relocated, or modified to support persistence of the species per FW-DC-TE-03.

**FW-GDL-EM-04. Aquatic Habitat.** Any Plan of Operation that proposes activities in RCAs should include a reclamation plan and a reclamation bond that address the cost of removing facilities, equipment, and materials; recontouring disturbed areas to pre-mining topography; isolating and neutralizing or removing toxic materials; and salvaging or replacing topsoil and preparing and re-vegetating seedbeds to move toward attainment of desired stream conditions and avoid adverse effects on native fish.

**FW-GDL-EM-05. Aquatic Habitat.** Mineral projects should reuse existing access routes and processing sites left from previous projects. Where new construction or relocation is necessary,

access routes and processing facilities<sup>27</sup> should avoid RCAs. Where no alternative access exists, roads should be kept to the minimum necessary for the approved mineral activity.

**FW-GDL-EM-06. Soils.** Allow no more than 15 percent of surface area within RCAs to have exposed mineral soil after exploration or extraction operations<sup>28</sup> are completed. See FW-GDL-EM-04.

**FW-GDL-EM-07. Water Quality.** Immediately decommission or place into intermittent stored service access routes and processing sites after operations are completed or have been abandoned for longer than 1 year. See FW-GDL-EM-04.

**FW-GDL-EM-08. Water Quality.** To maintain water quality and to prevent biological, chemical, or industrial pollutants from being delivered to water bodies, mineral exploration, processing, and extraction projects should install barriers<sup>29</sup> between construction-related pollutant hazards (e.g., sumps, processing pits, fuel storage, latrines, adits and shafts, underground workings, open pits, overburden, development rock and waste rock dumps, tailings impoundments, leach pads, mills, and process water ponds) or natural pollutant hazards (e.g., acidity, metals, sulfate, cyanide, and/or nitrate), and watercourses, streams, lakes, wetlands, or groundwater dependent ecosystems (GDE).

**FW-GDL-EM-09. Water Quality.** Hardrock and placer mines that have constructed features (e.g., adits and shafts, underground workings, open pits, overburden, development rock and waste rock dumps, tailings impoundments, leach pads, mills, and process water and/or settling ponds) should not have direct water flow paths to streams, lakes, wetlands, or GDEs.

**FW-GDL-EM-10. Water Quality.** Where placer mineral exploration, processing, and extraction activities occur within stream channels, the project:

- a) Should not excavate the stream banks and
- b) Should restore all project activity to proper channel dimensions, patterns, and profiles (as defined in the FW-DC-RHAS-11), at the end of the mining/dredging season, at abandonment of operations, or after completing operations, whichever comes first.

**FW-GDL-EM-10. GDE.** To maintain quality and quantity of water flows to, within, or between GDEs, bore holes from minerals exploration should be decommissioned after exploration or extraction operations<sup>30</sup> are complete. A decommissioned bore should not:

- a) Produce or accept fluids;
- b) Serve as a conduit for the movement of contaminants inside or outside the well casing; nor
- c) Allow the movement of surface or groundwater into unsaturated zones, into another aquifer, or between aquifers.

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<sup>27</sup> Processing facilities include buildings, equipment, sump pits, ore piles, and waste piles.

<sup>28</sup> Completion of operations includes all activities described in the Plan of Operations, Special Use Permit, or Annual Operating Plan that are agreed to by the Permittee and the District Ranger.

<sup>29</sup> The type of barrier will vary in size, material, and design, depending on the type of pollutant located on site.

<sup>30</sup> ‘Completion’ of operations includes all activities described in the Plan of Operations, Special Use Permit, or Annual Operating Plan that are agreed to by the Permittee and the District Ranger.

## Livestock Grazing

### *Desired Conditions*

**FW-DC-GRZ-01.** The Forest provides forage for 25,000–35,000 animal unit months (AUMs) of livestock grazing contributing to agricultural business and local employment opportunities, as well as supporting traditional lifestyles and generational ties to the land. Transitory forage on suitable forest lands is available for livestock grazing.

### *Objectives*

**FW-OBJ-GRZ-01.** Within 5 years of Plan approval, treat invasive weeds (500 acres/year) in areas of suitable range with high potential for improved native forage production.

### *Standards*

**FW-STD-GRZ-01. Soils.** Rangelands will be managed to maintain 85 percent of the capable range with all five soil ecological functions in a functioning condition or trending towards improved soil functions.

### *Guidelines*

**FW-GDL-GRZ-01.** To reduce localized impacts resulting from concentrated livestock use and associated trampling, livestock salting should be excluded from riparian areas, meadows, designated sensitive plant habitat, seedling conifer regeneration areas, and prescribed restoration areas.

**FW-GDL-GRZ-02. Botany.** Allotment planning should include measures to protect Spalding's catchfly occupied habitat during the active growth period<sup>31</sup> as needed.

**FW-GDL-GRZ-03.** To allow forage plants to maintain vigor, root development, and soil cover, upland forage utilization should not exceed 45 percent. Specific utilization guidelines should be developed during grazing allotment environmental analysis and allotment management plan development, which consider variables such as ecological condition of the vegetation, timing and duration of use, and other resource values in the area.

**FW-GDL-GRZ-04.** Riparian forage utilization should not exceed 45 percent to allow forage plants to maintain vigor, root development, and soil cover. Green line stubble height should be 6 inches or greater along designated key stream reaches<sup>32</sup>. Specific riparian forage utilization, green line stubble height, and bank disturbance guidelines should be developed during the allotment planning process.

**FW-GDL-GRZ-05. Water Quality.** To maintain quality and quantity of water flows to, within, or between groundwater dependent ecosystems (GDE), livestock water from spring developments should have points of diversion protected (e.g., excluded with fences or barriers) from livestock trampling.

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<sup>31</sup> Active growth period may be variable year to year depending on local climatic conditions.

<sup>32</sup> Designated key stream reaches are those identified for both implementation and effectiveness monitoring that would be expected to be susceptible to grazing effects (e.g. low gradient reaches and/or meadows).

**FW-GDL-GRZ-06. Aquatic Habitat.** The relationship between existing grazing practices and stream reach conditions should be evaluated during the allotment planning process and anytime adjustments to ongoing grazing practices are considered, using accepted protocols (e.g., PIBO). This evaluation should be used to develop site-specific grazing practices that contribute to meeting desired aquatic conditions, and be used to implement monitoring of stream conditions that documents trend. One or more stream parameters should be identified to serve as management triggers for removing livestock from the area during the allotment planning process.

**FW-GDL-GRZ-07. Riparian.** New or reconstructed livestock handling, management or watering facilities should be located outside of RCAs, except for those needed for aquatic resource protection.

**FW-GDL-GRZ-08. Riparian.** Livestock herding and driving inside of RCAs should be limited to areas and times that do not prevent meeting desired conditions in FW-DC-RHAS-11.

**FW-GDL-GRZ-09. Water Quality.** To maintain water quality and to minimize the sediment that is generated and delivered to watercourses from active livestock grazing allotments, degraded trailing stream crossings and approaches should be hardened or relocated.

**FW-GDL-GRZ-10. Aquatic Habitat.** Grazing management should prevent trampling of native fish redds by livestock.

## **Special Forest and Botanical Products**

### ***Desired Condition***

**FW-DC-SFP-01.** Special forest and botanical products are harvested in a sustainable manner while protecting resources, providing products for current and future generations. Vegetation management activities augment the firewood program providing opportunities to collect firewood.



## Suitability of Lands

**Table 20. Suitable Uses and Activities on the Forest**

Area	Timber Production	Timber Harvest	Prescribed Fire	Livestock Grazing	Minerals - Leasable	Minerals Materials-Saleable	New Facilities	Motorized Recreation <sup>1</sup>	Over-snow Motorized Recreation	Mechanized Recreation Travel <sup>1</sup>	New Road Construction
RCAs	N	Y	Y	Y	N	N	N <sup>2</sup>	Y <sup>3</sup>	Y	Y	N <sup>3</sup>
Landslide Prone <sup>4</sup>	N	Y <sup>5</sup>	Y	Y	N	N	N	N <sup>5</sup>	Y	Y	N
Municipal Watersheds	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Developed Recreation Sites	N	Y	Y	N	Y	N	Y	Y	Y	Y	Y
Primitive ROS	N	Y	Y	Y	Y	Y	N	N	N	Y <sup>6</sup>	N
Semi-Primitive Non-Motorized ROS	N	Y	Y	Y	Y	Y	Y	N	N	Y	N
Semi-Primitive Motorized ROS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Roaded Natural, Roaded Modified, and Rural ROS	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Wilderness	N	N	N	**	Y	N	N	N	N	N	N
Recommended Wilderness	N	N	Y	Y	Y	Y	N	N	N	N	N
SMA – Summer Rec	N	N	Y	Y	Y	Y	N	Y	N	Y	N
SMA – Winter Rec	N	N	Y	N	Y	Y	N	N	Y	N	N
Wild and Scenic Rivers - Wild	N	N	Y	N	N	N	N	N	N	Y	N
Wild and Scenic Rivers - Recreation	N	Y	Y	N	Y <sup>7</sup>	Y <sup>7</sup>	Y	Y	Y	Y	Y
<p>** Per designating legislation  <sup>1</sup> On designated routes and areas  <sup>2</sup> Except as needed for resource protection or those inherently located in RCAs  <sup>3</sup> Except at perpendicular stream crossing as designed per plan components  <sup>4</sup> As identified during site-specific project planning  <sup>5</sup> When long-term slope stability can be maintained or improved  <sup>6</sup> Outside of Wilderness and recommended Wilderness  <sup>7</sup> Depending on river management plan.</p>											

## Chapter 3—Management Area Direction

Management Area (MA) allocations are specific to areas across the Forest that have similar management needs and desired conditions. Each MA has a certain emphasis which will direct management activities on that piece of land.

This chapter includes the following for each MA:

- A brief description of the management area, including acres by specific areas; and
- Management direction in the form of desired conditions, standards, and guidelines.

