

Administrative Correction 1, 10/31/2007

Corrections to Forest Plan Appendices D and E

Introduction

Administrative corrections, as defined at 36 CFR 219.31(b) in the 2000 Planning Rule¹, may be made at any time, are not plan amendments or revisions, and do not require public notice or the preparation of an environmental document under Forest Service NEPA procedures.

Administrative corrections include the following:

1. Corrections and updates of data and maps,
2. Updates to activity lists and schedules (proposed actions, anticipated outcomes, projected range of outcomes);
3. Corrections of typographical errors or other non-substantive changes; and
4. Changes in monitoring methods other than those required in a monitoring strategy (referring to the requirements for monitoring sustainability criteria in the 2000 rule.)

Background

On February 15, 2007, Gail Kimbell, Chief of the Forest Service, rendered a final decision on the appeals received on the 2005 Mark Twain National Forest Land and Resource Management Plan (Forest Plan). The Chief upheld the Regional Forester's decision to adopt the revised plan, but instructed the Regional Forester "to provide further information from the planning record, if it exists, regarding the appropriate silvicultural system for each of the primary forest types and the proportion of probable timber harvest methods or, if the information does not exist, to develop and incorporate it in the 2005 LRMP and FEIS."

Corrections to Forest Plan, Appendices D and E (36CFR 219.31(b)(2) and (3))

A review of the documents in the planning record revealed that the requested information was present in the planning record. Incorporation of the following information from the record into Forest Plan appendices complies with the Chief's instructions. These corrections are non-substantive changes because they clarify and bring into the Forest Plan document information that existed in the Planning record, but do not change any of the management direction contained in the Forest Plan.

¹ The U.S. District Court for the Northern District of California has enjoined the Forest Service from implementing the 2005 planning rule. Therefore, administrative corrections to the Forest Plan are currently governed by the 2000 planning rule, which became effective again on April 27, 2007.

Correction to Forest Plan Appendix D

Appropriate silvicultural system by primary forest types (36CFR 219.31(b)(2))

Forest Plan, Appendix D, Harvest Methods discusses the various silvicultural systems used on the Mark Twain National Forest, and references two publications (Silvicultural Systems for the Major Forest Types of the United States-Agricultural Handbook 445, and Silvics of North America Volumes 1 and 2-Agricultural Handbook 654) to use in determining which of the silvicultural systems to use.

Correction: Add a table summarizing the appropriate harvest methods by timber type; include citations for the specific page numbers from the afore-mentioned publications for each of the four principal timber types; add information regarding the rationale for determining the appropriate harvest method.

Corrected pages Appendix D-4 through Appendix D-6 are attached. Corrections are bracketed by double asterisks (**). (Page Appendix D-3 is included for ease in inserting pages into the Forest Plan.)

Corrections to Forest Plan Appendix E

Proportion of probable timber harvest methods (36CFR 219.31(b)(2))

Forest Plan, Appendix E, Goods, Services, and Probable Management Practices, provides estimates of the activities anticipated to be needed to fully implement the Forest Plan.

Correction: Add the estimates of the proportion of harvest activities using uneven-aged management to Appendix E.

Corrected page Appendix E-2 is attached. Corrections are bracketed by double asterisks (**).

Typographical error (36CFR 219.31(b)(3))

In the process of reviewing Appendix E, a typographical error was discovered in Table E-1 on page E-1.

Correction: Change the word “Natural” on line 3 of the table to “National.”

Corrected page Appendix E-1 is attached. Correction is bracketed by double asterisks (**).

Pre-commercial Thinning (PCT)

Pre-commercial thinning is used to maintain or improve species composition by favoring desired species, and to obtain desired stocking levels for forest health and increased growth. PCT treatments are made between 10 to 30 years of age in shortleaf pine, and between 15 to 35 years of age in hardwood and hardwood-pine stands.

Commercial Thinning

Commercial thinning is an intermediate treatment that reduces basal area by cutting and removing trees by means of a commercial timber sale. The treatments may be made to improve growth, enhance forest health, obtain advanced regeneration, or move the stand toward its natural community type. Methods of thinning include:

Thinning from Above

The removal of trees from the dominant and co-dominant crown classes in order to favor the best trees of those same crown classes.

Thinning from Below

The removal of trees from the lower crown classes to favor those in the upper crown classes.

