

Apache-Sitgreaves National Forests CER Supplement to meet AMS Requirements December 2009 Updated March 2010¹

Introduction

The Apache-Sitgreaves National Forests' (ASNFs) plan revision process conforms to the 1982 Planning Rule provisions, including those for conducting an Analysis of the Management Situation (AMS). The AMS procedures require the ASNFs to develop and/or verify benchmarks for setting the evaluation space for alternatives, analyze existing conditions and trends, make projections of future demand, and identify public issues and management concerns in order to determine the need to change current plan direction. The ASNFs' Comprehensive Evaluation Report (CER) published in December 2008, prior to the enjoyment of the 2008 planning rule, accomplishes much of this objective. Language and concepts specific to the enjoined 2008 rule, such as Species-of-Concern/Species-of-Interest, that are found within the CER will not be carried forward into plan development and Environmental Impact Statement (EIS) evaluation of the plan; however, concepts that still apply under the 1982 rule provisions, such as coarse filter/fine filter analyses, will be carried forward. Most of the material developed for the ASNFs' CER meets AMS requirements and there is no need to redo or reformat that material. The information below supplements the CER so that it fully conforms to the remainder of the AMS requirements. It, along with the CER document, provides the basis for revision of the existing forest plan.

Benchmark Analysis

Benchmark analyses are one of the required components of the 1982 Planning Rule Procedures pertaining to the Analysis of Management Situation. Benchmark analyses define the range within which alternatives are to be developed and analyzed by identifying the maximums and minimums that each alternative should fall within. Selection of benchmarks depends primarily on the revision topics to be addressed during plan revision.

All forests in the Southwestern Region developed benchmarks during development of their original plans. Benchmarks were established for timber resources, as well as for other resource areas such as livestock grazing, recreation, wildlife, wilderness, and other key resources. They were evaluated for their physical and biological production potential, and monetary benchmarks were run for those resources having an established market value.

During the need for change evaluation for revising the current forest plan, all benchmarks previously developed² were reviewed, validated, and found to still be appropriate and reasonable. This review is

¹ Modifications: 1st sentence in MIS section; removed the reiteration of Sec 219.27 Resource Requirements; added term 'tentatively' to timber suitability in Appendix B

documented in Appendix A. Some adjustments to existing benchmarks were made, although no new benchmarks were identified at this time. If, in the process of alternative development, it is discovered that an alternative falls outside the range of an existing benchmark, then the affected benchmark will need to be re-evaluated and re-established as necessary.

Projections of Demand Summaries

This section provides a summary of demand projections for some of the key uses of the ASNFs: recreation, grazing, minerals, and timber. The analysis of projections of demand are required under the 219.12(e)(3) of the 1982 planning rule provisions. These summaries are based on the report prepared by Joshua Wilson and Henry Eichman, Economists on December 9, 2009 titled Recreation, Grazing, Minerals, and Timber Demand Analysis of the Management Situation and the ASNFs' Planning Team Supplement to the Demand Report prepared on December 15, 2009. Projected future demand for forest resource-use was estimated using existing, secondary data from federal, state, and forest-specific sources. Sources included United States Census and USDA Agricultural Projection, state population projections, Arizona Department of Game and Fish data, and a variety of data sets specific to the ASNFs. A full list of sources is available as bibliographic references at the end of the report. Although statistical data and methods were used for some resources, such as recreation and grazing statistics, this analysis is primarily a qualitative description of possible future resource demands.

Demand for outdoor recreation is expected to grow indefinitely. As long as populations are increasing, so will the demand for recreation on the ASNFs. Non-consumptive wildlife and developed recreation will grow the most, exceeding the forests' ability to supply. Capacity of general forest areas and designated wilderness is expected to meet the increased demand for more primitive forms of recreation during the next planning cycle.

The share of total demand for grazing within the market area (as measured by cattle inventory) that could be supported by actual use on the ASNFs has ranged from a high of approximately 5.2 percent of the market area cattle inventory in 2003 and a low of 1.2 percent in 2008. While the share of total demand provided by the ASNFs is small, it may be more important for smaller areas within the market area. However, the actual use numbers must be used with caution as the supply of grazing is limited, and factors other than demand may limit grazing use on the forest. In addition, this trend is uncertain given the wide degree of variation in actual use over the relatively short period examined. Despite these limitations, actual use trends on the ASNFs indicate a possible trend of decreasing demand for forage relative to cattle inventory within the market area.