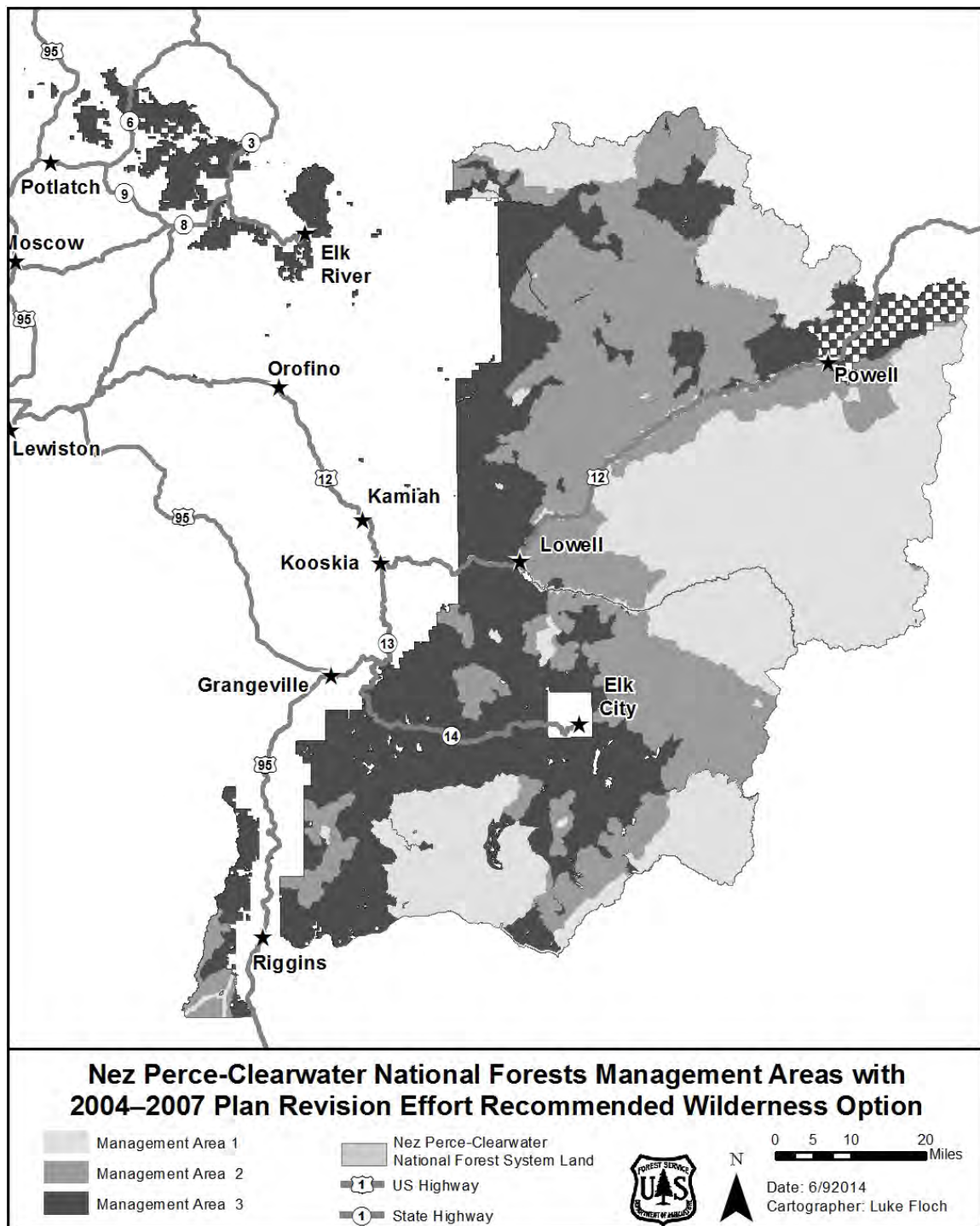
The management direction results in a “prescription” for the MA.

There are three proposed management areas categories. Each category has specific descriptions, desired conditions, standards, and guidelines. Because there are two options for recommended wilderness in this proposed action, there are two options for overall proposed MA allocations (see the recommended wilderness section for additional information).

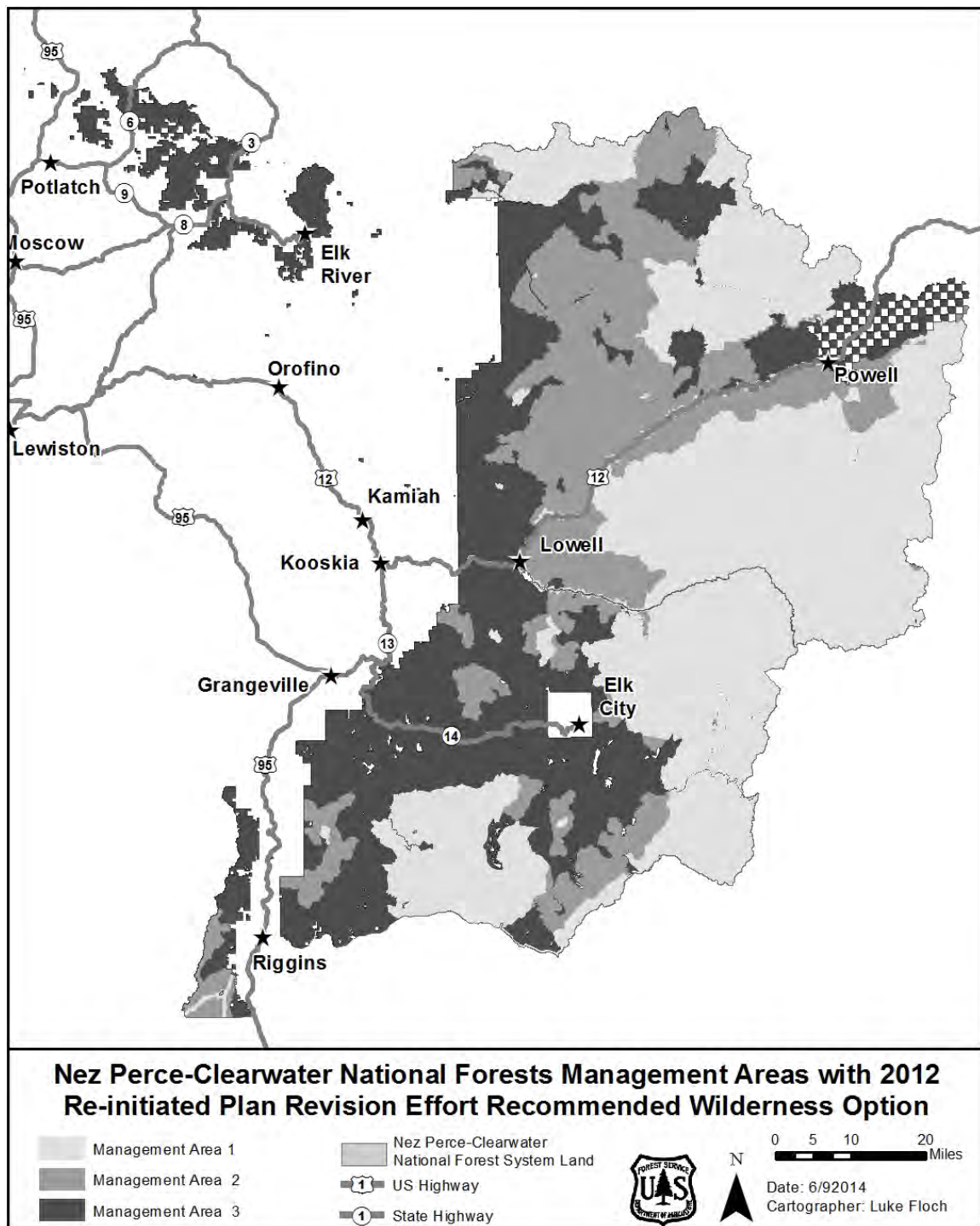
**Table 21. Management Areas and Acreages**

<b>MA</b>	<b>MA Name</b>	<b>Option A Acres/ Percent of Forest — 2004–2007 Recommended Wilderness Option</b>	<b>Option B Acres/ Percent of Forest — 2012 Re- initiated Recommended Wilderness and Special Management Area Option</b>
1*	Wilderness	1,137,547 29%	1,137,547 29%
	Recommended Wilderness	236,166 6%	330,270 8%
	Special Management Areas	0	214,031 5%
	Research Natural Areas	21,987 <1%	21,987 <1%
	Wild and Scenic Rivers	36,207 1%	36,204 1%
2	Backcountry	1,204,554 31%	898,128 23%
3	Front Country	1,297,549 33%	1,295,843 33%

\*There are no acres associated with the eligible wild and scenic rivers.



**Figure 3. Proposed Management Area Allocation with 2004–2007 Plan Revision Recommended Wilderness Proposal Acres Option** (Large scale color map available online at: [www.fs.usda.gov/main/nezperceclearwater](http://www.fs.usda.gov/main/nezperceclearwater))



**Figure 4. Proposed Management Area Allocation with 2012-Reinitiated Plan Revision Option (Large scale color map available online at: [www.fs.usda.gov/main/nezperceclearwater](http://www.fs.usda.gov/main/nezperceclearwater))**

## MA 1—Wilderness, Recommended Wilderness, Special Management Areas, Wild and Scenic Rivers, and Research Natural Areas

**MA1-DC-01.** Natural ecological processes (e.g., plant succession) and disturbance (e.g., fire, insects, and disease) are the primary forces affecting the composition, structure, and pattern of vegetation.

**MA1-DC-02.** Large remote areas with little human disturbance such as those found in this MA and MA 2 are retained and contribute habitats for terrestrial species with large home ranges. Habitat conditions within MA1 and MA2 contribute to wildlife movement within and across the Forest. These areas also provide foraging, security, denning, and nesting habitat for wildlife.

