

Chapter 1. Background

Introduction

The Coconino National Forest (Coconino NF or the Forest) Land and Resource Management Plan (hereinafter referred to as the land management plan or plan) covers the National Forest System (NFS) lands within the boundary of the Coconino NF, excluding land designated as Experimental Forest.

The Coconino NF is located in north central Arizona (figure 1) in Coconino, Yavapai, and Gila counties and encompasses about 2 million acres. The Coconino NF is managed by the Forest Service, an agency of the United States Department of Agriculture (USDA). Ranger District offices are located in Flagstaff, the Village of Oak Creek, and Blue Ridge. The Forest Supervisor's office is located in Flagstaff.

Purpose of the Land Management Plan

This plan aims to promote responsible land management for the Coconino NF based on useful and current information and guidance. Land management planning guides the Forest Service in fulfilling its responsibilities for the stewardship of the Coconino NF to best meet the needs of the American people.

This plan provides strategic guidance and information for project and activity decisionmaking on the Coconino NF for approximately the next 15 years. It is intended to provide additional direction not already provided by existing law, regulation, or policy. This plan does not include site-specific project and activity decisions. Project and activity decisions are analyzed separately. All project and activity decisions, however, must comply with the guidance provided by this plan unless amendments are made to the plan that allow for deviation.

The plan provides a framework that contributes to sustaining native ecological systems by managing towards appropriate conditions that support native plant and animal diversity. The plan integrates forest restoration, watershed protection, resilience to changing climate, wildlife conservation, and contributions to social and economic values, goods, and services. The plan honors the continuing validity of private, statutory, or pre-existing rights.

Summary of the Analysis of the Management Situation

The Analysis of the Management Situation (AMS), published in May 2010, highlights the social, economic, and ecological conditions and trends in and around the Coconino NF, as detailed in the Forest's Economic and Social Sustainability Assessment (USDA Forest Service 2008), the Ecological Sustainability Report (USDA Forest Service 2009), as well as the Recreation, Grazing, Minerals, and Timber Demand Report (USDA Forest Service 2010a) for the Forest. The AMS used these key findings, along with public input (see appendix XX), to identify areas in the existing plan direction that do not provide adequate guidance for the present and the future and attempts to consider potential

Figure 1. Vicinity Map of the Coconino NF



implications of those plan needs for change to other resources. The draft AMS and its supporting materials were used by the Forest leadership team to determine the initial scope of plan revision topics.

Social and economic trends and conditions show increasing demand on the Forest for a wide variety of human uses. Ecological conditions and trends demonstrate there are current and future threats to the sustainability of some of the Forest's ecosystems and the species they support. Identified plan needs for change are summarized below and grouped into three broad topics:

1. **Recreation** (this includes updated plan components for recreation and scenery management and existing Special Areas),
2. **Community-Forest Interaction** (this includes updated plan language regarding open space values, potential future community expansion desires, energy and mineral development, forest products [including culturally important forest products], air quality and smoke emissions, and communication sites, and
3. **Maintenance and Improvement of Ecosystem Health** (this includes updated plan language for soil, riparian, aquatic, water resources, changing climate, habitat connectivity, non-invasive animals and grasses, and vegetation.

Other needs for change have been and will continue to be identified. New information and changing conditions will necessitate changes in management. Iterative and adaptive planning may facilitate the incorporation of new information into potential plan amendments. Under the National Forest Management Act (NFMA) of 1976, projects and activities must be consistent with the plan.

Plan Content

This plan includes “plan decisions” and “other content.” Once plan decisions are approved, any substantive changes to plan decisions will require a plan amendment. A change to “other content” may be made using an administrative correction process. Administrative corrections are also used to make non-substantive changes to plan decisions such as corrections or updates of data and maps and typographical errors. The public is notified of all plan amendments and administrative corrections.

Plan Decisions

Plan decisions are the equivalent of plan components. They include goals (hereafter identified as desired conditions), objectives, standards, guidelines, suitability, and monitoring.

Desired Conditions set forth the desired social, economic, and ecological goals of the Coconino NF. They attempt to paint a picture of what we (the public and the Forest Service) desire the forests to look like or the goods and services we desire them to provide. Desired conditions are generally expressed in broad, general terms however more specificity may be added to clarify the intent. They are timeless in that there is no specific date by which they are to be completed. Desired conditions may only be achievable over a long time frame (several hundred years). In some cases, a desired condition matches the current condition, so the goal is to maintain the existing condition.

