OLD GROWTH STRATEGY

APPENDIX B

INTRODUCTION

The preliminary inventory of possible old growth for the Jefferson Forest Plan Revision is based upon the report of the Region 8 Old Growth Team entitled *Guidance for Conserving and Restoring Old Growth Forest Communities on National Forests in the Southern Region* (Old Growth Guidance). The Old Growth Guidance defines three types of old growth to be used by national forests in the Southern Region when describing old growth:

Existing Old Growth**.** Forest stands or patches that meet the age, disturbance, basal area, and tree size criteria described in the operational definitions for the 16 forest community types of the Southern Region. These criteria vary by forest community type and can be found in Table B-2. Information from scientific descriptions of the 16 old growth forest communities was used to develop the operational definitions and criteria. The Jefferson National Forest contains 9 of these 16 forest community types.

Future Old Growth**.** Forest stands or patches allocated to old growth through land management decisions, but which do not currently meet the operational definition for existing old growth. Examples of Future Old Growth include allocations of wilderness, backcountry, riparian corridor and special areas (such as the Crest Zone) management prescriptions. Management prescriptions 6A, 6B, and 6C contain some future old growth when useful for linking patches of existing old growth to create a medium-sized patch.

Possible Old Growth**.** Forest stands which meet one or more of the preliminary inventory criteria described on pages 8-11 of the Old Growth Guidance. Possible old growth was also used to link patches of Existing Old Growth to create medium patches allocated to Management Prescriptions 6A, 6B, and 6C. Possible Old Growth has served its purpose prior to the revision of the Forest Plan. The remainder of this old growth strategy will refer only to Existing and Future Old Growth.

OLD GROWTH PATCHES OF DIFFERENT SIZES

This Forest Plan contains a network of old growth areas composed of both Existing and Future Old Growth. This network consists of a mix of large, medium, and small patches. Large patches are designed to ensure the integrity of ecological functions and the distribution of old-growth conditions at the subregional scale. Large patches are greater than 2,500 acres and are always made up of Future Old Growth with medium and small patches of Existing Old Growth imbedded. This Forest Plan provides large patches of old growth in every Ecological Subsection. All forest community types except River Floodplain and Eastern Riverfront Hardwoods are represented in these large patches. Northern Hardwoods, Dry-Mesic Oak, Dry and Xeric Oak Forest, Montane Spruce and Spruce-Fir, and Dry and Dry-Mesic Oak-Pine forest communities are represented in one or more large patches.

Medium patches are designed to fill in gaps in old growth forest community type representation or to improve the spatial distribution between large-sized areas. Medium patches are greater than 100 acres and are typically a mix of existing and future old growth, although some existing old growth is in medium patches. All forest community types except River Floodplain and Eastern Riverfront Hardwoods are represented in one or more medium patches.

OLD GROWTH PATCHES OF DIFFERENT SIZES

Small patches typically protect existing old growth or represent forest communities that are underrepresented, and/or normally occur in small, isolated patches. Small patches are 100 acres or smaller. All forest community types are represented in several to many small patches, with the River Floodplain and Eastern Riverfront representing the least.

OLD GROWTH ALLOCATION IN THIS FOREST PLAN

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The network of old growth patches across the Jefferson National Forest is distributed across all Ecological Subsections and linked by a forest matrix dominated by mid– and late-successional forest conditions.

Table B-1. Old Growth Allocations in this Forest Plan

Forest Community	Total Acres in All Age Classes	Acres Existing Old Growth	Acres Future Old Growth
Northern Hardwood	16,800	2,000	11,300
Conifer-Northern Hardwood	21,400	900	6,000
Mixed Mesophytic	84,500	4,700	33,300
River Floodplain and Eastern River-front	309	13	296
Dry-Mesic Oak	269,300	21,800	98,800
Dry and Xeric Oak Forest, Woodland and Savanna	120,100	10,300	52,700
Xeric Pine and Pine-Oak Forest and Woodland	41,500	1,300	16,700
Dry and Dry-Mesic Oak-Pine	146,600	8,800	66,500
Montane and Allied Spruce and Spruce-Fir	4,200	120	4,000

IDENTIFICATION OF ADDITIONAL OLD GROWTH PATCHES

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The identification of additional old growth patches during project-level decision-making and monitoring is limited to patches which meet the operational criteria for existing old growth, which because of their condition or forest community represented would contribute to the desired condition of the management prescription in which they are found or the Forest-wide distribution and abundance of that particular old growth community type.

The determination of a stand's status as existing old growth is based on age, past disturbance, basal area, and tree size. Table B-2 provides the attributes for determining old growth status of forest stands. If during field inventory, a stand meets all four criteria it will be considered existing old growth.

The minimum age criteria is applicable when at least 30 trees per acre are present for the deciduous forest community types and at least 10 trees per acre for the pine forest community types. The minimum d.b.h. criteria is applicable when at least 10 trees per acre are present for all forest community types.