**MA1-DC-03.** Recreation activities associated with wild and scenic recreation settings and experiences contribute to jobs and income in the local economy, community stability or growth, and the quality of lifestyles in the area.

### Designated Wilderness

#### *Description*

The Nez Perce-Clearwater NFs administer all or part of three designated wilderness areas encompassing 1,145,433 acres, with an additional 60,000 acres of the Hells Canyon Wilderness on the Forest administered by the Wallowa Whitman NF.

**Table 22. Designated Wilderness on the Nez Perce-Clearwater National Forests**

Wilderness Area	Acres on NPCW	Total Wilderness Acres (Percent on Forest)
Gospel Hump Wilderness	205,796	205,796 100%
Selway-Bitterroot Wilderness	818,864	1,340,681 61%
Frank Church River of No Return Wilderness	110,773	2,365,896 5%
Hells Canyon Wilderness	59,900*	218,019 27%

\*This portion of the Hells Canyon Wilderness is administered by the Wallowa-Whitman NF

#### *Desired Condition*

**MA1-DC-WILD-01.** Wilderness areas provide the qualities of wilderness character as defined by the Wilderness Act.

**MA1-DC-WILD-02.** Wilderness areas meet Class I airshed criteria except when unplanned fire ignitions result in short term noncompliance.

## Recommended Wilderness and Special Management Areas\*

### Description

The Nez Perce-Clearwater National Forests are proposing two options for recommended wilderness for the revised forest plan. One proposed options is based on the recommended wilderness proposal developed through public input for the 2004–2007 plan revision effort. The other proposed option is based on additional public input provided since reinitiating the plan revision effort in 2012. Analysis of both alternatives, as well other potential alternatives identified during scoping will be conducted for the development of the plan revision EIS.

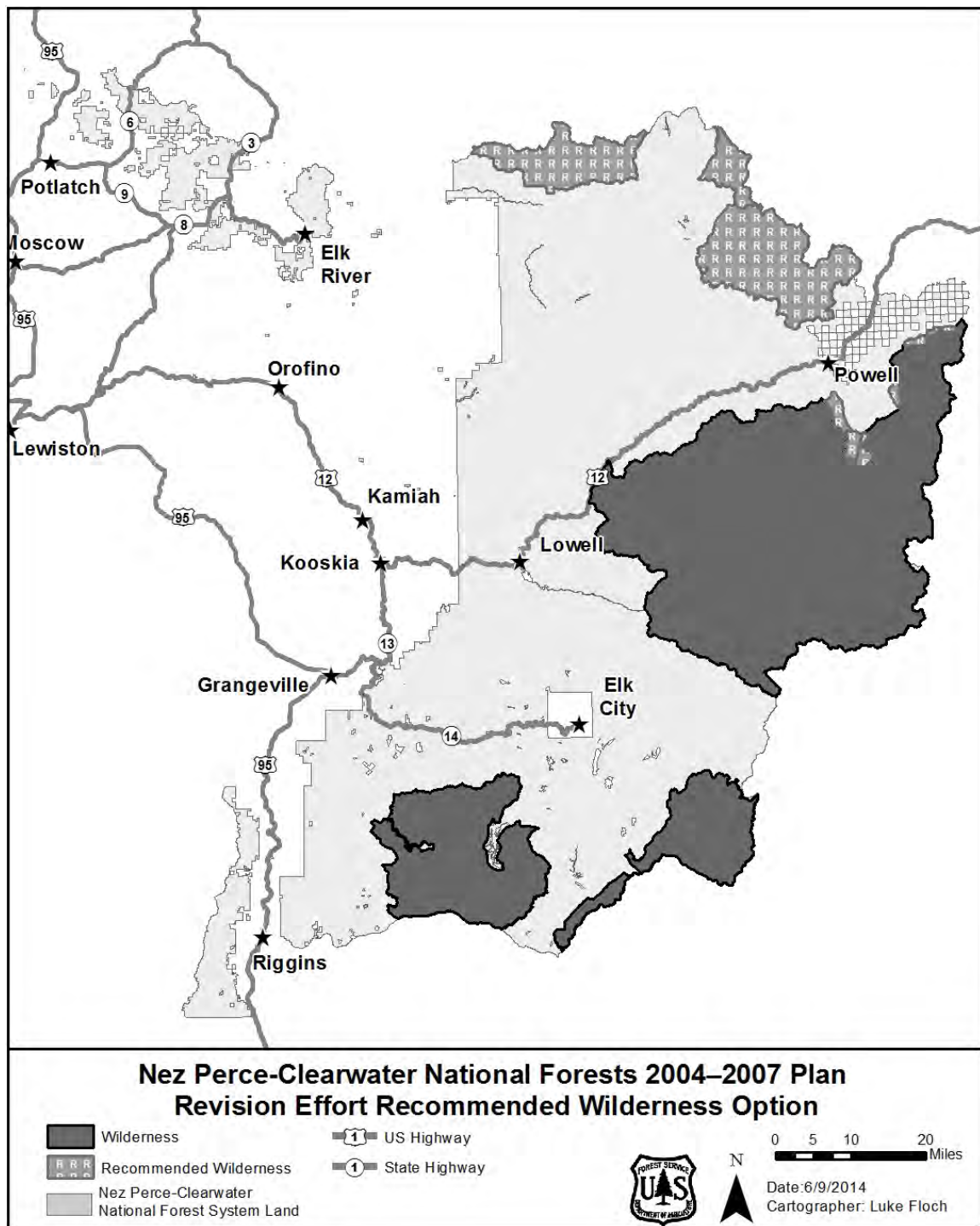
*\*Special management areas desired conditions and guidelines are only associated with the 2012-reinitiated plan revision option. If carried forward in the revised plan following analysis of alternatives for the EIS, they would fall in stand-alone category of MAI.*

**Table 23. Recommended Wilderness and Special Recreation Management Areas Proposed Options with Approximate Acres\***

Name	2004–2007 Plan Revision Proposal Acres	2012-Reinitiated Plan Revision Proposal Acres
<b>Hoodoo (Great Burn)</b>	148,584	136,593
SMAGB1 (Surveyor Cherry Stem)	NA	7,733
SMAGB2 (Blacklead/Williams Lake Cherry Stem)	NA	2,133
SMAGB3 (Hoodoo Cherry Stem)	NA	5,802
<b>Mallard Larkins</b>	68,192	81,801
<b>Selway-Bitterroot Additions:</b>		
- Sneakfoot Meadows	9,675	9,597
- Storm Creek	2,914	NA
- Elk Summit	3,535	NA
- North Fork Spruce –White Sands	NA	2,608
<b>SMABR (Beaver Ridge)</b>	NA	4,162
<b>East Fork Meadow Creek</b>	NA	96,292
<b>SMACayuse</b>	NA	87,292
<b>SMAWFMC (West Fork Meadow Creek)**</b>	NA	106,886

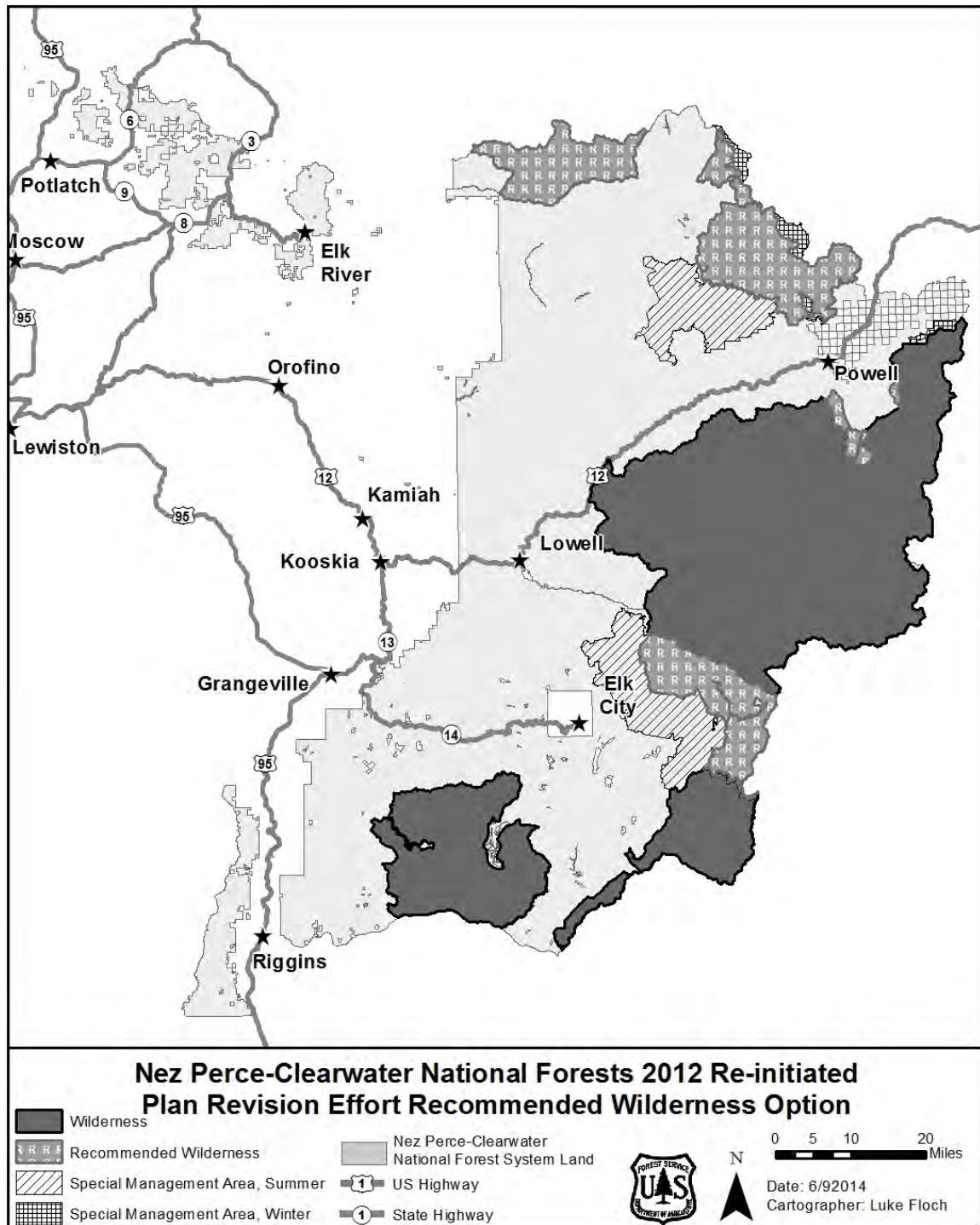
\*Acres are approximated for the proposed action. Further boundary refinement and detailed analysis may result in changes for the EIS.

