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Forest Service



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Proposed Land Management Plan Clearwater National Forest



Lochsa River

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OVERVIEW

1.1 Introduction

The purpose of this Clearwater National Forest Proposed Land Management Plan is to establish goals and set forth the guidance to follow in pursuit of those goals.

Land management plans do not make project-level decisions, nor do they contain commitments to implement specific projects or actions. Those decisions are made after more detailed analysis and further public comment.

1.1.1 Plan Structure

The format of this Plan is considerably different than the Plan approved in 1987. The 2005 planning rule requires land management plans to include five plan components: (1) desired conditions, (2) objectives, (3) guidelines, (4) suitability of areas and (5) special areas. **Headings for plan components are shaded in gray to make them easy to identify. Additionally, the text of plan components is in bold type. Tables included within the text of plan components are considered to be part of the plan component.**

The five plan components are incorporated into a Plan which is divided into three chapters: Vision, Strategy and Design Criteria.

Chapter 1 - Vision

Chapter 1 sets the context for management. It describes existing and desired conditions for the Clearwater National Forest. This chapter's plan component is:

Desired Condition – Desired conditions are the plan component that describes the ecological, economic and social attributes that characterize the desired outcome of land management.

Chapter 2 - Strategy

Chapter 2 describes how the Clearwater National Forest intends to move toward or maintain the desired conditions described in Chapter 1. It steps the reader through a program prospectus that begins with a brief performance history followed by a description of the program emphases. Objectives are described for anticipated levels of conditions, uses and activities to achieve or move toward the desired conditions. This chapter also identifies lands as suitable for various uses and recommends lands for special area designations. This chapter's plan components include:

Objectives – Objectives describe the focus of unit management during the next 15 years.

Special Areas – Special areas are places within the National Forest System identified or designated because of their unique or special characteristics. The responsible official may identify, designate or remove special areas that occur within their authority or recommend the designation or removal of those special areas that require a Congressional or higher level administrative decision.

Suitability of Areas – Plans identify areas of the Forest as “generally suitable” for a variety of uses. Social, economic and ecological factors are considered when areas are identified as generally suitable for a land use. Suitability of areas must be consistent with the desired conditions.

Geographic Areas – Since specific management emphasis is sometimes needed for unique areas within the Clearwater National Forest, the Forest has been divided into 17 subunits called geographic areas. At the end of Chapter 2 readers will find maps and basic information about geographic areas as well as area-specific management emphases and suitable uses.

Chapter 3 – Design Criteria

Design criteria provide information and guidance for subsequent projects designed to achieve or trend toward the management strategy. They include guidelines and references to some other applicable guidance. This chapter’s plan components include:

Guidelines – Guidelines provide guidance and information for carrying out projects and activities that help achieve the objectives and desired conditions.

Additionally, Forest Plans are required to describe a monitoring program for the Forest that establishes monitoring questions and associated performance measures. A draft Forest Plan monitoring program is available from the revision website http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_monitor_clw.shtml. Individuals are encouraged to provide feedback regarding these questions and suggest appropriate performance measures.

See the *User’s Guide for the Clearwater National Forest Land Management Plan* for additional information about Supporting Documentation.

1.1.2 Plan Use and Consistency

As required by the National Forest Management Act and the planning rule, all projects and activities authorized by the Forest Service must be consistent with the Plan (16 USC 1604(i) and 36 CFR 219.8(a), (b), and (e)). A project or activity must be consistent with the Plan (36 CFR 219.8(e)) by being consistent with applicable plan components.

The planning rule identifies five plan components: desired conditions, objectives, guidelines, suitability of areas and special areas. Plans may have other content (which is optional) such as: the statements of background, collaboration strategies, existing conditions, glossary, introduction, monitoring questions, performance history, performance measures, performance risks, program emphasis, program guidance, program priorities, proposed and possible actions, roles and contributions, management challenges, or strategies. The optional contents are not “the Plan.” Projects and activities need not be consistent with other contents, but responsible officials may consider them.

Ensuring Project or Activity Consistency with the Plan – Where a project or activity as proposed would not be consistent with the five plan components, the responsible official has the following options:

1. Modify the proposal so that the project or activity will be consistent;
2. Reject the proposal; or
3. Amend the Plan contemporaneously with the approval of the project or activity so that the project or activity is consistent with the Plan as amended. The amendment may be limited to apply only to the project or activity.

The following paragraphs describe how a project or activity is consistent with Plan components and the requirements for documenting consistency.

Desired Conditions (36 CFR 219.7(a)(2)(i)) – A project or activity is consistent with the desired condition component of the Plan if it does not foreclose the opportunity for maintenance or attainment of the applicable desired conditions over the long term based on the spatial scales described in the Plan.

Objectives (36 CFR 219.7(a)(2)(iii)) – Objectives are designed to move toward desired conditions. A project or activity is consistent with the objectives component of the plan if it contributes to the attainment of one or more applicable objectives.

The project documentation should identify any applicable objective(s) to which the project contributes. If there are no applicable objectives, the project is consistent with the objectives components of the Plan; the documentation should state that fact.

Guidelines (36 CFR 219.7(a)(2)(iii)) – 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 may be consistent with a guideline in one of two ways:

1. The project or activity is designed in accordance with the guideline, or
2. The project or activity design varies from the guideline but the design is an effective means of meeting the purpose of the guideline, to maintain or contribute to the attainment of relevant desired conditions and objectives.

The project documentation should describe how the project is consistent with the guidelines, and specifically explain whether the project varies from a guideline, and how the variance is an effective means of meeting the purpose of the guideline.

Suitability of Areas (36 CFR 219.7(a)(2)(iv)) – Except for timber production, consistency of a project or activity should be evaluated in one of two ways:

1. The project or activity is a use identified in the Plan as generally suitable for the location where the project or activity is to occur, or

2. The project or activity is not a use identified in the Plan as generally suitable for the location, but the project or activity has been determined in the project analysis documents to be appropriate for that location.

The project documentation should describe whether the project or activity is: (1) a use for which the area is specifically identified in the Plan as generally suitable, or (2) whether the project or activity is nonetheless appropriate for that location.

A project with the primary purpose of timber production may only occur in an area identified as suitable for that use (see 16 USC 1604(k)), and the documentation for such project should confirm that the project would occur in an area identified as suitable for timber production.

Special Areas (36 CFR 219.7(a)(2)(v)) – Where a plan provides desired conditions, objectives, or guidelines, or identifies suitable uses for a special area, a project or activity must be consistent with those area-specific components. The project documentation should describe how the project or activity is consistent with the area-specific components of the Plan.

1.1.3 Maintaining Plans and Adapting to New Information

The Forest Plan is an integral part of the adaptive management cycle that provides a framework guiding future management decisions and actions. Adaptive management includes: defining measurable objectives, monitoring, learning and changing, and recognizing uncertainties with outcomes.

The cycle of adaptation functions through the monitoring and evaluation requirements of the Plan. The monitoring program is described in more detail in the Plan Set of Documents¹. Key components of the monitoring program² are described below, including an approach for responding to changing conditions or public desires, and to new information including research and scientific findings.

The Forest Plan and Plan Set of Documents will be kept current with evaluation reports, which will reflect changing conditions, science, and other relevant information. Three types of evaluations are used:

1. Comprehensive evaluations (updated at least every 5 years) are used for plan development and plan revision³;
2. Evaluation for a plan amendment where issues arise that warrant change to the Forest Plan; and

¹ At this time, the Forest's draft monitoring program is filed in Supporting Documentation (http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_monitor_clw.shtml).

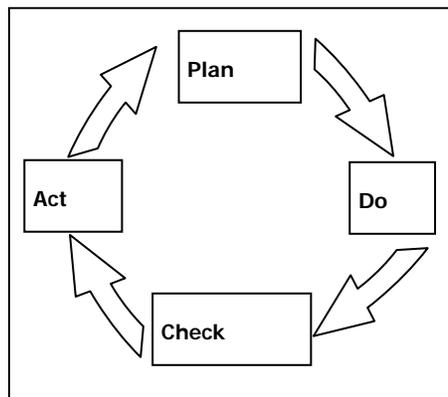
² A monitoring program consists of monitoring questions and performance measures, a monitoring guide, annual monitoring work plans and evaluation reports, and comprehensive evaluation reports.

³ The Clearwater National Forest initiated forest plan revision in accordance with the 1982 planning rule. The Forest later transitioned to the 2005 planning rule. Information consistent with the comprehensive evaluation report is compiled in the Draft Analysis of the Management Situation, 2004 Social Assessment and watershed analysis and inventory and assessment documents.

3. Annual evaluation of the monitoring information.

Annually, the Forest Supervisor and other managers on the Forest will evaluate the monitoring information and determine if any changes are needed in management actions or plan guidance as informed by those monitoring results. This management review is a part of the environmental management system (EMS) that is established on the Forest. Simply, the environmental management system promotes a “plan, do, check, act” management system (Figure 1.1.3) that tracks the Forest management’s environmental performance, identifies needed improvements and results in actions to make those improvements. The continual improvement of environmental performance is focused on achieving or maintaining desired conditions, as described in the Forest Plan.

Figure 1.1.3 Plan, Do, Check, Act Management System



Monitoring information to facilitate the management review addresses the following questions:

- Are projects and activities, which are guided by the Plan, achieving multiple use objectives?
- What are the effects of various resource management activities on the productivity of the lands?
- To what degree is on-the-ground management maintaining or making progress toward the desired conditions and objectives for the Plan?
- What changes needed in the monitoring program to account for unanticipated changes in conditions?

Table 1.1.3 displays the plan components and the kinds of monitoring conducted. The relation to the environmental management system is also provided.

Table 1.1.3 Plan Components, Monitoring Strategy and Relation to Environmental Management System

Plan Component	Monitoring Type	Relation to Environmental Management System
Desired Conditions	<p>This monitoring considers a broad view of ecological and social and economic conditions, recognizing that many factors (natural events, human uses and management activities) influence desired conditions.</p> <p>Monitoring items have a frequency specified in the monitoring guide. While monitoring may occur annually, indications of trends will likely be on the basis of 3-5 years or more.</p>	<p>Information is provided for management reviews on periodic basis. The information may be tied to reports such as the comprehensive evaluations and national/regional inventory systems.</p>
Objectives	<p>This monitoring measures progress towards the objectives. Performance measures, often as identified in the budgeting process, are used to assess progress or accomplishment.</p> <p>Performance (i.e. accomplishment) is generally measured as part of the annual budget process.</p>	<p>Objectives for Environmental Management System can include plan objectives or other objectives to improve environmental performance. Monitoring and measurement will provide the management review with documented progress on improving environmental performance.</p>
Guidelines	<p>This monitoring addresses whether projects and other activities are accomplished within the guidelines used for project design.</p> <p>The agency's administration of projects or authorized uses provides monitoring (e.g. inspection reports) that document that the activity occurs as designed. Audits and other monitoring systems are also used as additional checks.</p> <p>Projects are monitored as they are accomplished. Audits for a sampling of projects occur on an annual basis consistent with audits for Environmental Management System.</p>	<p>Environmental Management System provides for project implementation monitoring and measurement of plan guidelines when those guidelines are part of a significant environmental aspect.</p> <p>Environmental Management System also addresses efforts to evaluate compliance with legal and other requirements. Monitoring results are provided to the management review to document progress on improving environmental performance.</p>

A compilation of potential Forest Plan monitoring questions is available in Supporting Documentation (http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_monitor_clw.shtml). The Forest is looking for feedback that can be used to fully develop a Forest Plan monitoring program.

CHAPTER 1: VISION

1.2 Forest Roles, Contributions and Management Challenges

1.2.1 Location

Map 1.2.1 Clearwater National Forest Vicinity

The Clearwater National Forest is comprised of 1.8 million acres in north-central Idaho, extending from the Bitterroot Mountains on the east to the hills of the Palouse Prairie on the west. Elevations range from 1600 to almost 9000 feet. Much of the landscape is deep, forested canyons interspersed with high, rugged ridges.

Clearwater National Forest lands lie primarily in Clearwater, Latah and Idaho Counties with small parcels in Lewis, Benewah and Nez Perce Counties. Bounded on the north by the Idaho Panhandle National Forests, it abuts the Lolo and Bitterroot National Forests to the east and the Nez Perce National Forest to the south.