The ASNFs is not a major producer of minerals. The only measurable extraction is for construction related materials which have varied substantially in recent years. The forests' capacity is expected to allow for sustainable removal of these minerals. There is currently no mining for metallic or energy minerals. There are no known oil and gas leases, identified oil shale, coal permits or leases, or geothermal leasing areas. However, there is renewed interest in the forests' copper deposits. There is a development

² See the benchmark sections in Appendix B of the Environmental Impact Statement for the Apache-Sitgreaves National Forests Plan, published in 1987: <http://www.fs.fed.us/r3/asnf/projects/docs/1987-USDA-EIS-ASNF-Forest-Plan.pdf>

proposal currently under review, but no decision has been made. Additional proposals are likely to appear during the next planning cycle. There are also interests in geothermal resources; however no formal proposals have been developed. The ASNFs have potential to supply geothermal, solar, and wind energy.

The comparison of timber inventory and demand presented here assumes that all supplies of timber in Arizona and New Mexico national forests are available for commercial timber harvest and ignores such factors as harvest economics, steep terrain, and resource quality. Under this baseline estimate, current annual demand represents only 0.05 to 0.15 percent of inventory in Arizona and 0.11 to 0.29 percent of inventory in New Mexico. Consequently, there appears to be sufficient timber inventory to sustain current consumption rates indefinitely assuming moderate rates of growth. Recent estimates of capacity suggest that area facilities have the capacity to accommodate existing removal. The change in Forest Service management focusing on removal of smaller size classes does not mean demand for these materials will follow. These materials may increase in demand with favorable market conditions, changes in energy markets, and continued programs that incentivize industry development.

MIS

Management Indicator Species (MIS) are species selected during the forest planning process to allow evaluation of the differences between alternatives in the revised plan's EIS. There may be a need to change the MIS identified in the current plan to reflect changes in management direction made during plan revision during the evaluation of alternatives and, ultimately, within the revised Forest Plan. MIS selected for the final revised plan will be based on the proposed management in the selected alternative.

Review of Need for Change

The need to change the existing 1987 forest plan and topics to address during revision identified in the previous CER document were re-evaluated in light of the above supplementary information. With the addition of the need to change MIS evaluation completed in this document, the needs for change previously identified remain valid. The topics identified to carry forward into revision also remain valid.

Land not Suited for Timber Production

Data on NFS lands within the ASNFs' planning area was reviewed, and lands were preliminarily identified as not suited for timber production. See Appendix B for details. Note the definition of timber production is the purposeful growing, tending, harvesting, and regeneration of regulated crops of trees to be cut into logs, bolts, or other round sections for industrial or consumer use. The term timber production does not include production of fuelwood.

Evaluation of Roadless Areas

Roadless areas have been initially evaluated so that the Responsible Official may consider whether to recommend these potential wilderness areas for designation by Congress. The draft potential wilderness evaluation was completed in June 2009 and is available on the ASNFs' Web site:

<http://www.fs.fed.us/r3/asnf/plan-revision/documents.shtml>

APPENDIX A.

ASNF Plan Revision – Forest Planning Team

Benchmark Review

The core planning team met on October 27, 2009 to begin review and possible adjustments of benchmarks. The notes, including recommended benchmark changes, from this meeting were forwarded for review and comment to the full planning team in November. Below are the results of the meeting and review:

(1) Benchmark analyses to define the range within which alternatives can be constructed. Budgets shall not be a constraint. The following benchmark analyses shall be consistent with the minimum applicable management requirements of Sec. 219.27 and shall define at least--

(i) The minimum level of management which would be needed to maintain and protect the unit as part of the National Forest System together with associated costs and benefits;

These will be reflected in forest plan components per Sec 219.27.

(ii) The maximum physical and biological production potentials of significant individual goods and services together with associated costs and benefits;

Source of review: Environmental Impact Statement for the Apache-Sitgreaves National Forests Plan, published August 1987

Recreation

Developed Recreation range from a minimum of 0 RVDs to a maximum 2,293,000 RVDs (8,082,825 visits)

Dispersed Recreation range from a minimum of 0 RVDs to a maximum 1,737,000 RVDs (6,122,925 visits)

Assume: average length of stay on the forests is 42.3 hours.

*RVD = 12 hours; formula $RVD/12 * 42.3 = \text{Visits}$*

Source: 2002 National Visitor Use Monitoring (NVUM) Results, August 2002, USDA Forest Service, Region 3, Apache-Sitgreaves National Forests

The NVUM Report estimates approximately 2,000,000 forest visits in 2002. The maximum benchmark is well above the current visitation and provides for potential increases in recreation.