Desired conditions are the focus of this plan; management of the Coconino NF's resources will be directed toward achieving the desired conditions. Desired conditions are the basis for the other plan components and describe the framework for future projects and activities. They are aspirations and are not commitments or final decisions approving projects. Variance at the project level requires a plan amendment.

- **Objectives** are concise, time-specific statements of measurable anticipated results that respond to desired conditions. An objective forms the basis for further planning to define the precise steps to be taken and the resources to be used in achieving desired conditions. The objectives represent just some of the outcomes or actions expected to accomplish movement towards desired conditions. Not every action or objective the Coconino NF may do is identified in the plan, just the primary ones.

Variation in achieving objectives, however, may occur during the next 15 years because of changes in environmental conditions, available budgets, and other factors. Objectives are strongly influenced by recent trends, past experiences, current and anticipated staffing levels and short-term budgets.

- **Standards** are constraints upon project and activity design. A standard is an absolute requirement to be met in the design of projects and activities. A project or activity is consistent with a standard when its design is in accord with the explicit provisions of the standard; variance from a standard is not allowed except by plan amendment.
- **Guidelines** are sideboards that guide management activities and provide specifications that a project or activity would adopt unless there is a compelling or defensible reason to vary from the guideline. Deviation from the explicit provisions of the guideline is permitted without a plan amendment, as long as the intent of a guideline is met. Deviation from the explicit provisions of a guideline, if it is meeting the intent of the guideline, must be documented in the project record. Projects that deviate from the guideline's intent must be accompanied by a plan amendment that would allow for the deviation.
- **Suitability** describes the appropriateness of applying certain resource management practices to a particular area of land. A unit of land may be suitable for a variety of individual or combined management practices.
- **Management Areas** are lands that have management direction that is more specific than forestwide and include lands with designations as Special Areas by Congress or another delegated authority. Special areas are identified because of their unique or special characteristics. Examples include wilderness, research natural areas, scenic byways, and national recreation trails.

- **Monitoring** is used to determine the degree to which on-the-ground management is maintaining or making progress toward desired conditions. The monitoring plan includes questions and performance measures designed to inform implementation and effectiveness of plan decisions. It helps ensure that the plan remains adaptive, in that new knowledge and information can be analyzed and the plan changed.

Other Content

Besides the plan decisions mentioned above, the plan also contains other content. Other content includes chapter one, certain sections in chapters 3 and 4 (i.e., background, management approaches, and related plan content), and all appendices. These sections are meant to provide information and assist in understanding the larger management context. These sections are not intended to be mandatory direction.

The **background** section provides a narrative regarding resource conditions. The primary sources for the information found in this section are derived from the Analysis of the Management Situation, the Ecological Sustainability Report, the Economic and Social Sustainability Assessment, and Resource Evaluations (see references on previous pages).

The **management approach** sections identify probable management actions to accomplish desired conditions and objectives. Management approaches describe the priorities and expectations for future program coordination. Partnerships and collaborative arrangements are also included as part of the management approaches for accomplishing desired conditions. Management approaches are strongly influenced by recent trends, past experiences, and anticipated staffing levels and short-term budgets. Decisions about what projects are actually proposed and approved, as well as details of project design, are determined by public involvement, science, and professional experience at the project or activity-level.

The **related plan content** section lists other portions of the plan that contains related information.

The plan includes several **maps** throughout the document. The following statement applies to all maps found within the plan:

The USDA Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. Using GIS products for purposes other than those for which they were intended may yield inaccurate or misleading results. The USDA Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. This map is not a legal land line or ownership document. Public lands are subject to change and leasing, and may have access restrictions; check with local offices. Obtain permission before entering private land.