1.2.2 Description

The Clearwater National Forest is characterized by vast areas of wildlands. Roughly 263,000 acres of the 1.3-million-acre Selway-Bitterroot Wilderness lie within the Forest's borders. Large blocks of undeveloped land can be found within the 988,200 acres of inventoried roadless areas.

Rivers and streams dissect the landscape and provide important aquatic and riparian habitat. Two rivers – the Middle Fork Clearwater and Lochsa – are included in the National Wild and Scenic Rivers System.

Many of the Forest's soils are very productive. An ash cap from volcanic eruptions amends many of the soils, retaining nutrients, improving water-holding capacity, and increasing stability. The presence of an intact ash cap indicates stable slopes.

Vegetation on the Clearwater National Forest is as varied as the terrain. Lower elevation southerly aspects along the rivers are drier with more ponderosa pine and Douglas-fir. Northern aspects and higher elevations are forested with grand fir, Douglas-fir, subalpine fir, lodgepole pine, ponderosa pine, western larch, western redcedar, mountain hemlock and Engelmann spruce. Whitebark pine is also found at the highest elevations.

Wildlife on the Clearwater National Forest is abundant and varied. Elk, deer, moose, mountain goats, bighorn sheep, black bears, mountain lions, coyotes and gray wolves are the most common large wildlife species. The elk herd on the Clearwater is nationally known and highly valued by local residents.

Resident fish such as cutthroat trout and bull trout are nationally significant. The anadromous fish runs (Chinook salmon and steelhead) are of international importance. The Middle Fork Clearwater and Lochsa Rivers support anadromous fish runs, and most of their tributaries provide spawning and rearing habitat.

The Forest is the traditional homeland of the Nez Perce and Coeur d'Alene American Indian Tribes. Tribal members continue to rely on the Forest for subsistence and cultural purposes.

Modern-day residents have strong ties to the Clearwater National Forest. The land holds diverse resources used for recreational, commercial and related purposes. Commercial uses include timber harvesting, grazing, mining and guided recreational activities conducted by licensed outfitters and guides.

The Forest offers a broad variety of recreation opportunities. Undeveloped sites abound in the Forest's vast backcountry. Developed sites provide opportunities along many of the major routes. Popular recreational opportunities include river floating, hiking, backpacking, camping, hunting, fishing, cross-country skiing, snowmobiling, off-highway vehicle use and wildlife viewing.

There are also historic and scenic resources. The Nez Perce (Nee-Me-Poo) and Lewis and Clark National Historic Trails wind through the high elevation route designated as the Lolo Trail National Historic Landmark. The Mallard-Larkins Pioneer Area, "Great Burn" roadless lands and the Selway-Bitterroot Wilderness attract those seeking a primitive experience.

The Clearwater's main office is in Orofino, Idaho, and is also the location of the North Fork Ranger District. The Palouse Ranger District is based in Potlatch, Idaho; the Lochsa Ranger District in Kooskia, Idaho, with a satellite work facility in Kamiah, Idaho; and the Powell Ranger District office 13 miles west of the Idaho-Montana state line along U.S. Highway 12.

1.2.3 Expected Roles and Contributions

In accordance with the agency's mission and goals, the Clearwater National Forest strives to achieve quality land management under the sustainable, multiple-use management concept to meet the diverse needs of people.

Ecological Roles and Contributions

The Clearwater National Forest contains some of the most valuable natural resources within north-central Idaho. Maintaining and enhancing these important resources is an overriding priority.

The Forest features a broad array of landscapes from wilderness, where natural conditions predominate, to more intensely managed areas, where conditions have been altered to meet specific resource concerns as well as social needs.

The basic foundations of ecosystems (air, soil, water, vegetation) are present and in a condition that promotes vegetative growth, hydrologic function, long-term nutrient cycling and natural erosive processes. Air quality falls within acceptable standards. Ecosystems are dynamic and resilient to natural and human caused disturbances.

Disturbance processes (fires, insects, diseases, floods, landslides) contribute to functioning ecosystems. Fire plays its role where appropriate and desirable, but is suppressed where necessary to protect life, resources and property. Fires and mechanical

treatments are used to manage vegetation to enhance ecosystem resiliency and reduce excess forest fuel levels.

Forest, grassland, shrubland and riparian plant communities are within a desired range for processes (disturbances), composition (species present), structure (size) and vegetative patterns. They provide diverse habitat that sustains desired plant, wildlife and aquatic species.

Vegetation forms a diverse network of habitats and connective linkages for wildlife. There are desired numbers of snags and down woody material.

Invasive weed populations are not expanding, and new invader species do not become established.

Riparian areas connect upland and aquatic habitats and promote stable and diverse stream channel conditions. Streams and lakes provide clean water at appropriate temperatures and support native and desired nonnative species. Water quality is maintained for all State-designated beneficial uses.

Social, Economic and Cultural Goals and Contributions

There is a high level of cooperation and coordination among tribal, federal, state and county governments. People with an interest in the management of the Clearwater National Forest are informed about project proposals. They provide valuable information and ideas. Their contributions are used to craft creative management alternatives. The Forest clearly articulates how public input is incorporated into land management decisions. People understand the rationale behind decisions.

Ecosystems provide a sustainable level (within the land's capability and existing laws) of products and services for current and future generations. Timber, range, recreation, minerals, fish, wildlife, water, heritage and special-use programs offer opportunities for economic development and contribute to local communities. Programs are available and accessible to all individuals.

Resilient, dynamic ecosystems offer a wide range of recreation opportunities, uses and experiences. Visitors enjoy a variety of special attractions, including designated wilderness, designated wild and scenic rivers, scenic byways and historic trails and landmarks.

Opportunities for people to experience the natural environment are provided to both motorized and non-motorized users through a system of low-speed trails and roads and non-motorized trails. Areas with roads provide the highest density of motorized routes, but opportunities for semi-primitive motorized experiences are also provided in areas with and without roads. There is an increased emphasis on management of high priority Forest system roads and trails.

Designated and recommended wildernesses provide outstanding opportunities for solitude and unconfined recreation. The unique character of each area recommended for wilderness designation is preserved until Congress acts on the recommendations of the Forest Service. Additions to the northern boundary of the Selway-Bitterroot Wilderness enhance protection of wilderness resources.

River segments and corridors identified as “eligible” or “suitable,” and designated wild and scenic rivers are managed to retain their free-flowing status, classification and outstandingly remarkable values.

Facilities (e.g. roads, trails, campgrounds, recreation sites) are constructed, reconstructed and maintained to provide a variety of experiences for visitors. Modern recreational facilities are provided in the heavy-use areas (e.g. along the Lochsa River). More rustic facilities are provided in more remote areas (e.g. along the North Fork Clearwater River). Opportunities for physically-challenged recreationists are maintained or expanded at developed facilities and through management of dispersed sites. Facilities are safe and accessible and constructed appropriately to the setting.

New and existing special use permits serve the public interest and do not compete with private businesses.

National Forest System lands have been consolidated to facilitate management. Consolidation does not result in tax increases for county residents to compensate for changes in federal land boundaries.

Authorized commercial developments and outfitter and guide services broaden the range of recreational opportunities and experiences provided on Forest lands.

Lands within the Clearwater National Forest are used to sustain the cultural viability of the Nez Perce and Coeur d’Alene Tribes. Important cultural resources, such as the Nez Perce National Historic Trail, are maintained in a condition that sustains tribal and non-tribal cultural activities. Land management decisions are made in consultation with the Tribes and are consistent with treaties, laws, policies and executive orders regarding tribal cultural and religious rights.

1.2.4 Management Challenges

While filling a distinctive role as a public land management agency, the Clearwater National Forest faces many challenges. The American public cares deeply about their national forests. They are also sharply divided in their beliefs about what activities should occur on National Forest System lands. Forest personnel are constantly challenged to maintain or improve contributions of goods and services to the local economy when:

1. Budgets are flat or declining – The actual funds used to manage the Forest have been on a steady decline since the 1990s. This trend will likely continue.
2. Resource conditions and needs are changing – Forests are constantly changing through either natural events (e.g. fire or floods), or human activities. Resource managers cannot always anticipate and plan for these occurrences.
3. Changes in the environment affect populations of plant and animal species – Several species on the Clearwater National Forest are listed as “threatened” or “endangered” in accordance with the Endangered Species Act. Recovery of these species is a critical consideration in forest management.

4. People's values are conflicting – People generally agree that forests should be healthy and resilient. They disagree sharply about the types of management that should be used to achieve the desired state.
5. The legal landscape is shifting – As new laws are enacted and courts render decisions interpreting existing laws, rules for forest management are constantly evolving.

1.3 Collaboration

Collaboration – the ongoing process of working with people, agencies, organizations and governments – has provided valuable information and ideas that have shaped this Proposed Land Management Plan.

Collaboration was initiated with 81 data collection sessions involving over 100 individuals from a variety of backgrounds. This information was the foundation for the Social Assessment prepared for the Clearwater and Nez Perce National Forests. Forest representatives have also discussed the revision effort, issues and content at nearly 200 meetings with individuals, elected officials, agencies, organizations and governments.

A formal comment period regarding the Proposed Action occurred from October to December 2004. It yielded 11,018 responses. These responses are summarized in a 368-page Content Analysis Report that was used to develop the content of this Proposed Plan.

Nineteen issues generated from collaborative efforts are available in Supporting Documentation (http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_other.shtml).

1.4 National Strategic Goals

This Land Management Plan tiers to national goals and direction. Priority goals for the Forest Service are based on the Government Performance and Results Act and are explained in the Forest Service National Strategic Plan for 2004-2008 (<http://www.fs.fed.us/plan>). The priority goals embody the agency's many areas of responsibility, as captured in the agency's mission statement: "The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations."

1.4.1 Summary of National Agency Goals

1. Reduce the risk from catastrophic wildland fire.
2. Reduce the impacts from invasive species.
3. Provide outdoor recreation opportunities.
4. Help meet energy resource needs.
5. Improve watershed condition.
6. Complete other mission-related work.

Forest Land Management Plans also identify the role each national forest plays in attaining these national goals by developing forest-wide desired condition statements and forest-specific objectives.

1.4.2 Four Threats to National Forests

At this time (2006), the Chief of the Forest Service has identified four primary nationwide areas of concern. The Proposed Plan supports the agency's goal to remove the "four threats" from the national landscape. This is necessary to achieve desired long-term outcomes: clean air, clean water, conserving wildlife and protecting communities from wildfire.

Actions needed to address the four threats include:

1. Fire and Fuels – Restore healthy, resilient ecosystems on lands at risk for catastrophic fire, improving the condition and function of critically important watersheds and sustaining critical wildlife habitat.
2. Invasive Species – Protect forest and rangeland ecosystems by preventing the release of non-native species and by controlling the spread of, or eradicating, invasive species.
3. Loss of Open Space – Conserve the nation's forests and rangelands most at risk due to subdivision and land conversion by working with partners, communities and landowners to balance development with sustaining ecosystem services and viable working landscapes.
4. Unmanaged Recreation – Work with partners to develop travel management plans that regulate the use of off-highway vehicles on designated roads, trails, and parks in an appropriate manner.

1.5 Ecosystem Integrity and Sustainability Desired Conditions

The Clearwater National Forest desired conditions contained herein are the product of a variety of land management options generated through internal and external collaboration. These desired conditions were carefully integrated to provide for a variety of multiple uses that will meet the current and future needs and desires of local, regional and national interests. The desired outcome of this integrated resource product is sustainability – social, economic and ecological sustainability.

The Forest Plan provides a framework for sustaining native ecological systems by providing for the ecological conditions that support the diverse native plant and animal species within the Clearwater National Forest. Plan components, when implemented together, should provide habitats necessary to maintain native plant and animal communities. (See Supporting Documentation

http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_sustain_clw.shtml.)

1.5.1 Forest Vegetation

Vegetation varies widely across the Forest due to variations in elevation, aspect, climatic factors and past disturbances. The National Hierarchy of Ecological Units is used here to describe similar settings. The Clearwater National Forest contains portions of two ecological sections (ecosections): Bitterroot Mountains and Idaho Batholith. Most of the Forest is located within the Bitterroot Mountains section; lands south of the Lochsa River are within the Idaho Batholith section. The breakland, upland and subalpine settings within the Bitterroot Mountains section and the subalpine setting within the Idaho Batholith section are approximations of subsections as described in *Ecological Units of the Northern Region: Subsections*. Because climate and topography influence how landscape dynamics work, broad settings are used to describe those dynamics and associated vegetation.