\*\* National Forest System Trail (NFST) 505 Anderson Butte ATV Tail is the western boundary of SMAWFMC.



**Figure 5. 2004–2007 Plan Revision Effort Recommended Wilderness Option (Large scale color map available online at: [www.fs.usda.gov/main/nezperceclearwater](http://www.fs.usda.gov/main/nezperceclearwater))**





**Figure 6. 2012 Re-initiated Plan Revision Effort Recommended Wilderness Option (Large scale color map available online at: [www.fs.usda.gov/main/nezperceclearwater](http://www.fs.usda.gov/main/nezperceclearwater))**



### ***Desired Conditions—Recommended Wilderness***

**MA1-DC-RWILD-01.** Recommended Wilderness areas preserve opportunities for inclusion in the National Wilderness Preservation System. The wilderness character and potential for the area to be included in the National Wilderness Preservation System remain intact until Congressional action is taken.

### ***Guidelines—Recommended Wilderness***

**MA1-GDL-RWILD-01.** Minimum tool requirements should be considered for all instances authorizing non-conforming uses (includes administrative actions except for the use of motorized and mechanized tools and equipment for trail maintenance).

**MA1-GDL-RWILD-02.** Management activities should be consistent with the scenic integrity objective of very high.

### ***Desired Conditions—Special Management Areas***

**MA1-DC-SMA-01.** Four special management areas, SMAGB1, SMAGB2, SMAGB3, and SMABR, preserve opportunities to experience some qualities of wilderness character while allowing low levels of oversnow motor vehicle use; otherwise these areas are managed per MA1-DC-RWILD-01.

**MA1-DC-SMA-02.** Two special management areas, SMACayuse and SMAWFCM, preserve opportunities to experience some qualities of wilderness character and protect water quality, native fisheries habitat, wildlife connectivity and the ecological integrity of the Cayuse and West Meadow Creek Watersheds while allowing low levels of motorized single track trail use; otherwise these areas are managed as per MA1-DC-RWILD-01.

### ***Standards—Special Management Areas***

**MA1-STD-SMA-01.** Motor vehicle use in summer SMAs can be designated or is allowed on the following routes only:

- **SMAWFCM:** Recreational motor vehicle use is prohibited in the SMA with the exception of the boundary trail, 505 Anderson Butte ATV trail.
- **SMACayuse:** Recreational motor vehicle use is prohibited in the SMA other than the designations for motor vehicle use per the 2011 Clearwater Travel Management Plan FEIS ROD.

### ***Guidelines—Special Management Areas***

**MA1-GDL-SMA-01.** Access to winter recreation SMAs for oversnow motor vehicles is on designated road and trail routes.

**MA1-GDL-SMA-02.** The Nez Perce Tribe, Idaho Fish and Game are allowed to use motorized and/or mechanized equipment on existing routes for fish and wildlife management with prior Forest Service coordination.

**MA1-GDL-SMA-03.** Management activities should be consistent with the scenic integrity objective of very high.

**MA1-GDL-SMA-04.** Minimum tool requirements should be considered for all instances authorizing non-conforming uses (includes administrative actions except for the use of motorized and mechanized tools and equipment for trail maintenance).

## **Designated Wild and Scenic Rivers**

### ***Description***

The Nez Perce-Clearwater NFs administer all or part of three designated Wild and Scenic Rivers: Salmon River, Middle Fork Clearwater River, including the Lochsa and Selway Rivers, and Rapid River. There are approximately 214 miles of river and 59,500 acres within the designated boundaries on the Forest.

### ***Desired Conditions***

**FW-DC-DWSR-01.** Designated Wild, Scenic, and Recreational Rivers are managed consistent with the Wild and Scenic Rivers Act (WSRA) and individual comprehensive river management plans (CRMP). CRMPs are current and consistent with the WSRA. The following CRMPs and any future versions are incorporated by reference and are part of the Forest Plan:

- River Plan—Middle Fork Clearwater, including the Selway and Lochsa Rivers, 1969
- Management Guides—Middle Fork of the Clearwater, including the Lochsa and Selway, 1973
- Frank Church River of No Return Wilderness Management Plan (USDA Forest Service 2003)
- Hells Canyon National Recreation Area Comprehensive Management Plan (USDA Forest Service 2003)

### ***Guidelines***

**FW-GDL-DWSR-01.** Management activities should be consistent with the scenic integrity objective of very high in designated wild and scenic river corridors, and moderate to high in designated recreational river segments.

## **Eligible Wild and Scenic Rivers**

### ***Description***

This portion of MA2 applies to river segments that have been identified as eligible for inclusion as part of the Wild and Scenic Rivers System under the authority granted by the Wild and Scenic Rivers Act of 1968, as amended. Congressional action designates these areas. See Table 24 and Table 25 for approximate mileages and associated outstanding remarkable values (ORVs) for the eligible Wild and Scenic Rivers on the Forest.

### ***Desired Conditions***

**MA1-DC-WSR-01.** Eligible wild, scenic, and recreation rivers are free flowing and have unimpaired water quality. Identified ORVs within eligible river corridors are protected or enhanced.

## ***Standards***

**MA1-STD-WSR-01.** Rivers found unsuitable for inclusion will be released from further consideration and restrictions of this section.

**MA1-STD-WSR-02. Wild.** Timber harvest is not allowed in eligible wild river segments.

## ***Guidelines***

**MA1-GDL-WSR- 01. Wild.** Cutting of trees is allowed for such thing as trail maintenance or hazard tree mitigation in eligible wild river segments.

**MA1- GDL-WSR- 02. Scenic/Recreational.** Timber harvest is allowed to maintain or restore the values for which the eligible scenic river or recreational river was identified.

**MA2-GDL-WSR-03.** Management activities should be consistent with the scenic integrity objective of very high in eligible wild and scenic river segments, and moderate to high in eligible recreational river segments.

**Table 24. Clearwater National Forest Eligible Wild and Scenic Rivers**

<b>Stream</b>	<b>Section</b>	<b>Potential Classification</b>	<b>Approximate Mileage</b>	<b>Outstandingly Remarkable Values</b>
Kelly Creek (including North, South and Middle Forks)	Mouth to source	Wild Scenic Recreational	33 11 0	Scenery, Recreation, Fisheries, Wildlife
Cayuse Creek	Mouth to source	Wild Scenic Recreational	230 2 230	Scenery, Recreation, Fisheries
North Fork Clearwater River (including Upper North Fork)	Dworshak Reservoir high pool to bridge on FR 255 FR 255 to source of Gravey Creek	Wild Scenic Recreational	10 3 66	Scenery, Recreation, Fisheries, Cultural, Botany
Little North Fork River	Clearwater National Forest portion	Wild Scenic Recreational	4 0 0	See Idaho Panhandle NF
Lolo Creek	Forest Boundary to source near Hemlock Butte	Wild Scenic Recreational	0 0 20	Scenery, Recreation, Historic, Cultural
Fish Creek	Mouth to source	Wild Scenic Recreational	16 0 5	Recreation, Fisheries, Wildlife
Hungry Creek	Mouth at Fish Creek to source	Wild Scenic Recreational	14 0 0	Fisheries, Historic
Musselshell Creek	Forest Boundary to confluence with Gold Creek	Wild Scenic Recreational	0 0 4	Cultural, Botany
Colt Killed Creek (aka White Sand Creek)	Mouth to source	Wild Scenic Recreational	10 0 14	Recreation, Fisheries, Wildlife
Upper Lochsa River	Powell Ranger Station to mouth of Colt Killed Creek	Wild Scenic Recreational	0 0 2	Scenery, Recreation, Wildlife, Historic, Cultural

Stream	Section	Potential Classification	Approximate Mileage	Outstandingly Remarkable Values
	<b>TOTAL MILES OF ELIGIBLE RIVERS BY CLASSIFICATION</b>	Wild Scenic Recreational	89 16 141	

**Table 25. Nez Perce National Forest Eligible Wild and Scenic Rivers**

Stream	Section	Potential Classification	Approximate Mileage	Outstandingly Remarkable Values
Bargamin Creek	Mouth to source	Wild Scenic Recreational	16 5 0	Scenery, Recreation, Fisheries
Bear Creek Complex	Mouth to source, including Cub, Brushy Fork, Paradise, and Wahoo creeks	Wild Scenic Recreational	65 0 0	Scenery, Fisheries, Cultural
Johns Creek	Mouth to source	Wild Scenic Recreational	20 0 0	Scenery, Fisheries
Lake Creek	Mouth at Crooked Creek to source	Wild Scenic Recreational	10 0 4	Scenery, Fisheries, Botany
Meadow Creek	Mouth to source	Wild Scenic Recreational	42 0 2	Scenery, Recreation, Fisheries
Moose Creek Complex	Mouth to source, including East Fork, North Fork, West Fork, and Rhoda creeks	Wild Scenic Recreational	93 0 0	Scenery, Fisheries, Historic, Botany
Running Creek	Mouth to source (includes 4 miles on Bitterroot National Forest)	Wild Scenic Recreational	9 12 0	Scenery, Geology, Fisheries

Stream	Section	Potential Classification	Approximate Mileage	Outstandingly Remarkable Values
Salmon River	Confluence with Little Salmon River to Long Tom Bar	Wild Scenic Recreational	0 0 26	Scenery, Recreation, Geology, Fisheries, Wildlife, Historic, Cultural
Slate Creek	Mouth to source	Wild Scenic Recreational	6 0 16	Fisheries
South Fork Clearwater River	Mouth to confluence with Red River (miles off-Forest reach)	Wild Scenic Recreational	0 0 63	Scenery, Recreation, Geology
White Bird Creek	Forest Boundary to source, including North and South forks	Wild Scenic Recreational	0 0 18	Fisheries, Historic
Three Links Creek	Mouth to source, including West Fork	Wild Scenic Recreational	18 0 0	Scenery, Fisheries
Gedney Creek	Mouth to source, including West Fork Gedney Creek	Wild Scenic Recreational	18 0 2	Scenery, Fisheries
	<b>TOTAL MILES OF ELIGIBLE RIVERS BY CLASSIFICATION</b>	Wild Scenic Recreational	297 17 131	

## Research Natural Areas

### *Description*

The Forest has 19 established and 6 proposed research natural areas (RNA) (Table 26). They are established to provide for the study and protection of a full range of habitat types identified in the Northern Region's RNAs current assessment. These areas form a long-term network of ecological reserves establishes as baseline areas for non-manipulative research, education, and the maintenance of biodiversity.