Guiding Future Projects, Program Plans, and Assessments

During implementation, management activities affecting the Coconino NF need to be consistent with the plan. This consistency is achieved in the following ways:

- Management activities are developed specifically to achieve the desired conditions of the plan. To the extent practicable, documentation for such projects should identify the elements of the desired conditions to be achieved by the project. It should not be expected that all projects or activities would contribute to all desired conditions, goals, or objectives, but rather to a limited subset. It should also be recognized that some projects designed to contribute to some desired conditions may have consequences considered adverse to the achievement of other desired conditions. In this situation, the responsible official for the project needs to identify and disclose these effects in the project documentation and make a decision that balances these considerations.
- Management activities for projects that are necessary but are not specifically related to one of these elements of the plan (e.g. routine road maintenance, facility maintenance, etc.) should be briefly evaluated to assess if they conflict or impede contribution to the desired conditions, goals, or objectives.
- Projects are expected to comply with suitability and standards and guidelines direction contained in the plan. Early in the project planning process, the applicable standards and guidelines and suitability considerations should be identified. To ensure compliance with the plan, each project should document consistency with these standards and guidelines.

Transition in the Implementation of the Plan

The plan is used as a direction source for future projects, plans, and assessments. It is not expected that this new direction be used to re-evaluate or change decisions that have been made under the previously existing plan. A smooth and gradual transition to the new plan is anticipated, rather than one that forces an immediate reexamination or modification of all contracts, projects, permits, and other activities that are already in progress. As new project decisions, contracts, permits, renewals, and other activities are considered, conformance to the new plan direction as described in the previous section is expected.

Changes to the Plan

A change to the plan requires either administrative correction or amendment. The following summarizes circumstances that warrant corrections or amendments to the plan:

1. **Administrative corrections:** are minor changes to the plan that do not substantively affect the management direction or create additional environmental consequences. These minor changes include the following:
 - Elements of the plan that are not plan decisions as described in the previous section, “Other Content.”
 - Corrections and updates of data published in the plan and minor changes to maps.
 - Changes in proposed or probable actions expected to occur during the plan period.
 - Minor text changes such as typographical errors, clarification of explanatory text, etc.

Unless otherwise required, administrative correction must be initially published as a proposed correction either on the Coconino NF’s Web page or in a local newspaper of record. The proposed correction must identify the language or map to be corrected, the proposed correction, and the reason for the correction. The public will have an opportunity to comment on the proposed correction within a 30-day period following publication. After reviewing the comments received, the final correction may be similarly published and the plan corrected.

2. **Site-specific plan amendments:** occur to allow specific projects or other activities to deviate from certain plan direction. These amendments occur only for a specific area or a specific project. They do not lead to changes in plan language, and if changes are made to management area map layers, they are made only for the area affected. Such amendments are usually proposed with appropriate NEPA analysis for the site-specific project proposal. The procedures for processing a site-specific plan amendment are outlined in the applicable planning regulation.
3. **Programmatic plan amendments:** change the text and language of the plan decisions identified in the earlier section, “Plan Decisions,” and any other changes that cannot be addressed through administrative corrections or site-specific plan amendments. The procedures for addressing a regular plan amendment are outlined in the applicable planning regulation.

Plan Organization

This plan is organized into five chapters and appendices:

Chapter 1 (Background) briefly describes the Coconino NF, the analysis of the management situation, the purpose of this plan, plan content, and plan organization. For a quick preview of the plan structure, glance at the Table of Contents. This chapter does not contain any plan decisions.

Chapter 2 (Forestwide Direction) contains plan decisions and other content that are applicable forestwide.

Chapter 3 (Management Area Direction) contains plan decisions and other content that is applicable to particular management areas, in addition for forestwide direction.

Chapter 4 (Suitability) describes the appropriateness of certain resource management practices (uses) across the forests.

Chapter 5 (Monitoring Strategy) contains the monitoring plan decision and provides a framework for subsequent monitoring and evaluation.

Appendices XX

Hypertext is used throughout the plan – it allows the user of the electronic version of this plan to click on a word (indicated by blue underlined text) and be redirected to another area of the plan or an external reference. Note the first occurrence of words that are found in the glossary are hyperlinked, for example [Glossary](#).

Roles and Contributions of the Coconino NF

The distinctive characteristics of the Coconino NF frame the roles and contributions it provides to the local area, the State, the Southwestern Region, and the Nation. The approximately two million-acre Coconino NF is located in north central Arizona and is at the southern end of the Colorado Plateau. It is one of six national forests in Arizona. The Forest shares borders with the Kaibab, Prescott, Tonto and Apache-Sitgreaves National Forests, private land, and lands administered by the State of Arizona and the National Park Service. It is within a couple miles of the Navajo Nation.