Table B-2. Operational Criteria for Determining Existing Old Growth

Old Growth Forest Community Type	Minimum Age of the Oldest Age Class	Minimum Basal Area (square feet/acre)	Largest Trees d.b.h.
Northern Hardwood	100	40	≥ 14
Conifer Northern Hardwood	140	40	≥ 20
Mixed Mesophytic	140	40	≥ 30
River Floodplain-Eastern Riverfront	100	40	≥ 16
Dry-Mesic Oak	130	40	≥ 20
Dry and Xeric Oak Forest, Woodland and Savannah	110	10	≥ 16
Dry and Dry-Mesic Oak-Pine	120	40	≥ 19
Xeric Pine and Pine-Oak Forest and Woodland	100	20	≥ 20

For a stand to be considered existing old growth, no obvious evidence of past human disturbance which conflicts with the old growth characteristics of the area should be present.

The age at which old growth develops and the specific structural attributes that characterize old growth will vary widely according to forest type, climate, site conditions and disturbance regime. Old growth in fire-dependent forest types may not differ greatly from young forests in the number of canopy layers or accumulation of downed woody material. However, old growth is typically distinguished from younger growth by several of the following attributes:

- Large trees for the species and site.
- Wide variation in tree size and spacing.
- Accumulations of large-sized, dead, standing and fallen trees that are high, relative to earlier stages.
- Decadence in the form of broken or deformed tops or boles and root decay.
- Multiple canopy layers.
- Canopy gaps and understory patchiness.

Additional information regarding the old growth forest community types can be found in the Old Growth Guidance.

EVALUATION OF ADDITIONAL OLD GROWTH PATCHES

EVALUATION OF ADDITIONAL OLD GROWTH PATCHES

The network of old growth patches across the Jefferson National Forest is distributed across all Ecological Subsections and linked by a forest matrix dominated by mid- and late-successional forest conditions. Existing and Future Old Growth allocations have been made for all forest community types.

The River Floodplain and Eastern Riverfront forest communities are not well-represented on the Jefferson National Forest in any age class. These community types are typically found along the banks of large streams and rivers which tend to be in private ownership. These forest communities are restricted to riparian zones where flooding routinely occurs, therefore, the locations of these forests shift as stream and river course change and meander. Newly discovered communities of any age class may be allocated to Management Prescription 9G1 which emphasizes these natural processes unless forest management activities are deemed to be necessary to restore these communities due to a disruption in their natural disturbance regime. Newly discovered old growth communities should be allocated to Management Prescription 6C - Old Growth Communities Associated with Disturbance.

The Conifer-Northern Hardwood forest community contains eastern and Carolina hemlocks both of which are being severely affected by hemlock wooly adelgid. This forest community is currently widespread across the riparian areas of the Jefferson National Forest, but will become increasingly rare as the hemlock wooly adelgid spreads southward. Newly discovered patches which meet the operational criteria for existing old growth containing hemlock should be evaluated for their ability to persist on the landscape and allocated to 6A - Old Growth Communities Not Associated with Disturbance if they have been determined not vulnerable to hemlock wooly adlegid. Newly discovered existing old growth communities composed of white pine and northern hardwoods should be evaluated for their contribution to the desired condition of the management prescription in which they lie.

The Northern Hardwood and Montane and Allied Spruce and Spruce-Fir forest communities are confined to the higher elevations of the Jefferson National Forest. They are largely protected in old growth, wilderness, backcountry, and special area management prescriptions. Due to the rareness of these communities on the Forest and their importance to a number of threatened, endangered, sensitive, or locally rare species, any newly discovered patches which meet the operational criteria for existing old growth should be allocated to 6A if they are not already in a management prescription which protects their old growth characteristics. A small pocket of red spruce on the Mount Rogers NRA has recently been infested with the southern pine beetle. Management actions to prevent the spread of this pest into other spruce-fir communities may neccessitate cutting existing old growth (dead or alive) in order to ultimately protect the whole community from the ravages of this native pest.