Existing Condition – Forest-wide (2006)

Vegetation in general has more cedar, grand fir and Douglas-fir than historically occurred, as reflected in the desired conditions. Conversely, there are less of the early seral species such as ponderosa pine, western larch and especially western white pine. The loss of white pine is a consequence of white pine blister rust, a disease introduced to North America that spread to the Forest.

Desired Condition – Forest-wide (PLAN COMPONENT)

Vegetation reflects native forest diversity for species composition and size classes that would be present if landscape dynamics (fire, insects and pathogens are the primary agents) were fully functioning. Species and size classes are represented in their ecologically appropriate settings at the levels that promote system health and resilience.

1.5.1.1 Bitterroot Mountains Breaklands Setting - 615,000 acres

Map 1.5.1.1 Bitterroot Mountains Breaklands Setting

Existing Condition (2006)

The landscape is dominated by steep slopes, forming deep canyon walls through which major rivers (North Fork Clearwater and Lochsa Rivers) and tributaries (e.g. Kelly, Weitas, Quartz, Pete King, Boulder and Warm Springs) flow. Soils are derived from granite and border zone geologies and are covered with volcanic ash of varying depths. Some southerly aspects have thin soils. The warm, moist climate, in combination with a variety of soil depths and amounts of volcanic ash cap, supports a variety of site productivity conditions. Landslides, debris avalanches and surface creep are the dominant erosion processes; mass wasted areas are present.

Stream channels are typically third order and smaller, V-shaped draws with high sediment delivery efficiency. Channel gradients are steep. Water movement is largely on the surface. Large wood and sediment moving through stream systems are dependent upon debris damming and sediment loading. Channels are prone to debris torrents. Steep slopes and narrow riparian habitats result in a low to mixed severity fire return interval in riparian and moist habitat inclusions that rarely exceeds 150 years. The wettest sites

(habitat type group six) experience only episodic stand-replacing fire, generally at hundreds-of-year intervals.

Typical potential vegetation includes Douglas-fir, grand fir, and western redcedar habitat types. Frost pocket and higher elevation inclusions are subalpine fir and mountain hemlock habitat types. Forest cover types are a mix of shade-intolerant (ponderosa pine, western larch, Douglas-fir, and western white pine) and shade-tolerant trees, in a variety of size classes, as shown in the dominance type and size class tables (Tables 1.5.1.1a and 1.5.1.1b).

The variety of forest conditions provides a mix of forage and cover for wintering big game and many forest raptors; large trees, especially western larch and ponderosa pine, provide habitat for a variety of cavity-using species; and fires and endemic insect infestations provide a continuous supply of standing snags for wildlife nesting and feeding.

Douglas-fir, grand fir and cedar exceed the desired ranges. Ponderosa pine, western larch and western white pine (seral species) are below desired levels. Size classes are at the upper end of desired conditions for stands dominated by trees from 0 to 15 inches and below desired levels for stands of trees larger than 15 inches.

Desired Condition (PLAN COMPONENT)

On north aspects, density is relatively higher than on southerly aspects. Douglas-fir, grand fir, western larch, and western white pine are the most prevalent species. They tend to occur in even-aged stands, in patches that follow topographic breaks.

On southerly aspects, density tends to be lower than on north aspects. Structure is a mix of age classes in small, even-aged groups. Douglas-fir, grand fir, western larch and ponderosa pine are the most prevalent species.

Cedar tends 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 establishes 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 after disturbance but will always fill in under the forest canopy over time. Mature western redcedar or western hemlock, though not common, may be found most often on lower slopes and in riparian habitats. The desired range of species composition is found in Table 1.5.1.1a.

Table 1.5.1.1a Desired Dominance Types: Bitterroot Mountains Breaklands

Dominance Type	Desired Range	Existing
Ponderosa Pine/Mix	9% to 19%	1% ⁴
Douglas-Fir	14% to 22%	30%
Lodgepole Pine	0% to 0%	3%
Western Larch/Douglas-Fir	13% to 20%	0%
Cedar/Grand Fir	9% to 17%	44%
White Pine	10% to 25%	0%
Spruce/Fir Mix	0% to 0%	4%
Seral Grass/Shrub	8% to 15%	8%
Non-Forest	10%	10% ⁵

On southerly aspects, young forests are commonly found as small (less than 10 acres), even-aged patches within a mixed species forest that covers an entire hillside. The overall stand structure is often two-storied or uneven-aged.

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 (>30 inches in diameter at breast height) are expected to occur on ridges and in riparian conservation areas at a density of 2 to 5 per acre, and persist indefinitely.

The large (15 inches and over) size class makes up 1/3 to 2/3 of the landscape. These are most often found on ridgelines or in riparian areas. “Old growth” would be found in the oldest of these patches. “Old growth” on the breaklands is composed of ponderosa pine, western larch and grand fir on the ridges and side slopes. “Old growth” on lower slopes and riparian areas is often grand fir or western redcedar. It has at least 10 trees per acre over 21 inches in diameter, or 25 inches in diameter for cedar. Old growth trees are at least 150 years old. Total basal area in old growth stands is at least 80 square feet per acre, or 120 square feet in cedar types. Desired size class distribution is found in Table 1.5.1.1b.

⁴ Existing forest cover types are from Forest Inventory and Assessment data for the Clearwater National Forest, measured from 1998-2002

⁵ Existing non-forest, not measured in Forest Inventory and Assessment inventory, is taken from potential vegetation maps, landtype maps, and inventory and satellite imagery.

Table 1.5.1.1b Desired Size Distribution: Bitterroot Mountains Breaklands

Size Class	Desired Range	Existing ⁶
Non-Forest	10%	10%
Seral Grass/Shrub	8% to 17%	6%
0" to 5"	6% to 13%	2%
5" to 15"	17% to 36%	38%
15"+	33% to 66%	44%

Young stands may be dense, with over 1000 stems per acre, or may be widely spaced (100 to 200 trees per acre) under a hardwood canopy. 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 of the large size class are 45 to 100 large trees per acre.

The desired level of down wood averages 5 to 25 tons per acre of material over 3 inches in diameter. Larger diameters are desired, if available, for persistent and more effective wildlife habitat. Snag numbers range from 1 to 5 per acre over 20 inches diameter, and 5 to 14 per acre that are 10 to 20 inches in diameter. New snags are recruited frequently through insects, disease or low-severity fires. Large, standing (“legacy” or “relict”) live trees typically persist following lethal wildfires. Riparian conservation areas support the greatest density of large snags and down wood.

Disturbances (harvest, insects, disease or fire) 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 (harvest, insects, disease or fire) are 3 to 5 times more common than the stand replacing disturbances. Intermediate 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 in the landscape.

Patch sizes on north aspects are generally even-aged forests that range up to 500 acres and generally have their borders on topographic breaks such as ridges, draws or changes in aspect. Patches on southerly aspects tend to be uneven-aged and smaller, up to 200 acres.

1.5.1.2 Bitterroot Mountains Uplands Setting – 306,000 acres

Map 1.5.1.2 Bitterroot Mountains Uplands Setting

Existing Condition (2006)

This landscape is a mix of gentle to steep slopes, forming shallow canyons that contain relatively small, fish-bearing streams that dominate the landscape. Soils are deep and comprised of volcanic ash over material derived from bedrock. The warm, moist climate,

⁶ Existing size classes are from Forest Inventory and Assessment data

in combination with a variety of deep volcanic ash soils, creates high site productivity. Surface creep is the dominant erosion process. Mass-wasted areas are localized and uncommon.

Stream channels are typically third order and smaller with U-shaped draws and low to moderate sediment delivery efficiency. Major channel gradients are gentle. Water movement is largely on the surface. Large wood- and sediment-moving stream systems are dependent upon episodic stream flows. Steep slopes are common but relatively short in length. Riparian conservation areas are extensive, comprising 30% or more of the landscape.

Typical potential vegetation is moist grand fir and western redcedar habitat types. Drier ridges and hillsides may include Douglas-fir or dry grand fir types. Frost pockets and higher elevation inclusions are subalpine fir or mountain hemlock types. Forest cover types are a mix of shade-intolerant (ponderosa pine, western larch, Douglas-fir or western white pine) and shade-tolerant (grand fir and western redcedar) vegetation in a variety of size classes as shown in the dominance type and size class tables, Tables 1.5.1.2a and 1.5.1.2b.

The variety of forest conditions provides a mix of forage and cover for use by big game and forest raptors; riparian forests are generally dense stands of larger trees that provide fisher habitat; and insects, disease and fire create a continuous supply of snags for snag-dependent species such as bats and woodpeckers.

Grand fir and cedar composition far exceeds desired levels. Ponderosa pine, western larch and western white pine (seral species) are below desired levels, particularly white pine. Size class distributions are within desired ranges. Douglas-fir beetle (in Douglas-fir) and fir engraver beetle (in grand fir) have been at outbreak levels sporadically over the past few years. These insects are closely tied to stress conditions including root rot infections and drought.

Desired Condition (PLAN COMPONENT)

Species present 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 on cooler sites. Riparian habitats are often dominated by mature western redcedar or grand fir. Western hemlock also occurs on the Palouse Ranger District. 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 1.5.1.2a.

Table 1.5.1.2a Desired Dominance Types: Bitterroot Mountains Uplands

Dominance Type	Desired Range	Existing
Ponderosa Pine/Mixed	5% to 10%	0% ⁴
Douglas-fir	5% to 15%	12% ⁴
Lodgepole Pine	3% to 7%	2% ⁴
Western Larch/Douglas-fir	7% to 15%	2% ⁴
Cedar/Grand Fir	15% to 25%	68%
White Pine	20% to 40%	0%
Spruce Mix	1% to 1%	10 %
Seral Grass/Shrub	3% to 7%	3%
Non-Forest	3%	3%

Younger forests are commonly even-aged. Large, live trees (typically western larch, occasionally ponderosa pine and Douglas-fir on the uplands; western redcedar and grand fir in riparian habitats) persist in groups or as individuals following stand replacement. These groups occur mostly as riparian stringers. The typical old forest character is large old cedar and/or western hemlock with grand fir and scattered western larch, western white pine or ponderosa pine. Old forests usually develop several age classes. The large size class, which should be about 35% to 70% of the landscape, includes the “old growth” stands. Old growth has at least 10 trees per acre over 21 inches in diameter, or 25 inches in diameter for cedar. Old growth trees are at least 150 years old. Total basal area in old growth stands is at least 80 square feet per acre, or 120 square feet in cedar types. Desired size class distribution is found in Table 1.5.1.2b.

Table 1.5.1.2b Desired Size Distribution: Bitterroot Mountains Uplands

Size Class	Desired Range	Existing ⁶
Non-Forest	3%	3%
Seral Grass/Shrub	3% to 7%	3%
0" to 5"	6% to 13%	8%
5" to 15"	21% to 41%	38%
15"+	36% to 72%	48%

These sites are generally well stocked except in the grand fir mosaic. Young stands often have 600 to 1,000 trees per acre. Typical basal areas at maturity (160+ years) are 200 to 300 square feet per acre. Grand fir mosaic sites have much lower densities, down to about 1/2 of the typical density on non-mosaic sites.

Large, dead wood accumulations typically range from 20 to 40 tons per acre in old forests. Levels of dead wood in younger forests are 15 to 30 tons on cedar or hemlock habitat types, slightly less (12 to 25 tons per acre) on other habitat types. Snag numbers range from 2 to 4 per acre over 20 inches diameter, and 8 to 13 per acre that are 10 to 20 inches in diameter. Snags are usually arranged in clumps of various sizes, with a few scattered individual snags. Riparian habitats, due to

extremely long fire return intervals, can support the greatest density of large snags and down wood.

Low and mixed severity disturbances occur 2 to 3 times as often as stand replacing disturbances. They reduce numbers of trees per acre, create openings in the stand and favor shade-intolerant 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 should be at low to moderate endemic levels in the landscape.