**Table 26. Established or Proposed RNAs**

RNA	Status	Acres <sup>a</sup>
Alum Beds*	Proposed	1,445
Aquarius	Established	3,900
Bald Mountain	Established	365
Bill's Creek*	Proposed	28
Bull Run Creek	Established	373
Chateau Falls	Established	200
Dutch Creek	Established	303
Elk Creek	Established	6,984
Fenn Mountain	Proposed	600
Fish Lake	Established	760
Four-Bit Creek	Established	392
Grave Peak	Established	360
Lightning Creek*	Proposed	2,134
Little Granite Creek*	Established	6,264
Lochsa River	Established	1,490
Moose Meadow Creek	Established	1,000
No Business Creek	Established	1,360
O'Hara Creek	Established	7,000
Rhodes Peak	Proposed	310
Sneakfoot Meadow	Established	1,965
Steep Lakes	Established	784
Square Mountain Creek	Established	709
Upper Hemlock Creek	Proposed	1,945
Upper Newsome Creek	Established	1,201
Warm Springs Creek	Established	530

\*Administered by the Wallowa-Whitman National Forests

### ***Desired Conditions***

**MA1-DC-RNA-01.** Research Natural Areas (RNAs) maintain a representation of natural systems found on the Nez Perce-Clearwater National Forests as a baseline for research, monitoring, and education by the agency, academia, and public interests. Wildfire, insects, and pathogens, along with other processes and disturbances, continue to affect vegetation, reflecting the dynamic nature of the systems they represent. RNAs contribute to ecological sustainability and biological diversity.

### ***Standards***

**MA-STD-RNA-01.** Special forest products for commercial purposes and personal use (including firewood) is not allowed.

### ***Guidelines***

**MA1-DC-RNA-01.** Management activities should be consistent with the scenic integrity objective of very high in RNAs.

## **MA 2—Backcountry**

### **Description**

This MA includes lands within Idaho Roadless Areas. This MA is made up of relatively large areas (generally without roads) and provides a variety of motorized and non-motorized recreation opportunities. Trails are the primary improvements constructed and maintained for recreation users. In some areas, lookouts, cabins, or other structures are present as well as some evidence of management activities.

### ***Desired Conditions***

**MA2-DC-01.** Idaho Roadless Areas meet desired conditions for all theme areas as defined by the final rule: 36 CFR Part 294. Special Areas; Roadless Area Conservation; Applicability to the National Forests in Idaho; Final Rule. (For the location and distribution of Idaho Roadless Areas by theme, reference the Idaho Roadless Area map found online at: <http://www.fs.usda.gov/roadmain/roadless/idahoroadlessrule>.)

**MA2-DC-02.** Natural ecological process (e.g. plan succession) and disturbances (e.g., fire, insects, and disease) are the primary forces affecting the composition, structure, and pattern of vegetation.

**MA2-DC-03.** The use of fire serves as the primary tool for trending the vegetation towards the desired conditions as well as serving other important ecosystem functions.

**MA2-DC-04.** Large remote areas with little human disturbance such as those found in this MA and MA 1 are retained and contribute habitats for species with large home ranges. Habitat conditions within MA1 and MA2 contribute to wildlife movement within and across the Forest. These areas also provide foraging, security, denning, and nesting habitat for wildlife.

**MA2-DC-05.** These areas provide more remote and undeveloped recreation experiences largely through the management of the various trail systems (i.e., motorized and non-motorized).

### ***Standards***

**MA2- STD-01.** Where inconsistent direction exists between the Idaho Roadless Rule and the Forest Plan, the Idaho Roadless rule takes precedent.



### ***Guidelines***

**MA2-GDL-01.** Coordinate all proposed management activities with the Idaho Roadless Commission.

**MA2-GDL-02.** Management activities should be consistent with the scenic integrity objective of moderate to high.

## **MA 3—Front Country**

### **Description**

Most of this MA consists of the areas with roads, trails, and structures, as well as sign of past and ongoing activities designed to actively manage the forest vegetation. This MA provides a wide variety of recreation opportunities, both motorized and nonmotorized.

### **Desired Conditions**

**MA3-DC-FC-01.** Vegetation management activities have a dominant role in affecting composition, structure, and pattern of vegetation. These management activities trend the vegetation toward desired conditions described in the terrestrial ecosystems section. Although natural ecological processes and disturbances are still present, they are influenced more by human activity in this MA than in others.

**MA3-DC-FC-02.** A range of recreation opportunities both motorized and nonmotorized are provided within this MA.

### **Guidelines**

**MA3-GDL-FC-01.** Management activities should be consistent with the scenic integrity objective of low to high.



## Chapter 4—Monitoring Program

Monitoring provides the feedback for the forest planning cycle by testing assumptions, tracking relevant conditions over time, measuring management effectiveness, and evaluating effects of management practices. Monitoring information should enable the Forest to determine if a change in plan components or other plan management guidance may be needed, forming a basis for continual improvement and adaptive management. Direction for the monitoring and evaluation of forest plans is found at 36 CFR 219.12.

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

This monitoring program will not be designed to depict all monitoring, inventorying, and data gathering activities undertaken on the Forest. Consideration and coordination with broad-scale monitoring strategies, multi-party monitoring collaboration, and cooperation with state agencies where practicable will increase efficiencies and help track changing conditions beyond the Forest's boundaries to improve the effectiveness of the plan monitoring program. In addition, project and activity monitoring may be used to gather information for the plan monitoring program if it will provide relevant information to inform adaptive management.

The Forest will be developing the monitoring program based on public comment provided on this proposed action and the analysis of alternatives for the EIS. We are seeking your input on focal species and indicators selection, opportunities for multi-party monitoring, and sources of relevant scientific information.



# Appendix A—Glossary

**Activity area**—A land area affected by a management activity such as a harvest unit including landings and temporary roads outside the harvest unit boundary but excluding system roads. An activity area may also be a prescribed burn unit or any area delineated on the ground for a specific treatment. Activity areas must be feasible to monitor.

**Adaptive management**—An approach to natural resource management where actions are designed and executed and effects are monitored for the purpose of learning and adjusting future management actions, which improves the efficiency and responsiveness of management.

**Allotment management plan (AMP)**—A document applying to management of rangeland ecosystems and livestock operations on the public lands prescribing: (1) the manner in and extent to which livestock operations will be conducted in order to meet ecosystem health, multiple use, economic, and other objectives; (2) describing range improvements to be installed and maintained; and (3) containing such other provisions relating to livestock grazing and other objectives found by the Secretary of Agriculture to be consistent with the provisions of Federal Land Policy and Management Act. An AMP integrates resource objectives, standards, guidelines, and management requirements for soil and water for watershed protection, wildlife and fisheries, recreation, timber, and other resources on lands within a range allotment.

**Assessment**—For the purposes of this forest plan, an assessment is the identification and evaluation of existing information to support land management planning. Assessments are not decisionmaking documents, but provide current information on select topics relevant to the plan area, in context of the broader landscape (36 CFR 219.19).

**Aquatic ecosystem**—Waters and wetlands of the United States that serve as habitat for interrelated and interacting communities and populations of plants and animals. The stream channel, lake or estuary bed, water, biotic communities, and the habitat features that occur therein.

**Beneficial uses**—Any of the various uses which may be made of the water, including, but not limited to, domestic water supplies, fisheries and other aquatic life, industrial water supplies, agricultural water supplies, navigation, recreation in and on the water, wildlife habitat, and aesthetics.

**Best management practices (BMP)**—Practice or set of practices that enable a planned activity to occur while still protecting the resource managed, normally implemented and applied during the activity rather than after the activity.

**Best management practices for water quality (BMP)**—Methods, measures, or practices selected by an agency to meet its nonpoint source control needs. BMPs include but are not limited to structural and nonstructural controls and operations and maintenance procedures. BMPs can be applied before, during, and after pollution-producing activities to reduce or eliminate the introduction of pollutants into receiving waters (36 CFR 219.19).

**Big game**—Those species of large mammals normally managed as a sport hunting resource. Generally includes; elk, moose, white-tailed deer, mule deer, mountain goat, bighorn sheep, black bear, and mountain lion.

**Biophysical setting**—An aggregation of vegetation response units or landtype associations, grouped by broad, climatic modifiers including temperature and moisture gradients.

**Coarse woody debris**—Coarse woody debris consists of dead woody material larger than 3 inches in diameter and derived from tree limbs, boles, and roots.

**Collaboration or collaborative process**—A structured manner in which a collection of people, with diverse interests share knowledge, ideas, and resources, while working together in an inclusive and cooperative manner toward a common purpose.