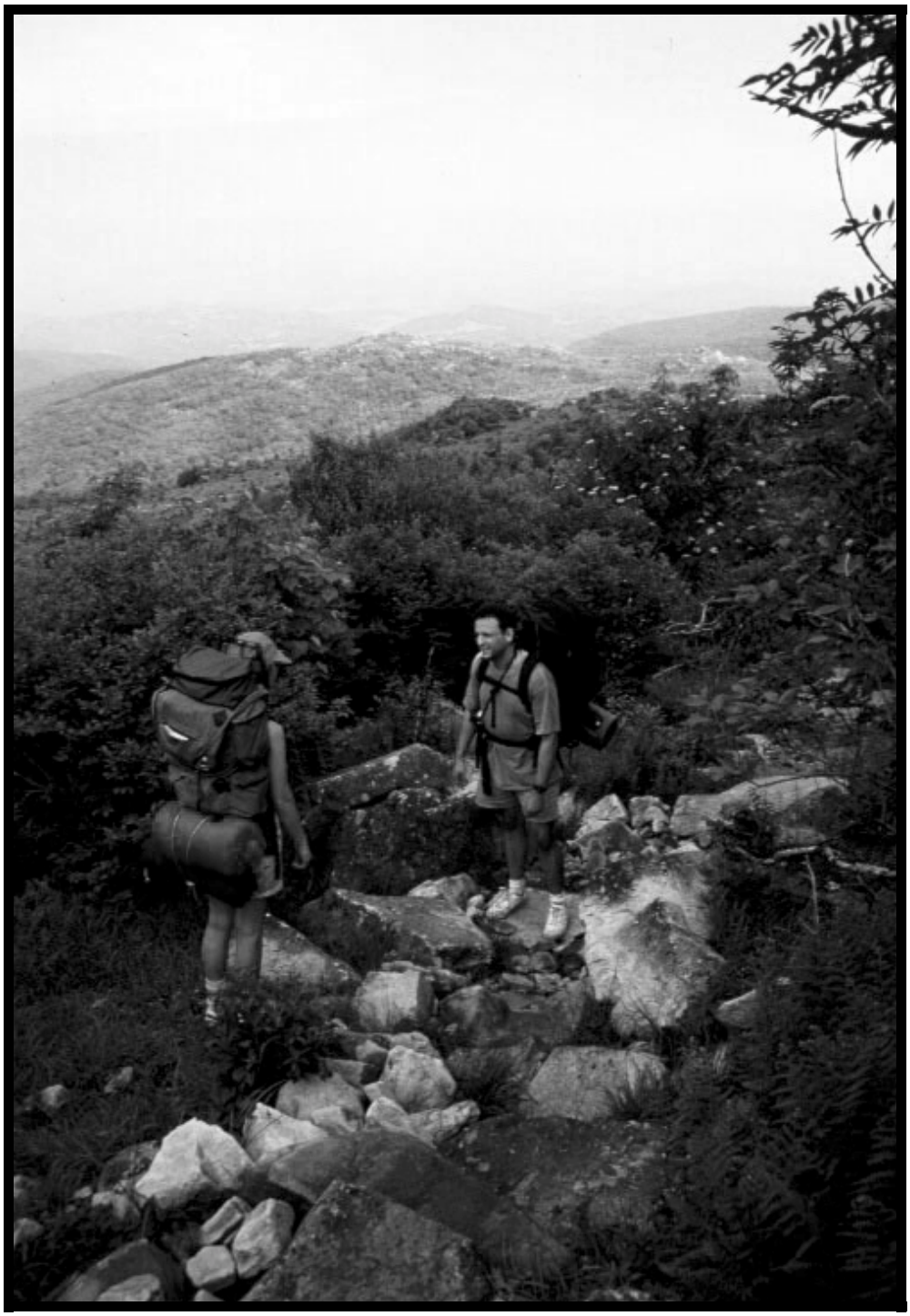
The Mixed Mesophytic forest community is abundant and well-distributed throughout the Jefferson National Forest, particularly in riparian areas and coves. This community is important for many biological, social, and economic reasons. Older trees in this community type are tall and very large in diameter, providing an aesthetic landscape that most people picture when they think of old growth. Forty-four percent of the Mixed Mesophytic forest community is well-distributed and protected within Management Prescriptions 6A - Old Growth Communities Not Associated with Disturbance, 11 — Riparian Corridors, and wilderness and backcountry allocations, however newly discovered patches which meet the operational criteria for existing old growth communities may be allocated to 6A due to their high social value and/or their contribution to the desired condition of the management prescription in which they lie.

EVALUATION OF ADDITIONAL OLD GROWTH PATCHES

The Xeric Pine and Pine-Oak Forest and Woodland community has the lowest percentage represented in the current inventory of existing old growth of the widespread community types across the Forest (the Montane Spruce and Spruce-fir and River Floodplain and Eastern Riverfront forest communities are equally low, but are much rarer across the landscape). These forest communities have historically experienced frequent fires and are relatively short-lived. Newly discovered patches which meet the operational criteria for existing old growth communities within this type may be allocated to 6B - Old Growth Forest Communities Dependent on Fire based on their contribution to the distribution and abundance of the current 6B land allocation and/or their contribution to the desired condition of the management prescription in which they lie.

The Dry-Mesic Oak forest community is well-represented in both existing and future old growth, however there are specific forest types within this broader community classification which are not well-represented. When evaluating newly discovered patches which meet the operational criteria for existing old growth in this community type, specific forest types should be considered separately for their contribution to the matrix of large, medium, and small old growth patches.

Exemplary illustrations of other existing old growth forest community types may also be allocated to one of the old growth management prescriptions when appropriate, however protection of these other types is not necessary for the matrix of large, medium, and small old growth patches.



The Jefferson National Forest features solitude, backcountry, and remote habitat.