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Comments: These are my comments and those of the Regional Association of Concerned Environmentalists (RACE), a regional organization from southern Illinois with a long history of involvement in national forest issues, regarding the Old Growth DEIS. I am going to limit these comments to Illinois forests, but I believe the same basic concepts hold true throughout the Central Hardwood region. According to various sources and how one defines old growth, there is anywhere from a couple thousand to less than 15,000 acres of old growth forest left in Illinois, next to nothing. Even if you accept the higher number that is only .003 of the total forest acres in Illinois, as will be demonstrated below.

Not only that, but according to a presentation I attended given by Max Hutchison, who was the team leader of the Illinois Natural Areas inventory, the first such inventory in the US, virtually all of the stands of potential old growth hardwood forest on the Shawnee preliminarily IDed as potential natural areas representing old growth central hardwood had been cut when on-the-ground inspection was done. In addition, throughout the state, those patches of virgin to old growth forest that remain are small remnants.

NEPA requires an EIS to give a detailed hard look at the environmental impacts of various alternatives to an impending decision. That hard look must be put into context. The context of the impacts of how old growth forest on the Shawnee is IDed and managed is that if Illinois is going to have any substantial stands of old growth forest capable of sustaining a large forest ecosystem it will have to be on the Shawnee.

According to a Forest Service sponsored review of forest conditions in Illinois done by Iverson et al in 1991, only about 440K acres of forest in the entire state would be eligible to be designated as old growth under the age class designation currently provided for in the DEIS, and not all of that would be on the Shawnee. Compare that to the total of 4,873,487 acres of forest land in Illinois according to the Forest Service's 2024 Illinois Forest Resource Fact Sheet. That is less than 1/10 of the total forest acres in the state.

Yet, according to Iverson et al, another 1.1 million acres of forest are either on the cusp of entering that age class or will enter it in the next decade or two. Again, not all of that is on the Shawnee. Even adding these two groups together, it would still mean less than 1/3 of the forest acres of the state would be old growth even if all of those acres were allowed to go to old growth. And note, that only a relatively modest percent of that is on the Shawnee. And no doubt that a percent of that, probably a good percent of that, particularly on private land, has been or will be cut. In fact, the Shawnee only represents less than 10% of all the forest land in Illinois, but represents most of the large forest ecosystems in the state. This is the context which the agency must give a detailed, hard look at when making the decision about how to manage those acres. (It is noteworthy that Iverson also states the need to reforest acres in Illinois. Early successional habitat can be created through either natural regeneration or planting of areas historically forested but cleared for agriculture or other developments. Mature forests should not be sacrificed for the purpose of creating early successional habitat in Illinois).

Another issue that the Forest Service on the Shawnee keeps misrepresenting, and it is misrepresented in the

DEIS, is that the Shawnee is not a predominantly oak-hickory forest. Dyer et al in 2006 study Revisiting the Deciduous Forests of Eastern North America, published in BioScience in April, 2006, reviewed the findings of E. Lucy Braun in her 1950 book Deciduous Forests of Eastern North America.

"Braun's book was recognized soon after its publication in 1950 as a major contribution to plant ecology (Stuckey 1973). Braun's stated goal was to describe the pattern and composition of the "original" (or virgin) forest pattern of eastern North America and the composition of virgin forests. The book includes a map of nine forest regions (see figure 1), which she based largely on her own field sampling of old-growth stands and an extensive review of the literature; a separate chapter is devoted to a discussion of each forest region within the book. Braun defined her forest regions on the basis of physiognomy (overall appearance and structure) and similarities in composition." (Dyer)

Dyer undertook to review Braun's findings over half a century later to see if they still were verifiable. According to a graduate student of Dyer, who is a friend of mine, over 20K plots were taken in this review. Very few changes were made in Braun's identifications of forest types. None were made regarding Southern Illinois. The paper is attached, and it contains both Braun's map of forest types and Dyer's review.

What is significant about this information and relevant to the Shawnee is that Braun and Dyer classify almost all, except for a very small area in the bottoms near the confluence of the Mississippi and Ohio Rivers, as western mixed mesophytic forest.