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 700 acres. The more frequent disturbances tend to be smaller in size, with stand-replacing disturbances tending toward the larger sizes.

1.5.1.3 Bitterroot Mountains Subalpine Setting - 503,000 acres

Map 1.5.1.3 Bitterroot Mountains Subalpine Setting

Existing Condition (2006)

This is a cold environment with short growing seasons. These lands occupy gentle to moderately steep landforms at higher elevations. Soil development is slow and soil profiles tend to be thin and rocky.

Stream channels are typically the headwaters for major stream systems that drain through the upland and breakland settings.

Typical potential vegetation includes subalpine fir, mountain hemlock, cool grand fir, fescue grasslands, and shrublands. Inclusions on warmer sites are western redcedar and Douglas-fir habitat types. Forest cover types are a mix of seral species (lodgepole pine, Douglas-fir, western larch, western white pine, with whitebark pine at the higher elevations) and climax, shade-tolerant species.

The variety of forest conditions provides a mix of forage and cover for summering big game and supports a prey base for wide-ranging carnivores such as lynx and wolverine. There are areas of large, old climax forests for boreal owls. Insects, disease and fires provide a continuous supply of snags for snag-dependent woodpeckers and other species.

Seral grasses and shrubs and western larch are below desired levels. The 5 to 15 inch, and over 15 inch, size classes are at the upper edge of desired levels.

Desired Condition (PLAN COMPONENT)

On more moderate sites within this setting, Douglas-fir, western larch, western white pine and lodgepole pine are important intolerant species that generally dominate after stand replacement. Engelmann spruce, subalpine fir, mountain hemlock, grand fir and western redcedar are the tolerant/climax species. These species may dominate 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. The highest ridgetops and peaks may support whitebark pine and alpine larch. Desired species composition is found in Table 1.5.1.3a.

Table 1.5.1.3a Desired Dominance Types: Bitterroot Mountains Subalpine

Dominance Type	Desired Range	Existing
Ponderosa Pine/Mixed	0% to 0%	0%
Douglas-fir	0% to 0%	9%
Lodgepole Pine	20% to 29%	29%
Western Larch/Douglas-fir	4% to 8%	0%
Cedar/Grand Fir	0% to 0%	4%
White Pine	0% to 2%	0%
Subalpine fir/Mountain Hemlock	24% to 50%	40%
Seral Grass/Shrub	9% to 20%	4%
Non-Forest	14%	14%

Young forests are commonly even-aged with relicts surviving from previous disturbances. Those relicts may cover up to 20% of the area. Riparian zones have less frequent stand-replacing disturbance and are dominated by climax species. The typical old forest character is large, old western larch and Douglas-fir with scattered lodgepole pine; western white 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 1.5.1.3b.

Table 1.5.1.3b Desired Size Classes: Bitterroot Mountains Subalpine

Size Class	Desired Range	Existing
Non-Forest	14%	14%
Seral/Grass Shrub	11% to 23%	4%
0" to 5"	3% to 5%	1%
5" to 15"	39% to 79%	61%
15"+	14% to 28%	20%

The more moist sites are generally well-stocked, though density varies over time. Higher elevation, colder sites have lower densities, typically down to 1/2 of the density expected on the mesic sites. Young stands often have 600 to 1000 trees per acre or more, especially in lodgepole types. Typical basal areas at 120+ years are 100 to 200 square feet per acre.

The amount of standing dead wood varies widely over time. There are large expanses of snags created at about 100-year intervals. These snags fall over in a relatively short time. The dead standing trees in the stands, 30 to 75 years after disturbance, are relatively small diameter. Desired levels of dead wood are 10 to 20 tons per acre on upland sites. Snag numbers are .5 to 3 per acre over 20 inches diameter, and 7 to 16 per acre that are 10 to 20 inches in diameter. Riparian habitats support higher densities of large snags and down wood.

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 (harvest, insects, or fire) tend to be stand-replacing. Landscape patch sizes range from ¼ acre to 500 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.

1.5.1.4 Idaho Batholith Subalpine Setting - 386,000 acres

Map 1.5.1.4 Idaho Batholith Subalpine Setting

Existing Condition (2006)

Occurring on gentle to moderately steep landforms at higher elevations, this is a cold environment with short growing seasons. Soil development is slow, and soil profiles tend to be thin and rocky.

Stream channels are typically the headwaters for major stream systems that drain through the upland and breakland settings.

Typical potential vegetation is subalpine fir, cool grand fir and shrublands.

Compared to the Bitterroot Mountains Subalpine setting, mountain hemlock is not found. This is a transition to the drier types found on the neighboring Nez Perce National Forest.

Warmer, drier sites include small amounts of Douglas-fir, dry grand fir and western redcedar habitat types. Forest dominance types are a mix of shade-intolerant (lodgepole pine, western larch, Douglas-fir and, on the coldest sites, whitebark pine) and shade-tolerant forests in a variety of size classes, as shown in the dominance type (Table 1.5.1.4a) and size class tables (Table 1.5.1.4b). The variety of forest conditions provides a mix of forage and cover for summering big game and supports a prey base for wide-ranging carnivores such as lynx and wolverine. There are large, old climax forests for boreal owls and insects. Disease and fires provide a continuous supply of snags for snag-dependent woodpeckers and other species.

Forest cover types are generally within desired ranges. The non-stocked and small size classes are below desired levels, while the 10 to 15 inch and 15+ inch classes are either at or above the desired levels.

Desired Condition (PLAN COMPONENT)

Douglas-fir, western larch and lodgepole pine are important seral species that dominate after disturbance. Engelmann spruce, subalpine fir and grand fir, with inclusions of western redcedar, are the tolerant species. Subalpine fir is the most common understory species. Engelmann spruce is a common species on moist sites. Whitebark pine is common on the coldest sites, either as pure stands or mixed with other species. Lodgepole pine on colder, drier sites is likely to be found in nearly pure lodgepole pine stands; more moderate sites are usually a mix of species. Riparian habitats are often dominated by mature spruce, subalpine fir or grand fir. Shrubs are prolific and diverse on these sites and may dominate for 30 years after disturbance. Desired species composition is found in Table 1.5.1.4a.

Table 1.5.1.4a Desired Dominance Types: Idaho Batholith Subalpine

Dominance Type	Desired Range	Existing
Ponderosa Pine/Mixed	0% to 0%	0%
Douglas-fir	4% to 8%	10%
Lodgepole Pine	13% to 24%	10%
Grand fir/Cedar mix	0% to 0%	4%
Western Larch/Douglas-fir	3% to 6%	1%
Subalpine fir/Spruce Mix	34% to 68%	56%
Seral Grass/Shrub	12 to 24%	3%
Non-Forest	16%	16%

Following stand-replacing disturbance, the forest commonly begins as an even-aged mix of species. There are often large, old seral trees found in small groups or as scattered individuals. Starting about 50 years after stand-replacing disturbance, forests begin to develop additional age classes due to low intensity disturbances. The younger trees are characteristically subalpine fir or grand fir. The typical old forest character is large old spruce and fir with scattered western larch, Engelmann spruce, Douglas-fir or lodgepole pine. It is most persistent in riparian areas but may also be found on slopes and ridges. The large size class contains stands that are “old growth” though not all are “old growth.” “Old growth” for most species, has

at least 10 trees per acre over 17 inches in diameter. Old growth trees are at least 150 years old. Total basal area in the old growth stands is at least 80 square feet per acre. Lodgepole pine old growth is over 120 years old, and is very uncommon. It has at least 10 trees per acre over 13 inches in diameter, and basal area is over 60 square feet per acre. Desired size class distribution is found in Table 1.5.1.4b.

Table 1.5.1.4b Desired Size Classes: Idaho Batholith Subalpine

Size Class	Desired Range	Existing ⁶
Non-Forest	16%	16%
Seral Grass/Shrub	14% to 28%	3%
0" to 5"	13% to 25%	0%
5" to 15"	29% to 59%	59%
15"+	10% to 20%	22%

On mesic sites, these stands are dominated by trees, though density varies as disturbances create small openings in the stand or remove understory layers. Higher elevation, colder sites 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 at 120+ years are 130 to 200+ square feet per acre on the most mesic sites. Wetter sites, including much of the grand fir mosaic and the cold, dry sites, often have the lower basal areas.

The amount of standing dead wood varies widely over time. There are large expanses of snags created at about 100-year intervals. These snags fall over in a relatively short time. The dead standing trees in the stands 30 to 75 years after disturbance are relatively small diameter. Large dead wood accumulations typically range from 10 to 50 tons per acre in old forests. Younger forests have between 10 and 24 tons of dead wood per acre. Snag numbers are .5 to 3 per acre over 20 inches diameter and 7 to 16 per acre that are 10 to 20 inches in diameter.

Disturbance events (fire or harvest) are a combination of more frequent low and mixed severity (every 30 to 50 years) on drier sites, with less frequent stand-replacing events (average 100 to 200 years) on more moist sites. Drier types tend to have mostly stand-replacing disturbances. More moist sites tend to have more mixed severity disturbances that create openings in the stands.

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. Mountain pine beetle outbreaks in lodgepole pine-dominated stands set the stage for stand replacement.

Following disturbance, landscape patches start as large, mostly homogeneous expanses of single-storied stands, 100s to 1000s of acres in size. Recommended patch sizes are 1/4 acre to 500 acres in size.

1.5.2 Grassland and Shrubland Vegetation

Existing Condition (2006)

Grasslands and shrublands are composed of grasses, forbs and shrubs. They are found on sites that generally do not support forest tree growth due to climate or soils, or are maintained in a non-forest condition by periodic disturbances such as fires or floods.

On the breaklands, non-forest types are grasses, forbs, and shrubs that are most often found in small patches on rocky ridgelines. Shallow soils and repeated fires have converted some areas to permanent shrubfields with mountain maple, ninebark, oceanspray, ceanothus and serviceberry the most common species. (See the invasive weeds section for more detailed weed conditions.)

On the uplands, grasslands are primarily riparian meadows dominated by sedges, or shrubfields that developed after repeated fires.

In subalpine settings alder, menziesia, dwarf subalpine shrubs, grassy balds, and riparian meadows are the most common vegetative types.

Desired Condition (PLAN COMPONENT)

Non-forest sites are dominated by native grasses, forbs and shrubs.

Riparian meadows are dominated by native species such as *Carex aquatilis* and other riparian grasses, sedges, and forbs. They are maintained in an open condition by periodic fire, flood or harvest of encroaching trees.

Within the breaklands, frequent fire top-kills fire-adapted shrubs, which re-sprout vigorously due to the health of individual plants and the flush of nutrients following fire.

Within the uplands, conifers do not encroach on the riparian meadows or grassy balds. Native grasses, sedges, forbs and shrubs dominate.

Within subalpine settings, conifers do not encroach on riparian meadows or grassy balds. Cool upland shrublands are dominated by Sitka alder and fool's huckleberry (menziesia). Subalpine grasslands have blue wildrye and mountain brome. Cold subalpine shrublands have heather and grouse whortleberry.

1.5.3 Rare Plants

Existing Condition (2006)

Rare plants are found throughout the Clearwater National Forest (see Supporting Documentation http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_rare_plants_clw.shtml). They can be grouped by their habitat needs into about ten groups: mesic conifer, ponderosa pine savannah/grassland, forested riparian, broadleaf riparian, mid- to high-elevation seral, grand fir mosaic, cool meadows, cold cedar/grand fir/subalpine fir, basalt outcrops in dry forest, and seral grand fir.

Desired Condition (PLAN COMPONENT)

Habitats for rare plant species of concern and species of interest are conserved.

1.5.4 Terrestrial Wildlife Habitat

Species diversity on the Clearwater National Forest is a reflection of the diversity of ecosystem conditions and characteristics. Wildlife habitats are a reflection of forest and non-forested vegetation composition and structure, and the disturbance processes on breakland, upland and subalpine settings. In addition, the motorized road and trail network influences the quality of habitat security available to wildlife species seasonally and year-round. Desired conditions result in the broad ecosystem diversity needed to sustain wildlife habitat and species diversity, including those needed by species of concern and species of interest.