**Community protection zone**—as an area extending one-half mile from the boundary of an at-risk community or an area within one and half miles of the boundary of an at-risk community, where any land:

- 1) has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community;
- 2) has a geographic feature that aids in creating an effective fire break, such as a road or ridge top; or
- 3) is in condition class 3 as defined by the Healthy Forest Recreation Act (HFRA).

(“At-risk community” for this definition is defined by the HFRA.)

**Decommission**—Demolition, dismantling, removal, obliteration and/or disposal of a deteriorated or otherwise unneeded asset or component, including necessary cleanup work. This action eliminates the deferred maintenance needs for the fixed asset.

**Deferred maintenance**— Maintenance that was not performed when it should have been or when it was scheduled, and therefore, was put off or delayed for a future period. When allowed to accumulate without limits or consideration of useful life, deferred maintenance leads to deterioration of performance, increased costs to repair, and decrease in asset value. Code compliance (e.g., life safety, ADA, OSHA, environmental, etc.), Forest Plan Direction, Best Management Practices, Biological Evaluations other regulatory or Executive Order compliance requirements, or applicable standards not met on schedule are considered deferred maintenance.

**Designated area**—An area or feature identified and managed to maintain its unique special character or purpose. There are two types of designations: statutorily designated (wilderness, national heritage areas, national recreation areas, national scenic trails, wild and scenic rivers, and wilderness study areas) and administratively designated areas (e.g. experimental forests, research natural areas, scenic byways, botanical areas, and significant caves). (36 CFR 219.19)

**Designated route**—A National Forest System road or a National Forest system trail on National Forest System lands that is designated for motor vehicle use pursuant to 36 CFR 212.51 on a motor vehicle use map.

**Determination**—A finding in the study document that the river segment meets the criteria found in this chapter to be first eligible, and then later, suitable for inclusion in the National System. FSH 1909.12 Chapter 80

**Development Scale**—A numeric scale (0 through 5) used to define the level of development within a recreation site. 0 is the least developed recreation site, containing no constructed features; 5 is the most developed recreation site, typically containing paved access and parking, flush toilets, showers, and other amenities for the comfort of visitors. Reference the Development Scale Primer document for more information. Development scale 0 to 2 is appropriate in primitive, semi-primitive nonmotorized, and semi-primitive motorized ROS settings. The full range of recreation site development scales (0–5) is appropriate in roaded natural, roaded modified, and rural ROS settings.

**Distinctive Roles and Contributions**—Describes key attributes and associated benefits and outcomes (uses, values, products, and services) that NFS lands are uniquely poised to provide; are important and relevant at the local, regional and/or national level; and contribute toward social, economic and ecological sustainability. (Draft FS HB 1909.12, Chapter 20). Distinctive Roles and Contributions will serve as a unifying concept helping define the vision for the plan area within the broader landscape. The preferred vision is expected to assist the responsible official in developing plan components the multiple uses. (36 CFR Part 219 ROD, page 21207). A plan reflects the unit's expected Distinctive Roles and Contributions to the local area, region, and Nation, and the roles for which the plan area is best suited, considering the Agency's mission, the unit's unique capabilities, and the resources and management of other lands in the vicinity. (36 CFR 219.2 (b)(1))

**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.

**Dominance group**—Dominance group is determined by the following:

**Single species** – species that makes up at least 60 percent of the canopy cover or weighted basal area.

**Species mix** – No single species determination can be made. Type of mix, either tolerant or intolerant, is determined by what species combination makes up 80 percent of the canopy cover or weighted basal area, with each species contributing more than 20 percent to the total. Mixed species were combined with habitat types to derive a single species label.

**Down wood**—Accumulation of woody material scattered on the forest floor that consists of two categories: coarse woody debris and fine woody debris.

**Ecological conditions**—The biological and physical environment that can affect the diversity of plant and animal communities, the persistence of native species, and the productive capacity of ecological systems. Ecological conditions include habitat and other influences on species and the environment. Examples of ecological conditions include the abundance and distribution of aquatic and terrestrial habitats, connectivity, roads and other structural developments, human uses, and invasive species.

**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.



**Ecosystem**— A spatially explicit, relatively homogeneous unit of the Earth that includes all interacting organisms and elements of the abiotic environment within its boundaries. An ecosystem is commonly described in terms of its:

1. **Composition.** The biological elements within the different levels of biological organization, from genes and species to communities and ecosystems.
2. **Structure.** The organization and physical arrangement of biological elements such as, snags and down woody debris, vertical and horizontal distribution of vegetation, stream habitat complexity, landscape pattern, and connectivity.
3. **Function.** Ecological processes that sustain composition and structure, such as energy flow, nutrient cycling and retention, soil development and retention, predation and herbivory, and natural disturbances such as wind, fire, and floods.
4. **Connectivity.** Ecological conditions that exist at several spatial and temporal scales that provide landscape linkages that permit the exchange of flow, sediments, and nutrients; the daily and seasonal movements of animals within home ranges; the dispersal and genetic interchange between populations; and the long distance range shifts of species, such as in response to climate change.

**Ecosystem services**—Benefits people obtain from ecosystems, including:

**Provisioning services**, such as clean air and fresh water, energy, food, fuel, forage, wood products or fiber, and minerals;

**Regulating services**, such as long term storage of carbon; climate regulation; water filtration, purification, and storage; soil stabilization; flood and drought control; and disease regulation;

**Supporting services**, such as pollination, seed dispersal, soil formation, and nutrient cycling; and

**Cultural services**, such as educational, aesthetic, spiritual, and cultural heritage values, recreational experiences, and tourism opportunities.

**Eligible Wild and Scenic River**—A river segment that is free-flowing and, in combination with its adjacent land area, possesses one or more “outstandingly remarkable values.” An eligible river is a river that is further evaluated in a suitability study to determine if it should be included in the National System. FSH 1909.12 Chapter 80

**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. [ESA §3(6)]

**Even-aged stand**— A stand of trees composed of a single age class.

**Fire behavior**—The manner in which a fire reacts to the influences of fuel, weather, and topography.

**Fire hazard**—A fuel complex defined by volume, type condition, arrangement, and location, which determines the degree of ease of ignition and of resistance to control.

**Fire intensity**—A general term relating to the heat energy released by a fire.

**Fire management**— Activities required for the protection of burnable wildland values from fire and the use of prescribed fire to meet land management objectives.

- Fire severity**—The degree to which a site has been altered or disrupted by fire. A product of fire intensity, fuel consumption, and residence time.
- Fire suppression**—An appropriate management response to wildland fire that results in curtailment of fire spread and eliminates all identified threats from the particular fire. All wildland fire suppression activities provide for firefighter and public safety as the highest consideration, but minimize loss of resource values, economic expenditures, and/or the use of critical firefighting resources.
- Forest health**—The perceived condition of a forest derived from concerns about such factors as its age, structure, composition, function, vigor, presence of unusual levels of insects and disease, and resilience to disturbance.
- Forest land**—Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for non-forest uses. Lands developed for non-forest use include areas for crops, improved pasture, residential or administrative areas, improved roads of any width and adjoining road clearing, and power line clearings of any width.
- Forest Service–Identified Study Rivers**—Rivers that the Forest Service has identified for study to determine potential inclusion in the National System, as directed under section 5(d)(1) of the WSR Act. Study rivers that have been determined by the Forest Service to be Eligible or Suitable Rivers for inclusion in the National System. FSH Chapter 80
- Free Flow**—As applied to any river or section of a river means existing or flowing in a natural condition without impoundment, diversion, straightening, riprapping, or other modification of the waterway. The existence, however, of low dams, diversion works, or other minor structures at the time any river is proposed for inclusion [in the National System] shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the [National System]. WSRA, Section 16(b)
- Fuel treatment**—Any manipulation or removal of fuels to lessen potential damage and resistance to control (includes mechanical and prescribed fire treatments).
- Function affected but not impaired**—When any or a combination of soil quality indicators is altered but can still provide all soil ecological functions.
- Functioning condition**—Soil quality indicators are at the Undisturbed Condition or Affected but Not Impaired.
- Grazing**—The consumption of standing forage by livestock or wildlife.
- Grazing allotment**—Area designated for the use of a certain number and kind of livestock for a prescribed period of time.
- Grazing permittee**—A person or entity authorized to graze livestock on national forest lands through the issuance of a Term Grazing Permit.
- Habitat type group**—A land or aquatic unit, consisting of an aggregation of habitats having equivalent structure, function, and responses to disturbance.
- Head month (HM)**—One month's use and occupancy of the range by one animal. For grazing fee purposes, it is a month's use and occupancy of range by one weaned or adult cow with or without calf, bull, steer, heifer, horse, burro, or mule, or five sheep or goats.

**Hibernacula**—Habitat niches where certain animals (e.g., bats) overwinter, such as caves, mines, tree hollows, or loose bark.

**Historic Range of Variation**—See natural range of variability.

**Hydrologically disconnected**—A water drainage system that is hydrologically disconnected from delivering water, sediment, and pollutants to water bodies means the following:

- The water drainage system should prevent erosion
- The drainage system should not discharge water onto landslide prone or high mass wasting hazard lands in quantities that are likely to result in hillslope failure
- The drainage system should disperse water away from the road, trail, linear feature, or airstrip surface using frequent cross drains, outsloping the travel way, and/or varying the running grade of the surface
- The drainage system should relieve inside ditch flows prior to delivering water and sediment to stream channels
- The drainage system should direct flows to areas where water can infiltrate into forest soils by having vegetated buffers between drainage outfalls for culverts, dips, and waterbars and the entry point to the watercourse
- The drainage system should have structures at stream crossings to direct stream channel overflows back into the stream channel

**Hydrologic unit (HU)**—A hydrologic unit is a drainage area delineated to nest in a multi-level, hierarchical drainage system. Its boundaries are defined by hydrographic and topographic criteria that delineate an area of land upstream from a specific point on a river, stream, or similar surface waters. A hydrologic unit can accept surface water directly from upstream drainage areas, and indirectly from associated surface areas such as remnant, non-contributing, and diversions to form a drainage area with single or multiple outlet points. Hydrologic units are only synonymous with classic watersheds when their boundaries include all the source area contributing surface water to a single defined outlet point

**Hydrologic unit code (HUC)**—The numeric identifier of a specific hydrologic unit consisting of a 2-digit sequence for each specific level within the delineation hierarchy.