Designated Wilderness

During 2009, ASNFs conducted a potential wilderness evaluation. Therefore, the wilderness capacity has been re-calculated, based on the existing designated wilderness areas (minimum) and the potential wilderness areas, including the Blue Range Primitive Area (maximum).

Minimum = 23,359 acres [Mt. Baldy (7,079 ac), Escudilla (5,200 ac), Bear Wallow (11, 080)]

Maximum = 919,800 acres [23,359 + Blue Range Primitive Area and additions (187, 410 ac), Potential Wilderness Areas (source: draft wilderness evaluation June 2008 709,000 ac)

Assumption: acres may differ based on mapping inaccuracies

Range

The EIS identified a maximum permitted use of 219,510 AUMs.

In 2008 – the total authorized 200,259 AUMs.

Note: A review of forage production and estimated available AUMs was completed in 2000. Based on this data (see attached) the grazing capacity is estimated at 78,984 AUMs. According to the 2000 analysis, the lower level of grazing demonstrates availability of vegetation primarily for the protection of watersheds, soils, and streams (riparian areas), as well as providing for wildlife needs (habitat, hiding cover, fawning cover, and forage).

Timber

Jerry Drury, ASNFs Timber Staff, reviewed the AMS and recent stand exam and CFI (continuous forest inventory) data to estimate the following:

Net Merchantable Timber Volume from 0 to 309, 407 CCF³ (annually)

Net Sawtimber Volume from 0 to 67, 274 MBF⁴ (annually)

Commercial Fuelwood Volume from 0 to 50,000 MBF (decade)

Free Use Fuelwood from 0 to 666,836 MBF (decade)

(iii) Monetary benchmarks which estimate the maximum present net value of those resources having an established market value or an assigned value;

When evaluating whether the forest plan is feasible, the planning team utilized the following value estimates:

Stream/riparian habitat improvement	slashing, crushing, draining, low water crossings, closure, re-	\$300 / mile
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³ CCF = 100 cubic feet

⁴ MBF = 1000 board feet

	vegetating	
Fish habitat improvement	construct/remove fish barriers, renovation, chemical treatments, habitat improvement structures, non-chemical removal, riparian planting	\$10,000 – 15,000 / mile
Restore fragmented aquatic habitat		\$100,000 – 200,000 / mile
Allotment management		\$300,000 / allotment
Wet meadow/cienega/lake restoration	removal of competing vegetation, fencing, rewetting, large woody debris	\$10,000 – 26,000 / acre
Grassland restoration	thinning, burning, crushing, chemicals	\$300 / acre
Invasive plant treatments	Grubbing, chemical, biological, mechanical, cultural	\$150 /acre
WUI (wildland urban interface) - maintenance	Mechanical, thinning, burning, mastication	\$50-100 / acre
WUI (wildland urban interface) - initial treatment	Mechanical, thinning, burning, mastication	\$700 - \$1000 / acre
Woodland restoration – initial treatment	Fuelwood, silvicultural treatments, overstory removal, burning	\$200 – 300 / acre
Woodland restoration – maintenance	Fuelwood, silvicultural treatments, overstory removal, burning	\$50 – 100 / acre
Riparian restoration	Mechanical and hand thinning, other silvicultural treatments, burning	\$400 – 1000 /acre
Decommission, recontour, close or revegetate roads		\$500 – 2,000 / mile
Operate 2 visitor centers		\$26,000 / year
Deliver interpretive program		\$500 / program
Developed recreation – deferred maintenance backlog		\$200,000
Dispersed recreation – site rehabilitation	Remove unneeded user-created developments (fire rings, toilets), mechanical ripping, reseeding, harden surfaces, signage	\$750 / site
Maintain non-motorized trail		\$500 / mile
Maintain motorized trail		\$500 / mile
Construct motorized trail		\$5,000 / mile
Visual enhancement project		\$2,000 - \$5,000 / project
Manage forest fuelwood program		\$300,000 / year
Provide Christmas tree permit program		\$100,000 / year
Survey and post NFS landline		\$2,500 / mile
Maintain NFS property boundary postings		\$1200 / mile

Resolve trespass case		\$6500 / case
Prepare instream flow water rights applications annually	7 applications	\$80,000
Maintain level 2 roads		\$150 – 200 / mile
Maintain level 3, 4, 5 roads		\$500 / mile
Maintain level 1 roads		\$150 – 200 / mile

APPENDIX B.