1.5.4.1 Terrestrial Habitat

Wildlife habitats are based on the desired landscape-level habitat conditions, as described in the vegetation and watershed sections. The attainment of those forest-wide vegetation and watershed desired conditions will normally sustain habitat and species diversity (see Supporting Documentation

http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_wildlife_clw.shtml and

http://www.fs.fed.us/cnpz/forest/documents/sup_docs/index_sustain_clw.shtml). Additional desired conditions are described below. Several species are mentioned as examples, but are not intended to be complete lists.

Existing Condition (2006)

Forest-wide

Limited fire activity over the past 70 years has resulted in more uniform forest composition and age class distribution than occurred historically.

Approximately 68% of the Forest is roadless or designated wilderness, where insects and disease, and to some extent fire, play out their natural roles. On about 18% of the Forest, large standing dead and down wood and live trees with decay are reduced, but not eliminated, by timber harvest and fuelwood removal along open roads. The remainder of the Forest has extensive snags and decayed live trees associated with insect activity. Large expanses of snags resulting from fires have been in limited supply, but recent increases in fire use and prescribed fire have increased the availability of fire-killed snags.

Winter range forage and browse plants, which depend on periodic disturbance, have declined or become decadent.

Invasive weeds have become established and spread along the road and trail network and into some habitats by vehicle use, domestic and wild animals, and by being wind-borne. They have reduced the quality of available habitat by out-competing native plant communities where growing conditions are favorable to the invasives.

Habitats for wide-ranging carnivores are largely intact in undeveloped areas such as roadless and wilderness areas.

Breaklands

Increased dominance of grand fir and Douglas-fir has reduced the availability of habitat for many species associated with open-grown ponderosa pine and Douglas-fir habitats, as well as overall habitat diversity.

Shallow soils on southerly aspects limit the production of high quality forage and browse for big game.

Uplands

Mature, older and secure habitats have been reduced or degraded in highly roaded areas (about 18%) of the Forest.

Subalpine

A high percentage of whitebark pine has been lost due to blister rust, mountain pine beetle, and the lack of wildland fire. This has reduced habitat for associated species like Clark's nutcracker.

Younger forest habitat is in short supply for species that prefer early seral habitat conditions.

Desired Condition (PLAN COMPONENT)

Forest-wide

Diverse vegetation composition, structure, patch sizes and distribution provides for diverse and sustainable wildlife habitats that support native and desired non-native wildlife species including species evaluated through the species of concern and species of interest processes. Common species continue to thrive, and rare or uncommon species find suitable habitats. Changes in habitat availability, similar to natural disturbance processes, provide for species population dynamics. Habitats are available for existing terrestrial species, both common and rare, and those that have lived here during the past 100 years. Vegetation desired conditions, well-distributed across breaklands, uplands and subalpine settings, provide connectivity between wildlife habitats. The range of desired vegetation species and size classes (identified in Plan sections 1.5.1 and 1.5.2) is well-distributed across the Forest and supports the needs of a broad spectrum of wildlife species. The full range of habitat conditions is generally well-distributed across the forest and available in each watershed.

Old forest habitats contain the structural conditions to sustain old forest-associated wildlife species. Old forest habitats are distributed across the Forest in all ecosection settings and in all watersheds.

Patch composition, size, structure and distribution reflect the disturbance dynamics expected in each watershed and ecosection setting.

Disturbance processes (i.e. wildland fire, insects and disease) contribute to diverse vegetation and therefore wildlife species diversity. Burned areas are available and provide unique habitat components for associated wildlife species. Insect-killed trees are also found across the Forest and provide unique habitat that tends to be distributed either as small patches or individual trees throughout the Forest or, in the case of mountain pine beetle in lodgepole pine, in large expanses at higher elevations. This provides habitat for wildlife associated with dead trees such as black-backed woodpeckers and Lewis' woodpeckers. Fire generally limits tree encroachment into meadow and grassland habitats.

Native vegetation dominates. Invasive weeds generally do not degrade or dominate sites such that wildlife habitat is reduced.

Desired conditions for dead wood described in section 1.5.1 support wildlife species diversity. Standing dead and down wood is present in various decay classes and is representative of the sizes in the current or previous forest. Sufficient large live trees are present to replace this dead material over time.

Desired riparian conditions described in section 1.5.7.3 provide the tree cover and moist forest conditions that attract wildlife use and provide habitat for riparian-associated species such as amphibians, mollusks and others. The riparian conservation areas provide ties between patches of old forest and facilitate wildlife use and movement across the entire Forest.

Special habitats such as wallows, mineral licks, talus slopes, wet fractured bedrock, rocky outcrops, caves and abandoned mines and buildings are available for wildlife use. Travel routes on ridgetops and in saddles are available for wildlife use and facilitate wildlife use of adjacent areas.

Breaklands

The non-forest and early seral desired conditions in the vegetation section 1.5.1. describe the open and early seral type conditions that provide habitat for a variety of wildlife. Medium and large tree desired conditions, with the more complex stand structures that develop as the forest ages, provide a variety of habitats used by wildlife including shade in the summer, tree cavities, and snow interception during the winter.

Invasive weeds do not dominate the vegetation cover in the early seral and non-forest areas. Native grasses, forbs and shrubs provide desired forage and browse species for wildlife such as small mammals, elk and mule deer.

Open-grown forests found on dry, southerly aspects generally stay in open-grown condition through periodic disturbance. They provide habitat for wintering ungulates and bird species that prefer large, old trees (e.g. flammulated owls, pileated woodpeckers, pygmy nuthatches, etc.). Ponderosa pine is more common in the Lochsa River drainage and the Palouse District, while Douglas-fir is more common in the North Fork Clearwater drainage. Disturbance every 20 to 40 years rejuvenates forage plants, creates scattered snags and down wood concentrations, maintains open forest habitat conditions and maintains a mix of smaller forested and non-forested habitats within larger landscape patches.

On north aspects, grand fir and cedar habitats occur in an ever-changing mosaic of age and size classes. Forest patches are generally one- or two-storied with closed canopies and contain greater numbers of snags and amounts of down wood than southerly aspects. Disturbance processes create and maintain habitat patches that are generally larger and more uniformly forested than on warmer and drier aspects. Disturbance is less frequent than on warm, dry aspects, every 40-120 years. Generally, these conditions are more similar to habitat conditions on uplands settings than warm, dry breaklands.

Patch sizes for seral shrub and seedling/sapling sizes are most often less than 100 acres, but 25% may range up to 5000 acres. Old forest patches are the remnants of these young forests that have survived over 150 years of frequent disturbance. Generally, about 50% of the old forest acreage is in patches over 1000 acres. About 2/3 is found on southerly aspects, and 1/3 on northerly aspects.

Unique and rare habitats such as grassland sites, talus and aspen are persistent on the landscape, in healthy functioning condition. They provide high quality habitat for associated species.

Uplands

Structural complexity, horizontally and vertically, including canopy closure, canopy openings, canopy layers and dead wood, facilitate wildlife habitat use and dispersal.

The juxtaposition of forest and opening here, together with high moisture regimes, provides habitat for wildlife species that utilize a wide range of forest composition and structure, and use forest edges. Disturbance every 30 to 50 years increases stand structure complexity by creating small openings, encouraging establishment of small, dense patches of young trees, and maintaining a diverse shrub and forb understory. Stand replacement at 120 to 200 years produces seral shrub fields used by many birds and small mammals as well as browsing ungulates. It also provides opportunities for establishment of seral tree species such as western white pine, ponderosa pine and western larch that are preferred by many wildlife species. These conditions provide habitat to sustain species such as great gray owl, fisher, lynx, goshawk, and most wide-ranging species.

The grand fir mosaic is a unique habitat here, often supporting very old forests. The mosaic of forest canopy and alder, coneflower or bracken fern openings with high moisture regimes supports high densities of small mammals and excellent summer habitat for ungulates as well as other species.

Patch sizes for the seral shrub and seedling/sapling sizes are generally less than 40 acres, but up to 25% may range up to 1000 acres on colder sites that support lodgepole pine. Old forest patches are the remnants of these young forests that have survived through 150 to 200 years or more of mixed severity disturbances. Generally, about 50% of the old forest acreage is in patches over 200 acres in size.

Unique and rare habitats such as aspen, both wet and dry meadows, and fens are persistent on the landscape, in healthy functioning condition. They provide high quality habitat for associated species.

Subalpine

Complex stand structures support a variety of wildlife species. Small to large openings, from an acre to over 100 acres, sometimes with clumps or stringers of large old trees, abundant shrubs or small trees, and multiple canopy layers are common here. Frequent disturbance, every 30 to 50 years, creates a continuous supply of early seral shrubs and small trees. Less frequent stand replacement, every 120 to 175 years, allows for the establishment of seral tree species such as Douglas-fir and western larch that are often favored by wildlife.

This diversity, while less than in the uplands due to shorter growing seasons and harsher climate, provides conditions favored by summering ungulates, and other species that are able to migrate seasonally. The mix of forest types and size classes described in the desired vegetation conditions support a variety of wildlife species, particularly those that prefer subalpine or alpine habitats (e.g. wolverine for denning, Clark's nutcracker for the whitebark pine seeds, lynx for deep snow conditions, forest owls such as the boreal owl, pikas, mountain goats and several migratory bird species).

Patch sizes for the seral shrub and seedling/sapling sizes are generally less than 100 acres, but up to 30% may be up to 1000 acres. Old forests that develop here are most often found in patches over 150 acres, but range from less than 20 to over 3000 acres.

Unique and rare habitats such as talus, cirque basins, and high lake basin habitats are persistent on the landscape, in healthy functioning condition. They provide high quality habitat for associated species.

1.5.4.2 Wildlife Security

Existing Condition (2006)

Forest-wide

Motorized access has reduced some habitat effectiveness and security through habitat loss, animal displacement, and making animals more vulnerable to hunting, poaching, and trapping. Some Forest roads are currently closed either year-round or seasonally to provide security for wildlife, such as elk. Motorized vehicle influence in unroaded areas is present but limited to specific routes such as Toboggan Ridge or the Lolo Motorway. Motorized use is limited in winter ranges, but has increased on the road and trail system and at higher elevations.

Watersheds with less than 50% of their area outside the influence of motorized routes have the least amount of secure habitat. Watersheds with 50 to 70% of their area outside the influence of motorized routes have a moderate level of secure habitat. Watersheds with 70% or more of their area outside the influence of motorized routes have the highest amount of secure habitat. Table 1.5.4.2 lists the number of subwatersheds and their relative security status.

Table 1.5.4.2 Existing Wildlife Habitat Security Conditions

Security Category (% of Watershed Outside the Influence of Motorized Routes)	Number of Subwatersheds
High (>70%)	38
Moderate (50-70%)	27
Low (25-50%)	19
Very Low (<25%)	39

Map 1.5.4.2 Wildlife Habitat Security

Overall, year-round wildlife habitat security is low to moderate in Forest subwatersheds that contain highly-roaded and intensively-managed landscapes. Year-round habitat security is generally moderate to high in subwatersheds that contain large amounts of wilderness and roadless areas (68% of the total Forest).

Desired Condition (PLAN COMPONENT)**Forest-wide**

Security, places to hide from or avoid predators, is provided. It allows wildlife species to effectively use available habitats. Security, limited human disturbance, is available for species that are vulnerable to disturbance and displacement. Areas of secure habitat are found in each subwatershed. Generally subwatersheds in inventoried roadless areas and designated wilderness provide higher levels of secure habitat than do more developed lands.

Wildlife and human interactions at recreation sites, campgrounds, campsites and administrative sites is generally at low levels and not influenced by such things as garbage, livestock feed or other attractants. Appropriate practices and equipment decrease vulnerability and provide security for wildlife while increasing safety for people.

Areas important at specific times for specific uses, such as calving, fawning, nesting, denning and wintering habitats, among others, generally have higher security levels at those specific times than at less vulnerable times. Wildlife sensitive to human disturbance use habitats effectively, at critical times and critical places.

The sizes of security areas, distributed in each subwatershed, are sufficient to reduce levels of disturbance for vulnerable species at vulnerable times.

Riparian conservation areas provide a network of relatively undisturbed, secure connections between larger blocks of secure area. Wildlife of all species can find secure habitats as they move across the landscape.

Access management provides for habitat connectivity and security as well as resource management and public access across landscape settings.