**4<sup>th</sup> code** refers to the 4<sup>th</sup> pair of an 8-digit code of a subbasin HU that is generally 450,000 acres in size.

**5<sup>th</sup> code** refers to the 5<sup>th</sup> pair of a 10-digit code of a watershed HU that generally ranges from 40,000 to 250,000 acres in size.

**6<sup>th</sup> code** refers to the 6<sup>th</sup> pair of a 10-digit code of a subwatershed HU that generally ranges from 10,000 to 40,000 acres in size.

**Impaired function**—When any or a combination of soil quality indicators is altered to a point where a soil can no longer provide an ecological function then its quality or productivity is impaired. Active restoration may be required to restore soil function.

**Instream flow**—Streamflow regime required to satisfy a mixture of conjunctive demands being placed on water while it is in the stream.

**Integrated pest management**—A process for selecting strategies to regulate forest pests in which all aspects of a pest-host system are studied and weighed.

**Interim management (FSH 1909.12 Chapter 80 Section 82.52 and 82.53)**—Management prescriptions for certain activities within eligible Wild and Scenic Rivers.

**Intermittent stored service**—An existing road where future use is expected but not known and is currently closed to vehicle traffic. The road is in a condition that there is little resource risk if maintenance is not performed.

**Invasive species**—Executive Order 13112 defines an invasive species as “an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health.” The Forest Service relies on Executive Order 13112 to provide the basis for labeling certain organisms as invasive. Based on this definition, the labeling of a species as “invasive” requires closely examining both the origin and effects of the species. The key is that the species must cause, or be likely to cause, harm and be exotic to the ecosystem it has infested before we can consider labeling it as “invasive”. Thus, native pests are not considered “invasive”, even though they may cause harm. 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. Additional information on this definition can be found in Executive Order 13112.

**Inventoried Roadless Rule Lands**—Areas designated pursuant to 36 CFR §294 Subpart C. These areas are identified in a set of maps maintained at the national headquarters office of the Forest Service.

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

**Landslide prone**—An area deemed at high or very high risk of mass failure based on a combination of factors including geology, soil properties, and slope.

**Legislatively mandated study rivers**—Rivers that Congress has identified under section 5(a) of the WSR Act for study to determine potential inclusion in the National System. FSH 1909.12 Chapter 80

**Long-term sustained yield capacity (LTSYC)**—The highest uniform wood yield from lands being managed for timber production that may be sustained under specified management intensities consistent with multiple-use objectives.

**Lynx analysis units (LAU)**—An area of at least the size used by an individual lynx, from about 25 to 50 square miles. A project analysis unit upon which direct, indirect, and cumulative effects analyses are performed.

**Maintain (ecological)**—To keep in existence or continuance of the desired ecological condition in terms of its desired composition, structure, and processes. Depending upon the circumstance, ecological conditions may be maintained by active or passive management or both.

**Maintenance**—The upkeep of the entire forest development transportation facility including surface and shoulders, parking and side areas, structures, and such traffic-control devices as are necessary for its safe and efficient utilization.

**Management activity**—Any activity that is carried out or authorized by the Forest that would result in impacts on natural resources or change human use of the Forest.

**Management area (MA)**—A land area identified within the planning area that has the same set of applicable plan components. A management area does not have to be spatially contiguous.

**Mechanized Uses**—Commonly refers to either vehicles used by recreational visitors as their mode of travel or mechanical transport devices used by visitors for transporting equipment and/or supplies, or in support of recreational activities such as hunting. For example, bicycles, fat tire winter bikes and some accessibility devices are mechanized modes of travel; game carts, wheelbarrows, etc. are mechanical transport devices in support of recreational activities.

**Minerals-Locatable**—Those hardrock minerals that are mined and processed for the recovery of metals. They also may include certain nonmetallic minerals and uncommon varieties of mineral materials, such as valuable and distinctive deposits of limestone or silica.

**Minerals-Leasable**—Coal, oil, gas, phosphate, sodium, potassium, oil shale, sulphur, and geothermal resources.

**Minerals-Materials (Saleable)**—A collective term to describe common varieties of sand, gravel, stone, pumice, pumicite, cinders, clay, and other similar materials. Common varieties do not include deposits of those materials that may be locatable.

**Minimum impact suppression tactics (MIST)**—The concept of Minimum Impact Suppression Tactics is to use the minimum amount of forces necessary to effectively achieve fire management protection objectives. It implies a greater sensitivity to the impacts of suppression tactics and their long-term effects, when determining how to implement an appropriate suppression response. Fire managers and firefighters select tactics that have minimal impact to values at risk. Minimum Impact Suppression Tactics is not intended to represent a separate or distinct classification of firefighting tactics but rather a mindset of how to suppress a wildfire while minimizing the long-term effects of the suppression action on other resources. The principle of fighting fire aggressively but providing for safety first will not be compromised in the process and when selecting an appropriate suppression response, firefighter safety must remain the highest concern.

**Monitoring**—A systematic process of collecting information to evaluate effects of actions or changes in conditions or relationships.

**Motor vehicle**—Any vehicle which is self-propelled, other than: (1) A vehicle operated on rails; and (2) Any wheelchair or mobility device, including one that is battery-powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area (36 CFR 212.1).

**Motor vehicle use map (MVUM)**—A map reflecting designated roads, trails, and areas on an administrative unit or a ranger district of the National Forest System (36 CFR 212.1).

**Native species**—An organism that was historically or is present in a particular ecosystem as a result of natural migratory or evolutionary processes; and not as a result of an accidental or deliberate introduction into that ecosystem. An organism's presence and evolution (adaptation) in an area are determined by climate, soil, and other biotic and abiotic factors.

- Natural Range of Variation (NRV)**—Spatial and temporal variation in ecosystem characteristics under historic disturbance regimes during a reference period. The reference period considered should be sufficiently long to include the full range of variation produced by dominant natural disturbance regimes, often several centuries, for such disturbances as fire and flooding and should also include short-term variation and cycles in climate. “Natural range of variation” (NRV) is a term used synonymously with historic range of variation or range of natural variation. The NRV is a tool for assessing ecological integrity, and does not necessarily constitute a management target or desired condition. The NRV can help identify key structural, functional, compositional, and connectivity characteristics, for which plan components may be important for either maintenance or restoration of such ecological conditions.
- Non-game species**—Those species of animals that are not managed as a sport hunting resource.
- OHV (Off -highway vehicle)**—Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain. (36 CFR Part IV, 212.1)
- Old forest habitat**—Forests that are characterized by large, old trees and decadence (e.g. dead trees, both standing and down).
- Outstandingly remarkable value**—A river related value that is a unique, rare, or exemplary feature that is significant when compared with similar values from other rivers at a regional or national scale. The Wild and Scenic Rivers Act includes scenic, recreational, geologic, fisheries, wildlife, historic, cultural or other similar values as outstandingly remarkable values. River values should be located within ¼ mile of the river, contribute substantially to the functioning of the river ecosystem, or owe their location or existence to the presence of the river.
- OSV (Over-snow vehicle)**—A motor vehicle that is designed for use over snow and that runs on a track or tracks and/or a ski or skis, while in use over snow. (36 CFR Part IV, 212.1)
- Patch**—An area of vegetation that is relatively homogeneous that differs from surrounding vegetation.
- Pattern**—Number, frequency, size, and juxtaposition of landscape elements (stands and patches) that are important to the determination or interpretation of ecological processes.
- Peat**—Organic matter (the dead remains of plants) deposited under water-soaked conditions as a result of incomplete decomposition. Peat accumulates when the rate of deposition of dead plant matter (usually sedges or sphagnum mosses) exceeds the rate of decomposition.
- Peatlands**—Any waterlogged area containing an accumulation of peat 30 cm or more thick. Any type of peat-covered terrain, including bogs, fens, and muskegs. Once peat has developed to this depth, the availability of oxygen and nutrients essential to plant growth drops sharply, and plant roots must obtain their mineral nutrients from the saturated, oxygen-poor peat. Because nutrient cycling is limited, peatlands depend on external supplies of nutrients from either the atmosphere or inflowing, mineral-enriched water.
- Plan area**—The National Forest System lands covered by a plan.
- Planned ignition**—A fire intentionally ignited by management under an approved plan to meet specific objectives.
- Population (ecological)**—Organisms of the same species that occur in a particular place at a given time.

**Potential stronghold watershed**—Watersheds at the 5th or 6th HUC scale to be managed to emphasize protection of populations of listed and proposed aquatic species and to contribute to their conservation and recovery at the 4th HUC scale. Population strongholds would support relatively robust populations and high quality habitat that would support expansion and re-colonization to adjacent watersheds. Considerations used to determine stronghold watersheds include: (1) high genetic integrity; (2) habitat connectivity; (3) genetic or phenotypic diversity; (4) abundance/productivity; and (5) potential for expansion into adjoining watersheds.

**Potential population stronghold watershed**—Watersheds at the 5<sup>th</sup> or 6<sup>th</sup> HUC scale to be managed to restore populations of listed and proposed aquatic species and to contribute to their conservation and recovery at the 4<sup>th</sup> HUC scale. Potential population stronghold watersheds would have high inherent capability to support spawning and rearing for the species identified. Objectives for management would include increasing growth and survival from direct habitat improvements and/or passive habitat and watershed management (or both), combined with re-colonization from stronghold watersheds and/or direct population recovery efforts (e.g. stocking or translocation).