Apache-Sitgreaves National Forests Lands Tentatively Identified as NOT Suited for Timber Production

A. 1982 Planning Rule Sections 219.3 & 219.14 Timber Resource Land Suitability

(1) The land is not forest land as defined in Sec. 219.3 =

“Forest Land: Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for non-forest use. Lands developed for non-forest use include areas for crops, improved pasture, residential, or administrative areas, improved roads of any width, and adjoining road clearing and powerline clearing of any width.”

Lands on the Apache-Sitgreaves which apply to this category are mapped as the following features and potential natural vegetation and cover types:

- All Private Land inholdings
- All USFS Administrative sites
- Farmsteads and corrals permitted on USFS lands
- Grasslands which will be restored and/or maintained as grassland/savanna with less than 10% tree cover
- Forblands dominated with perennial forbs (rushes, sedges, others) which will be restored and/or maintained as forblands with less than 10% tree cover
- Shrublands which will be restored and/or maintained as shrublands with less than 10% tree cover
- The percentage of Pinyon-Juiper and/or Oak Woodlands which are not desired in a persistent closed tree cover state, and/or cannot be managed on a regular rotation to provide roundwood products.
- Rocklands, Tallus, Scree (naturally exposed bedrock, rockslides and rock outcrops)
- Badlands and other bare soil areas which do not support trees
- Permanent gravel, cinder, rock borrow pits, quarries, strip mines
- All surface Waters and Wetlands (permanent, perennial or intermittent lakes, ponds, springs, seeps, sinkholes, bogs, fens, cienegas, rivers, creeks, flood plains, reservoirs, stock tanks)
- All System Roads
- Active Powerlines and other Utility Right-of-Ways maintained as permanent clearings

(2) “Technology is not available to ensure timber production from land without irreversible resource damage to soils, productivity, or watershed conditions”.

This includes mapping units from the Terrestrial Ecosystem Survey of the Apache-Sitgreaves NFs (TES, 1987) determined as being unsuited for timber harvest due to unstable soils or soils with low site productivity. (e.g. mapping units associated with the Datil Formation outcrops or cindercones with very shallow soils)

- (3) There is not reasonable assurance that such lands can be adequately restocked as provided in Sec. 219.27(c)(3) = “When trees are cut to achieve timber production objectives, the cuttings shall be made in such a way as to assure that the technology and knowledge exists to adequately restock the lands within 5 years after final harvest. Research and experience shall be the basis for determining whether the harvest and regeneration practices planned can be expected to result in adequate restocking. Adequate restocking means that the cut area will contain the minimum number, size, distribution, and species composition of regeneration as specified in regional silvicultural guides for each forest type. Five years after final harvest means 5 years after clearcutting, 5 years after final overstory removal in shelterwood cutting, 5 years after the seed tree removal cut in seed tree cutting, or 5 years after selection cutting.”

This level of detailed “restockability” analysis would be applied to general forest lands which are classified as “available”, i.e. not “withdrawn” from suitability. Such detailed analysis would typically have to be done at the project level on a case-by-case basis. However, an assessment of “not restockable” lands at the forest planning level can be based on TES mapping unit Reforestation Potential ratings, where trees are determined to be unable to become established and grow due to environmental or other conditions using the criteria mentioned above.

- (4) “The land has been withdrawn from timber production by an Act of Congress, the Secretary of Agriculture or the Chief of the Forest Service.”

Such “not available” lands will include lands classified under the following management emphases:

- Existing Wilderness (Escudilla, Mount Baldy, Bear Wallow)
- Existing Primitive Area (Blue Range PA)

Additional lands which are proposed for recommendation to be withdrawn by the above Federal authorities, and must be managed in the interim in a manner which retains the existing resource qualities for which they are recommended, including:

- Recommended Wilderness Areas
- “Wild” segments of Eligible Wild and Scenic Rivers

- Existing Botanical Area
- Existing Research Natural Areas
- Recommended Research Natural Areas

B. Extra ASNFs Plan Revision Lands Identified by the Core Team as NOT Suited for Timber Production

These are lands on which high-intensity timber production would likely not be compatible with management emphasis to create and/or maintain the desired conditions and objectives for such lands:

- High use developed areas (large recreation complexes, communications sites, etc.)
- Zone of residential forest intermix (including the wildland urban interface for example)
- Lands with a limited management, natural processes emphasis (desired condition includes no or very little human intervention)

USDA Forest Service. 1987a. Terrestrial Ecosystems Survey of the Apache-Sitgreaves National Forests. Southwestern Region. 453 pp.