1.5.5 Invasive Weeds

Two conservation themes define invasive weed conditions: “conserve” and “restore.” Conserve areas are those with no weeds or low weed populations. In conserve-designated areas, the emphasis is early detection and rapid treatment to prevent the establishment and spread of newly discovered invaders. Restore-designated areas are those with well-established weed infestations. These areas have either a “contain-and-control” or “restoration-and-rehabilitation” emphasis and are prioritized as high, moderate or low based on the presence of new invaders and the long-term treatment of well-established weed infestations. Areas designated “high” have the highest levels of weed infestations, whereas areas designated “moderate” and “low” have proportionately fewer weeds.

Existing Condition (2006)

Map 1.5.5a Invasive Weed Existing Condition

Invasive weeds have become established and are spreading across susceptible landscapes unimpeded by landownership boundaries, in forested and non-forested landform settings.

Native plant species have been displaced reducing the capability of habitats to support wildlife and livestock. Invasive weed establishment has affected fire frequency, altered soil properties, and threatened rare plant species through competition. Currently, all watersheds contain weed populations at various levels of infestation and are identified as needing restoration. Table 1.5.5a summarizes the existing conditions by watershed.

Table 1.5.5a Invasive Weed Existing Conditions

Conservation Themes and Priorities	Number of Watersheds
Conserve	0
Restore	30

Desired Condition (PLAN COMPONENT)

Map 1.5.5b Invasive Weed Desired Condition

Native and desired non-native plant communities are healthy and self-sustaining. Invasive weeds are a minor component. Invasive weed species do not dominate native vegetation.

High priority “restore” watersheds trend toward “conserve” status. Weed densities in moderate priority watersheds are reduced by 50% or more where weeds are firmly established. Conserve-designated watersheds have very low weed populations.

Table 1.5.5b. Desired Invasive Weed Conditions and Treatment Priorities

Conservation Themes and Priorities	Number of Watersheds Meeting Desired Conditions
Conserve	2
Restore	28

1.5.6 Soil Productivity

Existing Condition (2006)

The majority of soils on the Clearwater National Forest are in natural condition. Severe wildfires, fire suppression work, mining activities and timber harvest activities have reduced soil productivity in places. Soil compaction, displacement, puddling, burn damage, or loss of organic matter may be a concern on areas of lands affected by severe wildfires, mining, grazing or ground-based harvest. Roads on landslide-prone lands increase the risk of landslides.

Coarse woody debris is reduced on some sites and overabundant on others.

Desired Condition (PLAN COMPONENT)

The ultimate goal is to maintain natural soil structure and fertility. Soil conditions support vegetation, wildlife and hydrologic functions within a range of natural processes and disturbances. Soils are productive, ash soils are in place, soils are not detrimentally impacted by disturbances. There are desired numbers of down woody material and soil organic matter. Dead wood contributes to maintaining long-term soil productivity.

1.5.7 Watersheds and Aquatic Ecosystems

Existing Condition (2006)

Map 1.5.7 Watershed Condition

Existing conditions for watersheds and aquatic ecosystems have been summarized at the subwatershed scale into two conservation themes for the Clearwater National Forest: “conserve” and “restore.”

Conserve-designated subwatersheds display stream channel, riparian and upland vegetation conditions and patterns that reflect a historic range of watershed disturbance processes. Self-sustaining populations of native and desired, non-native aquatic species are present and well distributed in available habitats. Sediment amounts and stream flow regimes are within an expected historic range of frequency, duration and intensity based upon the landscape setting and historic processes. Water quality supports designated or existing beneficial uses. Land uses and human activities do not strongly influence disturbance patterns and processes, as indicated by low road density and few stream crossings. Currently, there are 45 conserve-designated subwatersheds (43%) (Table 1.5.7, [Map 1.5.7](#)). However, a small percentage (<10%) may have needed restoration and have a high priority for restore-type management actions.

In restore-designated subwatersheds, the cumulative effects of past land uses combined with natural disturbances have interrupted expected water flow regimes and physical processing of sediment. The past land uses may include road and trail networks, timber harvest near stream channels, stream channel changes caused by mining, and streambank and riparian vegetation impacts due to campgrounds or livestock grazing. The effects of stand-replacing fires, landslides and floods on watershed and biological conditions are

magnified by these human-caused disturbances. Common effects are long-term (decades) increases of sediment deposition in streams, loss of large woody debris recruitment to stream channels, changes in water flows and timing, and elevated water temperatures. Populations of native and desired, non-native aquatic species may be present but depressed because of loss of habitats. Currently, there are 59 restore-designated subwatersheds (56%) (Table 1.5.7, [Map 1.5.7](#)). These subwatersheds do not meet water quality or fish habitat desired conditions.

Desired Condition (PLAN COMPONENT)

Seventy-five percent⁷ of the Forest subwatersheds and aquatic ecosystems achieve conserve status (Table 1.5.7, [Map 1.5.7b](#)). Watershed and aquatic ecosystem condition and processes within conserve-designated subwatersheds support designated or existing beneficial uses.

Table 1.5.7 Existing and Desired Watershed Condition

Conservation Themes	Existing Condition (2006) Number (%) of Subwatersheds	Desired Condition in 20-50 Years Percentage of Subwatersheds	Desired Condition in 100 Years Percentage of Subwatersheds
Conserve	45 (43%)	(75%)	(90 to 100%)
Restore	59 (56%)	(25%)	(0%)

1.5.7.1 Watersheds

Desired Condition (PLAN COMPONENT)

Watershed scale processes reflect forest diversity for species composition and size classes that would be present if landscape dynamics (primary agents are floods, landslides, fire, insects and pathogens) were fully functioning. Watershed scale conditions, as measured by the amount and timing of water release to streams, soil erosion and channel sediment loads, are resistant to change from small disturbances. They rebound within 3 to 5 years into a water and sediment balance following subwatershed scale disturbances.

Soil physical processes reflect process and patterns as if landscape dynamics were fully functioning. As a result, watershed scale erosion, in-channel sediment and stream flow regimes are within an expected range of frequency, duration and intensity. Land uses and human activities do not strongly influence landscape pattern and processes as indicated by desired forest composition and structure, minimal road effects and few stream crossings. Sediment delivery from streamside facilities, roads and trails does not measurably impact pool frequency, residual pool depths or fish spawning habitats.

⁷ Achieving recovery in some watersheds may require much longer time periods, perhaps decades. There are a variety of reasons for this long recovery, including climate change, slow vegetation recovery time frames, etc.

Landscape disturbance frequency, severity and area extent create a range of watershed conditions. Types of natural landscape disturbances are erosion, fire, floods, insects and disease. Land use activities mimic these disturbance patterns and processes.

At the subwatershed scale, surface erosion and subsequent instream sediment yield generally occurs in pulses and rapidly recovers to pre-disturbance levels within 3 to 5 years. Desired frequency, amount and duration of subwatershed conditions following disturbance are generally dependant upon landform setting.

Within the breaklands setting, disturbances occur every 10-25 years. The resulting sediment yield peak to area streams and rivers is less than 30% over base level the first year following disturbance.

Within the uplands and subalpine settings, disturbances occur every 40 to 60 years. The resulting sediment yield peaks to area streams and rivers are less than 40% over base level the first year following disturbance. Once every 100 to 120 years in subalpine, and every 200 years in uplands settings, sediment yield peaks may exceed 100% over base levels following stand-replacing events.

Within all settings, surface soil erosion amount diminishes rapidly following disturbance. Stream channel sediment yield, as measured by percent over base, rapidly declines to less than 10% over base within 2 to 5 years in restore-designated subwatersheds, and less than 5% over base in conserve-designated subwatersheds. Water yield peak increases over base are less than 20%.

Road density may be used as one indicator of watershed condition. Road densities at the subwatershed scale are at the minimum network necessary to provide access for other resources and minimize effects to aquatic resources. In restore-designated subwatersheds, road densities are less than 3 miles per square mile. Road densities are less than 1 mile per square mile in existing (2006) conserve-designated subwatersheds. Road densities within riparian conservation areas are less than 1 mile per square mile in conserve-designated subwatersheds, and less than 2 miles per square mile in restore-designated subwatersheds. Road densities on landslide-prone soils are less than 1 mile per square mile of landslide-prone area.⁸

1.5.7.2 Water Quality and Water Uses

Desired Condition (PLAN COMPONENT)

The Clearwater National Forest provides water quantity and quality needed for domestic uses, agriculture, recreation and aesthetics, and instream flows to protect and maintain aquatic and riparian related resources.

⁸Acknowledging that the impacts of roads vary by location, road densities are coarse filter indicators of desired conditions. The minimum network necessary for long-term resource management may exceed road densities listed above while meeting overall aquatic ecosystem and watershed conservation desired conditions. Other indicators such as fish passage, riparian vegetation, stream habitat conditions, and water quality are used in conjunction with road densities to determine subwatershed condition.

Water quality meets designated or existing beneficial uses. In cooperation with state and federal agencies, tribes and holders of valid water rights, state of Idaho water quality standards are attained for currently-impaired water bodies and stream segments.

Municipal watersheds on the Clearwater National Forest provide surface water quality at a minimum to meet state of Idaho surface water quality standards. The likelihood that surface and ground water drinking supplies will become contaminated is minimal.

1.5.7.3 Riparian Vegetation

Desired Condition (PLAN COMPONENT)

Vegetation in riparian conservation areas is composed of a diverse structure of native plant communities that perpetuate the distribution of woody debris, soil cover, bank stability and thermal control characteristic of resilient aquatic and riparian ecosystems. Ground cover is typically comprised of organic litter, shrubs, grasses and forbs. Measured by stream reach, the exposed mineral soil is less than 1% in conserve-designated subwatersheds and less than 5% in restore-designated subwatersheds.

Riparian forest vegetation composition and structure are similar to what would be expected with natural disturbance processes functioning and would vary by ecoregion setting. Proportional to expected disturbances at the watershed scale, the dominant condition is a closed-canopy, older-age stand of conifer and deciduous trees with standing snags ranging from 13 to 19 per acre on breaklands, 13 to 17 per acre on uplands, and 12 to 19 per acre on subalpine settings. Down wood is found at the upper end of desired levels by setting. On breaklands, the range for riparian wood is 10 to 15 tons per acre; on uplands, 20 to 40 tons per acre; and on subalpine settings, 15 to 20 tons per acre. (See the vegetation section for information about distribution and dynamics of dead wood.)

Periodic floods, low-intensity fire and wind-throw are the primary disturbance factors shaping vegetation patterns in riparian conservation areas. Fire severity in riparian areas tends to be lower than on the adjacent uplands, due to generally higher humidity, higher soil moisture and resulting higher fuel moistures. Fire creates patchy openings, or a green strip of trees along stream courses and surrounding lakes, ponds and wetlands. Size and frequency of openings decrease with increasing valley bottom width. Reduced fuel loads in adjacent uplands reduce frequency of high severity fire within riparian areas. Flood timing and duration follow expected patterns based upon amount of precipitation, season, aspect, elevation and upland vegetation condition. High flows exceeding bankfull discharge for a short number of days at least every 1 to 2 years provide for flood-dependent vegetation and channel maintenance. Base flows support riparian vegetation and instream needs, at a minimum that is median monthly flow (equaling 50% exceedence interval).

1.5.7.4 Aquatic Habitats

Desired Condition (PLAN COMPONENT)

The Clearwater National Forest provides aquatic habitat to support well-distributed native and non-native vertebrate and invertebrate populations. Stream channel conditions are within the range consistent with the riparian and aquatic ecosystems in which they developed.⁹

The lower and upper thresholds defining this range are the desired stream features listed below.

Habitat Connectivity: Native fish species have access to historically occupied habitats.

Water Temperature - Cold Water Biota: Habitat complexity provides daily, seasonally, annually and spatially variable water temperatures within expected normal ranges. Generally this is less than 22° C with a maximum daily average no greater than 19° C. Specific life stage desired water temperatures are:

- Salmonid summer rearing temperature is between 10 and 16° C,
- Salmonid spawning and incubation temperature is less than 13° C,
- Bull trout summer rearing temperature is less than 12° C,
- Bull trout spawning temperature is 5 to 9 ° C, and
- Bull trout egg incubation is 2 to 4° C.

Pool Frequency: One pool every 5 to 7 channel widths in pool-riffle stream channels and 1 to 4 channel widths in step-pool stream channels.