**Prescribed fire**—See planned ignition.

**Productive land base**—Lands where vegetation and water resource management are the principal objectives.

**Productivity**—The capacity of NFS lands and their ecological systems to provide the various renewable resources in certain amounts in perpetuity. For the purposes of this Handbook, productivity is an ecological term, not an economic term.

**Project area**—The NFS lands covered by a project.

**Reclamation**—Those actions performed during or after mineral activities to shape, stabilize, revegetate, or otherwise treat the affected lands in order to achieve a safe and ecologically stable condition and land use that is consistent with long-term forest land and resource management plans and local environmental conditions.

**Recreation opportunity spectrum (ROS)**—A system, by which existing and desired recreation settings are defined, classified, inventoried, allocated, and monitored. Recreation settings are divided into six distinct classes (Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Road Natural, Rural, and Urban). Classifications are based on physical, social, and managerial attributes. As the names indicate, the settings follow a continuum ranging from very structured settings (urban) to those with little to no structure (primitive). Use reference to see some of the defining attributes that distinguish the 6 ROS classes. Also reference the ROS Definitions Primer Document.

**Primitive (P) ROS (summer)** settings encompass large, wild, remote, and predominately unmodified landscapes. These settings often coincide with designated Wilderness. Additional primitive ROS settings are scattered across the forest and surrounded by SPNM settings. Primitive ROS settings contain no motorized recreation and little probability of seeing other people. They provide quiet solitude away from roads and people, are generally free of human development, and facilitate self-reliance and discovery. Historic structures such as log ranger stations and fire lookouts are occasionally present. Signing, and other infrastructure is minimal and constructed of rustic, native or natural appearing materials.

**Winter Primitive ROS** settings are large, remote, wild, and predominately unmodified. Winter Primitive ROS settings provide quiet solitude away from motorized uses 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, making these settings appear even more natural and undisturbed by human activities.

**Semi-Primitive Non-Motorized (SPNM) ROS (summer)** settings provide opportunities for exploration, challenge, and self-reliance. Rustic structures such as signs and foot bridges are occasionally present to direct use and/or protect the setting's natural and cultural resources. These rustic constructed features are built from native materials or those that mimic native materials. Closed roads may be present but do not dominate the landscape or detract from the SPNM experience of visitors. These settings are free of motorized recreation travel but mechanized travel may be present.

**Winter Semi-Primitive Non-Motorized (SPNM) ROS** settings provide backcountry skiing, snowboarding, and snowshoeing opportunities. Trails are un-groomed and often not marked. Rustic facilities, such as historic cabins and yurts may exist but are rare.

**Semi-Primitive Motorized (SPM) ROS (summer)** settings provide motorized recreation opportunities in backcountry settings. Routes are designed for Off Highway Vehicles (OHVs) and high clearance vehicles that connect to local communities, 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 for the purpose of protecting the setting's natural and cultural resources. Bridges may be present to accommodate foot, horse and ATV 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. There may also be nodes that function as portals for visitors to park their ATVs and explore adjacent Semi-Primitive Non-Motorized and Primitive settings on foot.

**Winter Semi-Primitive Motorized (SPM) ROS** settings provide backcountry skiing and snowmobiling opportunities. Routes are typically un-groomed 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 warming huts are available for short breaks or overnight use. Guided winter trips may occur in this area. There may be landing areas for ski-planes.



**Roaded Natural (RN) ROS (summer)** settings are often referred to as front country recreation areas where forest management activities are evident. This setting is managed as natural appearing with nodes and corridors of development that support higher concentrations of use, user comfort, and social interaction. The road system is well defined and can accommodate sedan travel. There is a mix of motorized and non-motorized recreation occurring in this setting. Sanitation, potable water, interpretive signing, and other amenities are strategically placed to serve as destination points and/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 compliment the surrounding natural setting.

**Winter Roaded Natural (RN) ROS** settings support higher concentrations of use, user comfort, and social interaction. The road system is plowed and accommodates sedan travel. Winter trails are routinely groomed and may have ancillary facilities such as warming huts, restrooms, trailheads and parking area. Visitor Centers, restrooms, and other structures are often maintained and available for winter use. System roads and trails often provide staging to adjacent backcountry settings (primitive, SPNM and SPM). Guided snowmobiling, dog sledding, skiing, and snowshoeing may also be present.

**Roaded Modified (RM) ROS** settings are a subset of RN settings. RM settings contain higher road densities and active timber management. The road and trail system provides many roads and trails opportunities for both ATVs and mountain bikes. Landscapes often exhibit remnants of past harvest as well as active timber management.

**Rural (R) ROS** settings are positioned on the fringe of communities (i.e. Elk River) and often function as an extension of those communities. These highly structured and hardened settings accommodate large group gatherings and serve as day-use destinations. Family reunions, weddings, and local special events often take place here. These settings also function as outdoor classrooms for interpretive programs and other structured learning. Roads and parking areas are generally paved and structures and facilities provide shelter, sanitation, potable water and other creature comforts.

**Winter Rural (R) ROS** settings provide staging to adjacent winter settings and opportunities. These areas are accessed from paved and plowed roads and are generally close to population centers. Warming huts or other shelters, sanitation, and I&E (information and education) are commonly present. Parking areas are large and plowed. Entry points and routes are signed and lead snowmobiles to adjacent RN and SPM settings. Non-motorized trails are also typically groomed for skate skiing, and cross-country skiing. Rural winter settings provide quick and convenient access for communities and families to celebrate holidays, conduct racing events, walk the dog, or simply get some exercise.

**Recreation opportunities**—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 opportunities include non-motorized, motorized, developed, and dispersed recreation on land, water, and in the air.

- 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 non-motorized, semi-primitive motorized, roaded natural, rural, and urban. (36 CFR 219.19)
- Recreation sites**— Specific places in the Forest other than roads and trails that are used for recreational activities. These sites include a wide range of recreational activities and associated development. These sites include highly developed facilities like ski areas, resorts, and campgrounds. It also includes dispersed recreation sites that have few or no improvements but show the effects of repeated recreational use.
- Recreation supply**—The available (past, current, predicted, and desired) type, amount, and condition of recreation settings and opportunities
- Resilience**—The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.
- Restoration**— The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. Ecological restoration focuses on reestablishing the composition, structure, pattern, and ecological processes necessary to facilitate terrestrial and aquatic ecosystems sustainability, resilience, and health under current and future conditions.
- Right-of-way (ROW)**—Public or National Forest System lands authorized to be used or occupied pursuant to a ROW grant or special use authorization.
- Riparian areas**—Three-dimensional ecotones [the transition zone between two adjoining communities] of interaction that include terrestrial and aquatic ecosystems that extend down into the groundwater, up above the canopy, outward across the floodplain, up the near-slopes that drain to the water, laterally into the terrestrial ecosystem, and along the water course at variable widths.
- River/River Segment**—A flowing body of water or estuary or a section, portion, or tributary thereof, including rivers, streams, creeks, runs, rills, and small lakes. The term is used interchangeably with river segment and applies to the particular segment under consideration. FSH 1909.12 Chapter 80
- Road**—A motor vehicle route over 50 inches wide, unless identified and managed as a trail.
- Road construction**—FSM 7705 defines road construction or reconstruction together as the supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road (36 CFR 212.1).

**Road maintenance**—The objective of road maintenance is to provide for safe and efficient travel; access for administration, utilization and protection of NFS lands; and protection of the environment, adjacent resources, and public investment (FSM 7730.2). The term road maintenance is defined at FSM 7705 as the “ongoing upkeep of a road necessary to maintain or restore the road in accordance with its road management objectives (FSM 7714).” FSH 7709.59 62.1 describes the scope of road maintenance to “include any expenditure in the repair or upkeep of a road necessary to perpetuate the road and provide for its safe use. Work items may include surface rock replacement, seal coats and asphalt overlays, bridge replacement, slide removal, and other items that contribute to the preservation of the existing road. Road maintenance is not intended to substantially improve conditions above those originally constructed; however, there may be a need for adding to or modifying the original conditions without increasing the service provided. Typical examples of this include installing additional minor culverts and traffic control devices, implementing traffic management strategies, placing small quantities of spot surfacing, and revegetating cut and fill slopes.”

**Road reconstruction**—FSM 7705 defines road construction or reconstruction together as the supervising, inspecting, actual building, and incurrence of all costs incidental to the construction or reconstruction of a road (36 CFR 212.1). In practical terms, road reconstruction is conducted when the required work items to maintain or restore a road to its RMOs exceed what is expected during routine road maintenance. Additionally, work performed to upgrade the road’s service level above that for which it was originally constructed, to accommodate commercial haul or meet the needs of additional traffic, to realign an existing road for water quality protection, or to repair a road after natural disaster would be considered reconstruction.

**Salvage cutting or salvage logging**—The removal of dead trees or trees being damaged or dying due to injurious agents other than competition, to recover value that would otherwise be lost.

**Scenic Character**—A combination of the physical, biological, and cultural images that gives an area its scenic identity and contributes to its sense of place. Scenic character provides a frame of reference from which to determine scenic attractiveness and to measure scenic integrity.

**Scenic Integrity Objectives (SIOs)**—Reflect the desired level of intactness of positive attributes (biophysical and cultural) identified in scenic character descriptions. SIOs are an integral component of the forest’s recreation settings, opportunities, and experiences. (reference desired ROS classes and SIO suitability).

**Very High Scenic Integrity Areas**—Found in the forest’s Wilderness areas, Research Natural Areas, and primitive ROS settings. These rugged, steep, and remote landscapes contain little to no evidence of management and evolve through natural processes and disturbance regimes.

**High Scenic Integrity Areas**—Coincide with landscapes in which landscape character attributes “appear” intact. They often interface with rural landscapes, residential areas, small towns, travel routes, recreation destinations, and other private lands. Although some management activities have altered or influenced natural processes and disturbance regimes, the management activities do not dominate the landscape.