Mechanical Thinning

The thinning of trees in either even-aged or uneven-aged stands involving removal of trees in rows, strips, or by using fixed spacing intervals.

Restoration Thinning

Thinning to a specified basal area to restore the natural community type.

Selection Thinning

Selection thinning is the removal of trees in the dominant crown class in order to favor the lower crown classes.

Improvement Cuts

Improvement cuts are used under the uneven-aged management system to achieve internal stand structure objectives when regeneration is not an objective. They may be applied each entry if necessary.

Choice of Regeneration Harvest Method

The Forest manages four principal timber types. These are Oak-Hickory, Oak-Pine, Shortleaf Pine, and Bottomland Hardwoods. The primary regeneration harvest methods for managing these timber types on the forest are clearcutting with reserves, seed tree with reserves, shelterwood with reserves, and group selection. Documentation of silvicultural systems for these timber types is found in two publications (Silvicultural Systems for the Major Forest Types of the United States-Agricultural Handbook 445, and Silvics of North America, Volumes 1 and 2-Agricultural Handbook 654). The decision on which regeneration harvest method to use is based on desired condition, management objectives, stand conditions, and the silvical characteristics of the species present or desired.

** Clearcutting can be used only where it has been found to be the optimum method of regeneration to meet multiple-use objectives. Other even-aged harvest methods can be used only when determined to be appropriate. (16 USC 1604, Section 6(g)(3)(F)(i)) These determinations are made and documented as part of each individual project decision.

Table D-1 summarizes the cutting methods recommended for regeneration of the four major forest types found on the Mark Twain National Forest. For more detailed information, see *Silvicultural Systems for the Major Forest Types of the United States-Agricultural Handbook* 445, pp. 116 – 120 (Oak-Hickory); pp. 172 – 174 (Oak-Pine); pp. 157 – 161 (Shortleaf Pine); pp. 175 – 179 (Bottomland Forests).

Table D-1. Recommended Harvest Cutting Methods for Regeneration of Desired Forest Types

Forest Type	Clearcutting w/ reserves	Shelterwood w/ reserves	Seedtree w/reserves	Group Selection	Single Tree Selection
Shortleaf Pine	R	R	R	A	NGR
Oak-Pine	R	R	NR	A	NGR
Oak-Hickory	R	R	NR	A	NGR
Bottomland Hardwoods	R	R	NR	A	A

R = Recommended method; A = Acceptable method; NR = Not recommended; NGR = Not generally recommended

The decision of which regeneration method to use is made at the site-specific project level. The following discussion provides general information regarding each of the harvest cutting methods and under what circumstances they might be used.

Even-aged System

Even-aged systems are most suited to regenerating shade-intolerant species. With even-aged systems, regeneration harvests generally occur in a stand only once during the rotation age cycle, which on the Mark Twain National Forest ranges from 70 to 120 years.

Clearcutting with Reserves

Clearcutting is the optimum method for regenerating shade-intolerant species such as oak and shortleaf pine when advance reproduction is adequate or artificial regeneration is planned. Clearcutting may also be optimal for stands where the residual trees would not be worth retaining for a future crop, when stands have had the best trees removed in past harvests, in heavily damaged or declining stands. Clearcutting may be optimal for treating oak mortality related to oak decline, especially where red oak species predominate. Clearcutting may also be optimal for shifting species composition where the restoration of natural communities requires a stronger representation of shade-intolerant species.

Clearcutting is also used to provide shrub-brush habitat for wildlife species that use openings, edges, and low browse, such as white-tailed deer, rabbit, bobcat, most game birds, Bachman’s sparrow, northern bobwhite, prairie warbler, woodcock, indigo bunting, eastern towhee, yellow-breasted chat and ruffed grouse.

Seed tree with Reserves

Seed tree cuts can be used for regenerating shortleaf pine where the seedbed is satisfactory for natural pine seeding, there are adequate seed trees, and a good seed crop is anticipated. It

is not recommended for use with the hardwood species present on the Mark Twain because these species do not produce a consistent and reliable seed crop, and are not readily regenerated via seed sources.

Shelterwood with Reserves

The shelterwood method is most appropriate for species or sites where the shelter of a partial overstory is needed for reproduction, or to give desirable regeneration an advantage over less desirable species. Shelterwood cutting can be used to shift species composition where the restoration of natural communities (especially in savannas and woodlands) requires a stronger representation of shade-intolerant species. Shelterwood cuts are also useful for regenerating stands in areas with high visual quality objectives.