Pool Size, Maximum Depth and Pool Cover: Pool quality rating is greater than or equal to a rating of 4 in alluvial streams.

Width to Depth Ratio: Less than or equal to 10:1 for confined channel types (Rosgen channel types A, E and G); less than 20:1 for moderately confined channel types (Rosgen channel type B); and less than 40:1 for unconfined channel types (Rosgen channel types C and F).

Channel Substrate Condition: Less than or equal to 20% fines (<6.4mm) as measured by percent surface fines in spawning reaches at pool tails; or cobble embeddedness less than 30% in Rosgen channel types A2 and A3, B2 and B3, C2 and C3, E3, G2 and G3.

⁹ The dynamic nature and complexity of aquatic systems can result in a wide range of values that make selection of precise target values difficult. These habitat features may not all occur within a specific stream segment all the time, but generally should be achievable through time and be represented within the watershed. However, these desired stream features may change as scientists gain a greater understanding of aquatic ecosystems, processes and function.

Large Woody Debris (applies to forested systems): Near-natural patterns in size and amount of in-channel large woody debris and potential wood on stream banks and flood plain.

Bank Stability: Bank stability greater than 95% for A and B and E channel types; greater than 90% for C channel types within 80% of any stream reach.

1.5.7.5 Aquatic Species

Desired Condition (PLAN COMPONENT)

Native and desired non-native aquatic species (fish, amphibians, invertebrates, plants and other aquatic-associated species) are present and well distributed in historically occupied habitats. Stronghold populations continue to thrive and expand into neighboring unoccupied habitats and depressed populations increase in numbers. Native aquatic animals exhibit genetic integrity and life history strategies necessary to assure self-sustaining populations. Spatial extents of habitat disturbances are less than the area occupied by aquatic species of concern, in order to preserve their population structure and life history strategies.

Populations of native and non-native fishes are consistent with federal recovery goals and state and tribal population goals. Cooperation and coordination with state agencies, federal agencies, tribes, and other groups ensures efficient and effective program implementation toward conservation of native and desired, non-native aquatic species.

1.6 Cultural, Social and Economic Desired Conditions

1.6.1 Designated Wilderness

Existing Condition (2006)

The Clearwater National Forest manages 259,000 acres of the Selway-Bitterroot Wilderness. Visitor use is considered moderate to low compared to other units in the National Wilderness Preservation System.

Resource and social impacts are expected to increase near trailheads where use increases, particularly those access points popular with visitors from growing urban areas like Spokane, Washington/Coer d'Alene, Idaho, to the north; Missoula, Montana, to the east; and Boise, Idaho, to the south.

Desired Condition (PLAN COMPONENT)

Wilderness values and resources (e.g. solitude, natural processes, desired wildlife/fish populations and primitive recreation opportunities) are provided in designated wilderness.

Wilderness areas provide for native plant and animal communities with minimal presence of invasive species.

1.6.2 Designated and Eligible Wild, Scenic and Recreation Rivers

Existing Condition (2006)

Map 1.6.2 Designated and Eligible Wild and Scenic Rivers

On the Clearwater National Forest, there are currently 88 miles of rivers designated as “recreational” in the National Wild and Scenic River System. This includes 65 miles of the Lochsa River and 23 miles of the Middle Fork Clearwater River.

The 1987 Forest Plan recommended a total of 145 miles of river segments to be considered for inclusion in the National Wild and Scenic Rivers System. These river segments were considered to possess unique, rare or exemplary “outstandingly remarkable values.” These river segments and values were considered to be conspicuous examples from among a number of similar river segments.

Desired Condition (PLAN COMPONENT)

Designated rivers and river segments and their corridors identified as eligible or suitable for recommendation as part of the National Wild and Scenic Rivers System are managed to retain free-flowing status, classification and outstandingly remarkable values.

1.6.3 Research Natural Areas

Existing Condition (2006)

The 1987 Forest Plan identified candidate research natural areas that contained the forest, non-forest and aquatic types assigned by the Forest Service Northern Region guide. All except two of the candidate research natural areas have been established. The *Research Natural Areas of the Northern Region: Status and Needs Assessment* (1996) identifies the forest, herbaceous and aquatic types that are typical on the Clearwater National Forest. It also identifies the types that are not currently represented in research natural areas. Those types are represented in Table 1.6.3.

Table 1.6.3 Recommended Changes in Research Natural Areas

Class	Type	Setting	Status
Forest and Woodland	<i>Thuja plicata</i> <i>Gymnocarpium</i> <i>dryopteris</i>	Warm, mesic forest	Add
	<i>Tsuga heterophylla</i> <i>Oplopanax horridum</i>	Cold, very moist forest	Add
	<i>Tsuga mertensiana</i> <i>Clintonia uniflora</i>	Cold, moderately moist forest	Add
	<i>Tsuga mertensiana</i> <i>Streptopus</i> <i>amplexifolius</i>	Cold, very moist forest	Add
Herbaceous Vegetation	<i>Eleocharis pauciflora</i>	Peat land	Add
Aquatic Types	Thermal springs	Thermal springs	Unfilled from 1987 plan

The Forest has received one proposal from the public to establish a research natural area in Hemlock Creek. The initial assessment submitted with the proposal indicates that this location may contain the two *Tsuga mertensiana* types recommended for additions.

Desired Condition (PLAN COMPONENT)

Research natural areas maintain a representation of natural systems found on the Clearwater National Forest as a baseline for research and monitoring. Fire, insects and pathogens continue to affect vegetation, reflecting the dynamic forests they represent.

1.6.4 Areas Recommended for Wilderness Designation

Existing Condition (2006)

Map 1.6.4 Roadless Areas and Recommended Wilderness

The Northern Region's *Wilderness Needs Assessment – 2003* identified several social and ecological factors used to assess the need for wilderness. Ecological factors included vegetation and ecological systems, and fish and wildlife habitat. Social factors included levels of use in designated wilderness, trends in outdoor activities and population statistics.

The Clearwater National Forest can contribute to meeting the needs identified in the Northern Region's *Wilderness Needs Assessment*. Lands that are recommended for wilderness designation contribute to preserving: (1) important fish and wildlife habitat, (2) ecological systems and (3) vegetation. Recommendations will further provide opportunities for non-motorized recreation and provide primitive recreation for visitors from areas experiencing population growth.

Desired Condition (PLAN COMPONENT)

Recommended wilderness contributes to meeting needs identified in the Northern Region *Wilderness Needs Assessment - 2003*.

Recommended wilderness areas offer opportunities for primitive and unconfined recreation while sustaining natural systems, ecological and watershed functions and desired fish and wildlife habitat.

Recommended wilderness areas remain roadless and provide a non-motorized recreation opportunity.

1.6.5 Road Management

Existing Condition (2006)

The system roads on the Forest are important facilities that provide access for the public and facilitate forest management activities for a variety of resources (e.g. fish and wildlife, heritage properties and areas, water quality, vegetation, administrative facilities).

The average appropriated budget for planning, construction and maintenance of the approximately 4295 miles of road on the Clearwater National Forest is roughly

\$1,939,000. The annual maintenance needed to meet road management objectives is \$3,988,000 based on condition surveys. Condition surveys indicate the Forest has a \$46,650,000 deferred maintenance backlog of work to be done. The deferred maintenance backlog will continue to increase if current funding levels remain constant or decrease.

Desired Condition (PLAN COMPONENT)

The Clearwater National Forest has a transportation system of roads that is aligned with budget levels and is managed consistently with other resource and social desired conditions.

The transportation system provides reasonable and legal access for resource management, rights-of-way and recreation management.

1.6.6 Motorized and Non-Motorized Recreation Uses

Existing Condition (2006)

On the Clearwater National Forest 63% of roads and 55% of trails are open yearlong or seasonally to motorized uses by a variety of vehicle types. Additionally, the majority of the Forest outside of designated wilderness is open to motorized use off roads and trails except in areas closed to protect wildlife, sensitive soils, some recreation sites or cultural resources. Terrain and vegetation prevent use off roads and trails in many areas. There are extensive non-motorized trail systems in the Selway-Bitterroot Wilderness and additional opportunities outside of designated wilderness. Existing closures contribute to wildlife habitat needs for security and minimize or eliminate resource impacts.

The Forest Service published new travel management regulations in November 2005. The new regulations are intended to provide sustainable access for motor vehicles, including off-highway vehicles, on national forests and grasslands. These regulations require each forest to designate those roads, trails, and areas that are open to motor vehicle use.

Desired Condition (PLAN COMPONENT)

Map 1.6.6 Motorized and Non-motorized Recreation Uses

Roads and trails are located across the Forest to provide a variety of recreation opportunities in diverse terrain and scenic outdoor settings.

Wheeled motorized use occurs on designated roads and trails that provide for the safety of users and minimize environmental impacts and conflicts with other users.

Snowmobile routes and play areas are available outside of designated or recommended wilderness areas.

Unauthorized routes do not exist on the landscape.

Generally, opportunities for extreme recreation (i.e. summer off-highway vehicle “play areas,” high-speed downhill mountain bike courses and motor vehicle

“challenge routes,”) and other high impact activities are very limited on the Clearwater National Forest.

Open roads and trails are safe and available for public use.

Areas with roads provide the highest density of motorized routes, but opportunities for semi-primitive motorized experiences are also provided in areas without roads.

Opportunities for non-motorized experiences are provided primarily in areas without roads. Motorized and non-motorized traffic generally do not use the same trail(s) where the intent is to provide non-motorized experiences.

1.6.7 Dispersed Recreation

Existing Condition

The Clearwater National Forest offers many recreational opportunities to local and non-local visitors. Dispersed recreation is outdoor recreation in which visitors are distributed over relatively large areas. Where facilities or developments are provided, they are more for access and protection of the environment than for the comfort or convenience of people. Recreation opportunities include, but are not limited to: camping off local roads in pullouts, fishing, driving for pleasure, wildlife and scenery viewing, and water-related activities.

Northern Idaho and western Montana continue to experience high levels of growth and development. This contributes to increased visitation of the Forest. The Forest faces the task of offering a range of dispersed recreation opportunities while minimizing conflict between different user groups and effects on ecosystems. Dispersed recreation in close proximity to numerous streams and rivers near, and adjacent to, Forest roads is growing in popularity. Off-highway vehicle use, water-related activities and increasing numbers of visitors have the potential to damage resources.

Desired Condition (PLAN COMPONENT)

A sustainable level of dispersed recreation opportunities exists. Environmental impacts and potential conflicts between different user groups are minimized.

Forest users are knowledgeable about low impact recreation practices included in the *Tread Lightly* and *Leave No Trace* programs and they practice them.

The Forest is a place where visitors and employees feel safe and resources are free from damage that results from negligent behavior and criminal activities.

1.6.8 Developed Recreation Sites

Existing Condition (2006)

There are approximately 33 campgrounds as well as picnic areas, visitor information sites (including the Lolo Pass Visitor Information Center), river access sites along the North Fork of the Clearwater and Lochsa Rivers, and highly developed sites such as Elk Creek Falls Recreation area and the Elk Summit trailhead.

Desired Condition (PLAN COMPONENT)

The Forest provides a variety of developed recreation sites which have high use or the potential to accommodate high use.

Recreation facilities, campgrounds, picnic areas, rest sites and other developed sites provide recreation opportunities that include clean facilities and natural appearing views and scenery.

Forest vegetation in developed sites is diverse (species, size, and age) and complement recreational activities, user safety and visual quality.

Developed campgrounds and sites are managed at least at reduced service levels, except for fee campgrounds and fee sites, which are managed at full service levels.

Sites, or portions of sites, are recommended for mineral withdrawal where necessary to protect improvements and resources within the designated site. New developed sites or limited expansion of existing sites accommodate increasing recreation demand.

Developed sites in riparian conservation areas contribute to keeping stream and river water clean. Stream banks are stable and vegetated, providing streamside shade.

1.6.9 Recreation Special Uses

Recreation special uses authorize the occupancy and use of national forest land by private individuals or companies for a variety of recreation activities such as outfitter and guide services, recreation events, resorts and other private or commercial recreation uses. Recreation special uses provide the public opportunities for commercial services or group events when they are required or when there is a demonstrated need for the service. The partnership between the Forest and permitted outfitter and guide operations is strengthened by a Memorandum of Understanding between the national forests and Bureau of Land Management in Idaho and the State of Idaho Outfitter and Guide Licensing Board.