The Forest ranges in elevation between 2,600 and 12,633 feet. Numerous cinder hills and volcanoes of the San Francisco Peaks volcanic field are scattered across the northern portion. The north part of the Forest is dominated by the San Francisco Peaks, which includes Mount Humphreys, the highest point in Arizona. The Mogollon Rim, a 1,000-foot high cliff that runs for about 200 miles across central Arizona,

delineates the southeast border of the Forest. Deep canyons containing several perennial streams dissect it. The Verde River forms the southwest boundary of the Forest while one of its major tributaries, Sycamore Canyon, separates the Coconino from the Kaibab and Prescott National Forests on the west. The Forest has a high diversity of vegetative communities due to the wide range of elevations, complex topography, and the presence of perennial and ephemeral water. Vegetative communities at the lowest elevations are desert communities and riparian areas supporting cottonwoods and willows while the highest elevation atop the San Francisco Peaks supports the only alpine tundra in Arizona. In between, are extensive areas of piñon-juniper, ponderosa pine, and mixed conifer forests interspersed with grasslands and scattered pockets of aspen at higher elevations. Riparian vegetation is supported by perennial and intermittent waters.

The Coconino NF contains more water than most of the surrounding landscapes. There are about 224 perennial stream miles on the Forest. Mormon Lake is Arizona's largest natural lake. There are 13 reservoirs, constructed primarily for municipal water use, recreation, and livestock. The Forest lies mainly in the Verde River and Little Colorado River Plateau groundwater basins. The areas of highest precipitation and groundwater recharge for these basins occur on Coconino NF lands. The Forest also contains about 78 riparian wetlands totaling about 10,186 acres, the second highest number on national forest lands in Arizona. Over 200 springs occur on the Forest.

The diverse ecosystems on the Forest provide habitat for a wide array of wildlife, fish, and plants. There are a number of rare species such as the Wupatki Arizona pocket mouse, Chiricahua leopard frog, Little Colorado spinedace and rare plants like the San Francisco Peaks groundsel, and Arizona cliffrose. Fifteen native fish species occur on the Forest. Portions of nearly 80 percent of the perennial streams support native fish. Some native fish are only known from this area.

The CNF is a regional, national, and international year-round recreation destination. Visitors are drawn to the diversity of settings provided, which range from: warm grasslands in the Verde Valley, cool riparian respite in canyons, and prominent red rock spires and buttes around Sedona to Flagstaff's snow covered peaks and forests. They visit the Coconino NF seeking a change from summer heat and city living. Many people gravitate to water or snow-based activities. Others enjoy the diverse scenery of red rocks, grasslands, desert, and cool forests. The activities that see the greatest number of participants are hiking/walking; driving for pleasure; and viewing natural features, wildlife, and archaeological sites.

The top five activities identified are as follows¹:

- Viewing Natural Features (83.9 percent)
- Hiking/Walking (79.1 percent)
- Viewing Wildlife (70 percent)
- Relaxing (64.8 percent)
- Driving for Pleasure (54.8 percent)

Visitors enjoy the developed recreation sites throughout the Forest that include the Arizona Snow Bowl, popular lakes, and campgrounds. There are abundant year-round dispersed recreation activities. Ten wilderness areas provide opportunities for solitude and backcountry experiences. Several archaeological sites developed by the Forest for public interpretation and an abundance of private sector guided tours display the significant cultural heritage preserved on the Forest. Trails and roads provide numerous hiking, biking, horseback, and motorized vehicle access to natural areas in the Forest landscape. Wildlife

¹ USDA 2006, p. 14

viewing, big game hunting and fishing are popular activities. The Coconino NF is a destination for winter activities such as snow play, snowmobiling, skiing and snowshoeing.

American Indians and ranchers are a significant part of the Forest history and their traditional uses remain an important part of the cultural landscape of the Coconino NF.