Uneven-aged System

Uneven-aged systems are most suited to regenerating shade tolerant species. With uneven-aged systems, regeneration harvests occur in a stand several times (approximately every 20 years) during the rotation age cycle, which on the Mark Twain National Forest ranges from 70 to 120 years.

Uneven-aged harvest methods are generally considered to be less visually impacting than even-aged methods due to the maintenance of continuously forested conditions, and so are useful in areas of high visual concern. However, the frequent and repeated harvest operations required by this system, and the associated increase in road maintenance, are objectionable to some.

Group Selection

Group selection harvest systems develop a vegetative condition with an interconnected canopy and many small openings (0.25 acre to 2 acres), providing habitat for those wildlife species that use a forested environment with many small openings in a variety of age classes.

Single Tree Selection

The single tree selection method can meet the needs of most cavity dwelling and closed canopy wildlife species, assuming it is carried out for many decades.**

Appendix E

Goods, Services, and Probable Management Practices

Introduction

This Appendix displays an estimate of the goods and services provided, the proposed (Decade 1) and probable (Decade 2) management practices expected, and information including land classification.

The outputs and proposed and probable practices listed are projections based on available inventory data and on computer modeling.

NOTE: The outputs and amounts listed below are estimates and are subject to annual budgets for funding the resource programs on the forest. Actual amounts may vary from these and will be monitored on an annual basis.

Land Classification

Land identified as suitable for timber management include producing timber as part of multiple use direction. These are lands that contribute to the timber sale program on a regularly scheduled basis. Table E-1 shows how acres of these lands compare to the total acreage of National Forest System land.

Table E-1. Classification of national forest land for timber production.

Classification	Acres
Total National Forest System land	1,495,747
Non-forest and water	107,261
Legally withdrawn (Wilderness, **National** Scenic River)	69,981
Land not physically suited for timber production (e.g., low site index, regeneration not assured)	1,964
Land not appropriate for timber production due to other resource Management (e.g., riparian areas, campgrounds, unique areas)	319,829
Land suitable for timber management	996,712

Allowable Sale Quantity (ASQ)

The allowable sale quantity of timber (ASQ) is the maximum amount of volume that may be offered and sold during a given decade of Forest Plan implementation from land identified as suitable for timber management. ASQ is normally expressed as an annual average.

During Decade 1 (the first ten years of plan implementation) the ASQ is 1,030 million board feet (171 million cubic feet). The amount of timber that may be sold annually may exceed

103 million board feet as long as the decadal ASQ is not exceeded. Decade 2 is estimated to be the same as Decade 1.

The estimated volumes that can be harvested in each decade on a long term, sustained yield capacity is equal to the annual ASQ of 17,156 mcf per year (103 mmbf). Volumes in decades 1-15 are all equal to these numbers.

Proposed (Decade 1) and Probable (Decade 2) Management Practices

Tables E-2 and E-3 list the proposed and probable management activities that would be used to work toward the vegetative and other multiple-use desired conditions and objectives of the Forest Plan. The table displays the amount of each harvest treatment for the first two decades of plan implementation based upon modeling estimates. Actual treatments during plan implementation may vary from these modeled outputs. Regeneration treatments set the forest vegetation back to age zero, meeting the 0-9 year old age class objective and include, but not limited to, clearcutting, seed tree, shelterwood, and uneven-aged harvests intended to regenerate forest vegetation. Thinning treatments include, but not limited to, commercial thinning and uneven-aged harvests intended to reduce the basal area of tree stocking of forest vegetation.

Table E-2. Estimate of acres of timber harvest by treatment method (Forestwide)

Treatment Method	Decade 1 (Proposed)		Decade 2 (Probable)	
	Acres	Percent	Acres	Percent
Commercial Thinning	99,800	47%	99,800	47%
**Clearcutting	66,100	31%	66,100	31%
Shelterwood cutting	16,000	8%	16,000	8%
Seed Tree cutting	7,000	3%	7,000	3%
Single Tree Selection	3,200	2%	3,200	2%
Group Selection	20,400	10%	20,400	10%**
Totals	212,500	100%	212,500	100%