Existing Condition (2006)

There are 1 recreation resort, 18 land-based hunting, 1 tour, 1 fishing, 1 camping, and 4 river outfitter and guide permits on the Forest. In addition to these term permits, there are up to 30 temporary noncommercial group use or recreation event permits issued annually.

Twenty-five outfitter and guide operations are permitted on the Forest. These operations offer big game hunting, fishing, touring, camping, and/or river rafting opportunities.

Desired Condition (PLAN COMPONENT)

Outfitter and guides provide high quality public services for residents and non-residents while assuring public health and safety and protecting resources. They avoid degradation of social settings and experiences.

New and existing recreation special use authorizations and permits serve the public interest, meet national standards and complement recreation opportunities.

Opportunities are provided for recreation events that have negligible impacts to natural or social resources or other visitors.

1.6.10 Scenery Resources

Existing Condition (2006)

Scenic quality and landscape settings vary from heavily roaded and managed areas to primitive natural landscapes showing the effects of large wildfires and insects and disease.

Desired Condition (PLAN COMPONENT)

Map 1.6.10 Scenic Integrity Levels

Scenic quality across the Clearwater National Forest meets or exceeds applicable scenic integrity levels.

1.6.11 Heritage Resources

Existing Condition (2006)

Map 1.6.11 Lolo Trail National Historic Landmark

The Clearwater National Forest contains significant heritage resources that document a long history of human activity. American Indian habitation of the Clearwater area has been shown to date back 10,000 years ago. Beginning in the early 1800s, people from other cultures began to explore, utilize and live in the region. Historic properties found on the Forest are associated with past and present American Indian, Euro-American and other ethnic communities' histories and cultures. These include thousands of individual sites, extensive trail routes and areas where significant historical events occurred. The Nez Perce (Nee-Me-Poo) and Lewis and Clark National Historic Trails, Moore Gulch Chinese mining site, Kooskia Internment Camp, Lochsa Historic Station and the Lolo Trail National Historic Landmark ([Map 1.6.11](#)) are a few examples. Some historic properties have been affected by past management activities, vandalism or conflicts between uses by different ethnic communities.

Desired Condition (PLAN COMPONENT)

Heritage resources are identified, managed, stabilized, protected and interpreted to preserve heritage values.

Heritage resources are generally free from impacts from natural events, vandalism and other human activities.

Heritage resources in the Lolo Trail National Historic Landmark are managed according to existing agreements and management plans. There is ongoing coordination between the Forest Service, National Park Service and the Nez Perce Tribe in the management of the Lolo Trail National Historic Landmark.

Priority heritage assets listed in the Forest database will be nominated for listing on the National Register of Historic Places.

The public's awareness and understanding of heritage resources improves due to appropriate interpretation and management.

1.6.12 Economic Contribution

Existing Condition (2006)

The Forest Service manages roughly 63% of the lands in the north-central Idaho region comprised of Clearwater, Idaho, Latah, Lewis and Nez Perce Counties. The Clearwater National Forest's average annual economic contribution (direct, indirect and induced) from 2002 to 2004 was approximately 1740 full- and part-time jobs and \$44.9 million in labor income to the five-county area. This was approximately 3% of the total employment and 2.6% of the total labor income.

Desired Condition (PLAN COMPONENT)

Ecosystems provide a sustainable level of products and services (within the land's capability and existing laws) to economic systems. Timber, range, recreation, minerals, fish, wildlife, water and special-use programs offer opportunities for economic development and contribute to local community and economic needs. Scenery provides a backdrop that attracts visitors to the area. Forest employees are involved in community economic development efforts and work in partnership with communities and counties.

1.6.13 Timber Availability

Existing Condition (2006)

The 1987 Forest Plan established an allowable sale quantity of 173 million board feet per year, though actual harvest levels have been much less.

Desired Condition (PLAN COMPONENT)

Silvicultural systems for timber harvest reflect the natural disturbance regimes for the site and maintain forest resiliency. The sustainable flow of commodities from Clearwater National Forest lands is a result of treatments used to move the current vegetation pattern to a desired vegetation pattern and do not exceed the long-term sustained yield of 4.829 million cubic feet of timber annually. (This is approximately 25.1 million board feet annually.) Products are made available to mills.

1.6.14 Wildland Fire, Fuels and Air Quality

Existing Condition (2006)

Response to wildland fire includes the full range of appropriate management responses, including wildland fire use for resource benefit, as defined in policy and in Interagency

Standards for Fire and Fire Air Operations. Fuel levels are managed with a combination of fire and mechanical treatments.

The Clearwater National Forest authorizes fire use on 71% of the Forest (approximately 1.2 million acres). Fire use can be implemented when fire use plans define the conditions for acceptable use. Fire use plans currently cover about 57% of the Forest (approximately 1 million acres). Fire use is not allowed on “suitable” lands. Fire has been allowed to play its natural role under existing fire use plans to reduce unnatural fuel densities and to restore wildland ecosystems to healthy, natural states.

Fire regime condition class maps indicate that much of the Clearwater National Forest has changed from historic conditions through: (1) vegetation succession without periodic fire, (2) some timber harvests that did not maintain historic composition and structures, and (3) introduction of exotic pests such as white pine blister rust.

Wildland-urban interface lands are found adjacent to communities and individual home sites, as defined in county and community wildfire mitigation plans. Examples are Syringa, Powell, most of the Palouse and private lands in the upper North Fork.

Air quality is generally very good, and there are no areas the State has identified as non-compliant with state air quality standards. The Selway-Bitterroot Wilderness is a Class I airshed.

Desired Condition (PLAN COMPONENT)

Generally fire will be used for resource benefit, using the appropriate management response for natural, unplanned fire ignitions. Wildland fire use may be considered on all national forest lands. Management-ignited fires may be used on all lands to trend vegetation closer to desired conditions. Both fire and mechanical fuels treatments may be used throughout the Forest to achieve desired conditions.

Wildland fires within the wildland urban interface are generally non-lethal ground fires, meaning less than 20% of overstory trees would be killed.

Fire risk in the wildland urban interface is generally low due to low stand density, the presence of fire-tolerant tree species and low fuel loads.

Generally continue to choose appropriate management responses to wildland fire.

Air quality is generally very good, and there are no areas the state has identified as non-compliant with current state air quality standards. Involvement with the Montana-Idaho Airshed Group ensures that state, regional and tribal standards are not compromised by management activities.

1.6.15 Livestock Management

Existing Condition (2006)

There are 15 active allotments containing 82,202 acres of capable and suitable lands for livestock grazing on the Clearwater National Forest.

Desired Condition (PLAN COMPONENT)

Livestock grazing provides for healthy and self-sustaining native and desired non-native vegetation communities and healthy watersheds.

Desired use levels of forage vegetation by livestock are not exceeded.

The introduction, establishment, spread and impact of invasive weeds by livestock is minimized.

Municipal watersheds are generally free from adverse impacts from livestock management.

Livestock use is adjusted to meet resource management objectives.

1.6.16 Minerals

Existing Condition (2006)

The Clearwater National Forest has a number of locations that are explored for precious metals. The majority of mining activity occurs on the Palouse Ranger District. The remaining activities are divided between the other three ranger districts. There are no known oil and gas occurrences on the Forest. There is no potential for extensive geothermal development.

Desired Condition (PLAN COMPONENT)

Provide for the orderly exploration, development, and production of minerals and energy resources while minimizing environmental impacts and meeting Forest Plan direction for other resources.

Mineral materials are available to support resource management (e.g. road surfacing or protective rip-rap), personal use (e.g. landscape rock) and some commercial uses.

1.6.17 Lands

Existing Condition (2006)

On average, the Clearwater National Forest administers 250 non-recreation special use permits annually. Special use permits authorize the occupancy and use of National Forest System lands by private individuals or companies for a wide variety of activities, such as roads, utility corridors, communication sites and other commercial uses that cannot be accommodated on private land.

Surveying and posting the national forest boundary, maintaining posted property lines and defending public lands from trespass or encroachment are activities that maintain the integrity of the National Forest System.

Land ownership adjustments are one of the tools utilized to simplify and improve management of Forest lands. The acquisition, protection, and management of road and trail rights-of-way are ongoing activities intended to ensure public access to National Forest System lands. Recent acquisitions and right-of-way agreements have ensured public access in the Lolo Pass area. Additional purchases or land ownership adjustments are anticipated in future years.

Desired Condition (PLAN COMPONENT)

New and existing special use permits are processed in a timely manner, serve the public interest and do not compete with private businesses.

National Forest System property lines adjacent to private land and boundaries of special areas, such as National Wilderness Preservation System lands, are clearly marked where inadvertent trespass and encroachment is most likely.

Land ownership adjustment through purchase, exchange or other authority, simplifies and improves management of the Clearwater National Forest.

Public access to National Forest System land is provided and additional access is provided by acquisition of new road and trail rights-of-way.

Developed recreation sites and lands adjacent to recreation sites are retained in federal ownership.

1.6.18 Utilities and Communication Sites

Existing Condition (2006)

Map 1.6.18 Electronic Sites

There are approximately 51 miles of utility power lines authorized on the Forest and 9 communication sites.

Desired Condition (PLAN COMPONENT)

Utility corridors and communication sites are planned, constructed and managed to provide for authorized uses, meet Forest Plan direction for other resources and provide for public safety. They are managed according to approved management plans.

Obsolete or unused facilities are removed from the Forest.

Communication sites are provided at cost-efficient locations. They maintain important heritage resources and cultural properties.

1.6.19 Administrative Facilities

Existing Condition (2006)

There are 25 administrative sites, specifically ranger stations, work centers, lookouts and emergency airfields.

Desired Condition (PLAN COMPONENT)

Forest administrative sites provide safe facilities and areas for both the public and Forest employees. Sites are managed to achieve cost-efficient objectives.

1.7 Tribal Desired Conditions

1.7.1 Tribal Treaty Rights and Trust Responsibilities

Existing Condition (2006)

The Clearwater National Forest is rich in tribal history. The traditional homeland of the Nez Perce people includes 17 million acres in Idaho, Oregon and Washington. The Treaty of 1855 reserved 7.5 million acres, which includes the present-day Clearwater National Forest, for tribal use. The treaty also preserved fishing, hunting and gathering rights for the Nez Perce people.

Tribal members often gather traditional plants (e.g. huckleberries, camas, etc.) from sites customarily used by the Nez Perce people. The public is also able to gather forest plants, other than timber, in small quantities for personal use. The Forest occasionally permits the commercial harvest of products such as huckleberries, mushrooms, Pacific yew and decorative materials. Tribal leaders have expressed concern that increasing non-tribal use of wild plants is negatively affecting the availability of desired plants and is displacing tribal members from traditional gathering locations.

The Coeur d'Alene Tribe's aboriginal territory encompassed more than 5 million acres in Idaho, Washington and Montana. It included parts of the Palouse and North Fork Ranger Districts. The Coeur d'Alene Tribe remains interested in management in this area.

Forest managers strive to maintain government-to-government relationships and to develop land management projects in a manner that honors treaty rights. The Clearwater National Forest and Nez Perce Tribe enter into partnerships to complete important resource management work. Stewardship contracting authority and the Tribal Forest Protection Act provide a foundation for future partnerships and improved working relationships.

Desired Condition (PLAN COMPONENT)

The Clearwater National Forest fosters and maintains government-to-government relationships with the Nez Perce and Coeur d'Alene Tribes. Agency consultation procedures are followed. A tribal liaison facilitates discussions between the Forest and the Nez Perce Tribe.

Management activities are planned and implemented in a manner that protects and respects Nez Perce treaty rights. Management actions are consistent with executive orders regarding the Coeur d'Alene Tribe.

Forest and tribal employees forge partnerships to accomplish important land management work. These partnerships promote understanding and may result in economic opportunities for Tribes and tribal entrepreneurs.

The Clearwater National Forest maintains healthy, vibrant ecosystems that support plant and animal species of cultural significance to the Nez Perce and Coeur d'Alene Tribes. Traditional cultural areas are identified and protected. Culturally significant plants are sustained and available for tribal gathering at traditional locations.