Some additional features that make the Coconino NF unique on a regional and national scale include the following:

- The Coconino NF contains 55percent of the perennial stream miles in the Middle Little Colorado River 4th level hydrologic unit code (HUC) yet only 15percent of the 4th level HUC is on the Forest.
- The Coconino NF covers about 20percent of the total extent of the 4th level HUC watersheds that overlap the Forest yet has a proportionally higher 30percent of the perennial stream miles.
- The state of Arizona has designated two streams, Oak Creek and West Fork of Oak Creek, on the Coconino NF as being outstanding State resources and classified them as Outstanding Arizona Waters.
- The only two designated Wild and Scenic Rivers (WSR) in Arizona occur on the Coconino NF. The Verde River WSR is shared with the Prescott and Tonto National Forests. The Fossil Creek WSR is shared with the Tonto National Forest. Eleven additional segments in nine different streams are eligible for inclusion in the National Wild and Scenic Rivers System, including portions of the West Fork of Oak Creek.
- Fossil Creek contains the largest assemblage of native fish species in a creek that is free of non-native fish in the State of Arizona. In addition, the travertine formation in Fossil Creek is of international significance because it is of similar scale and significance with a handful of travertine systems in China, Afghanistan, Croatia, Italy, Guatemala and Turkey. Stream chemistry creates travertine formations and gives the stream its unique turquoise color.
- The Coconino NF contains the two largest natural lakes in Arizona: Mormon Lake and Stoneman Lake.
- Oak Creek has the largest number of caddisfly species reported in any drainage in Arizona.
- The Coconino NF has all of Arizona's big game species except buffalo and includes: pronghorn, black bear, bighorn sheep, elk, javelina, turkey, mountain lion, mule deer and white-tailed deer.
- Several factors make the Coconino NF unique for its bald eagle habitat. Edgar Mearns documented the first bald eagle nest in Arizona at Stoneman Lake in the late 1800's. The largest concentration of bald eagles ever counted in Arizona (120 eagles) was counted on the Forest near Mormon Lake. Fifteen to twenty percent of all bald eagles counted in Arizona in the winter occur on the Forest. The Forest contains both federally-listed (within low elevation areas) and separate Forest Service sensitive populations (within high elevation areas) of nesting bald eagles.
- Night sky viewing opportunities abound, and four observatories are located within or adjacent to the Coconino NF boundary. In recognition of the area's unique and valuable night sky viewing opportunities, Flagstaff became the world's first international "Dark Sky City".

- In addition to having six national monuments and four State parks as neighbors, the Coconino NF manages seven archaeological sites that are open to the public: Sacred Mountain, Honanki, Palatki, V-V and Red Tank Draw Petroglyph sites, Clear Creek Ruins, Old Caves Pueblo, and the award-winning Elden Pueblo Project, one of America's Hands on the Land designated sites.
- The Cinder Lakes volcanic field was used from 1968 to 1973 to train NASA astronauts in the Apollo 11 through Apollo 15 missions. This training was vital to the success of the Apollo program and the first U.S. landing on the moon by Neil Armstrong and Edwin Aldrin in July 1969.
- Coconino NF ranges from 2,600 feet in elevation in the Verde Valley to 12,633 feet atop Mount Humphreys. This wide range in elevation makes the Forest unique in Arizona because it contains all major biotic communities except true desert. All of the alpine tundra on Forest Service lands in Arizona is on the Coconino NF.
- The Coconino NF has one of the highest natural fire occurrences in the U.S. Over a 23-year period, the Forest had the highest natural fire occurrence in the U.S. for 18 years. It was in the top six every year.

The Coconino National Forest's Mission

"Caring for the Land and Serving People," is the Forest Service mission. This translates into sustaining the health, diversity, and productivity of the Nation's forests and grasslands to meet the needs of present and future generations. The overall goal of managing National Forest System lands is to sustain the multiple-uses of its resources in perpetuity while maintaining the long-term productivity of the land.

The Coconino NF's staff strives to effectively and efficiently manage National Forest System lands and resources to meet the needs and desires of the public while enhancing the environment.

The Coconino National Forest's Vision

The Coconino NF contains healthy ecosystems with an abundant and diverse flora and fauna. The Forest provides a variety of high quality outdoor recreation opportunities and serve as an important part of the rich southwestern scenic and cultural heritage. Historic uses such as timber harvesting and livestock grazing continue within sustainable levels and support rural economies..