"Mixed mesophytic forest types are among the most biologically diverse ecosystems of the United States and perhaps of temperate regions worldwide (I-linkle et al.1993). The most common of the 25 to 30 characteristic tree species are sugar maple (Acer saccharum Marsh.), beech (Fagus grandfolia Ehrh.), hemlock [Tsuga canadensis (L.) Carr.], silverbell (Halesia carolina L.), yellow-poplar (Liriodendron tulipifera L.), red maple (A. rubrum L.), white ash (Frainus atnericana L.), white oak (Q. alba L.), northern red oak (Q. rubra L.) and yellow birch (Betula alleghaniensis Britton), yellow buckeye (Aesculus octandra Marsh.) and basswood (Tilia heterophylla Vent.) (Braun 1935, 1938, 1940, 1942, 1950; WiMaker 1956; Core 1966; Quarteman st al. 1972; Winstead and Nicely 1976; Dickison 1950) (appendix A). The latter two are indicator species for the mixed mesophytic forest type but are absent from western mesophytic forests (Braun 1938)." (An Old-Growth Definition for Agriculture Forest Service Western and Mixed Mesophytic Forests" US Forest Service Southern Research Station tech report SRS-16, 1997)

"Old-growth, mixed mesophytic forests are broadly unevenaged or all aged (Lorimer 1980). The diameter distribution of uneven-aged forests is commonly negatively exponential, with many more small- than large-diameter trees (Lorimer 1980, 1985; Palmer 1987). Old-growth stands differ from younger, uneven-aged forests in having greater range of tree sizes, maximum tree age, and more large-diameter trees (table 1). Hardt and Swank (in press) reported an average of 2.4 and 2.5 trees 230.0 inches per acre (5.9 and 6.3 trees 2 75.0 cm d.b.h. per ha) in two old-growth stands in the Southern Appalachians. Longevity varies with species (Morey 1936, Tubbs 1977, Runkle 1982)." (IBID)

The FS's own researchers go on to conclude,

"Defining old growth is enigmatic and problematic. The assignment of specific values to a host of attributes disregards the tremendous variability among and combination of features exhibited in old-growth forests. Viewed

as the sum of a series of rigid criteria, a given stand may not "add up," whereas in fact, viewed as a whole it is indeed old growth. The species composition and structural attributes of old-growth western and mixed mesophytic forest stands are widely variable and depend upon the history of the specific stand. Species composition depends upon stand origin. An old-growth forest may be dominated by "pioneer" species, such as yellow-poplar, if the stand originated following a catastrophic disturbance (such as the Joyce Kilrner Memorial Forest), or of shade-tolerant species if gap dynamics has been the dominant process driving regeneration for several tree generations. Similarly, the number of snags, decadent trees, and logs depends upon tree mortality rates and mode, which in turn, depend upon disturbance history (including less dramatic disturbance such as drought), species composition and specific vulnerabiliy to disease, heart rot, and blow down. Even-age and diameter distribution depend upon stand history and, if too rigidly defined, may exclude some stands that would otherwise be recognized as old growth." (IBID)

Yet, the Shawnee never acknowledges that it is a western mixed mesophytic forest, instead continually putting out to the public that it is an oak hickory forest. This is false and misleading to the public. In fact, I believe it is done strictly for commercial purposes. And following right in step is this DEIS, which, when discussing the forest types of the Central Hardwoods, doesn't even mention mixed mesophytic. This does not meet NEPA's standard of a detailed hard look taking into account the best available science.

This overemphasis on oak-hickory has driven management on the Shawnee - clearcutting, and now large landscape fires, with little support in the historical documents for such widespread disturbances, all in the name of creating more "oak-hickory" forest. Yet, in most cases, these management activities, which have actually degraded such old growth characteristics as large snags, woody debris, and a full and lush understory of various sizes, have failed to produce the promised "oak-hickory" regeneration.

It is time for some truth by the agency. We have almost no old growth forest left in Illinois. The largest blocks of forest in Illinois are in the Shawnee. The best potential for large forest

ecosystems with a substantial old growth component are on the Shawnee. The EIS needs to consider all of this.

On a personal note, I have done extensive off trail hiking in the 44 years I have lived in South Pope County, Illinois, with the Forest Service as my neighbor and an inventoried roadless area in my back yard. I know of a number of stands, most of them relatively small, that are old growth forest or as close to old growth as there is around here. ALL OF THOSE need to be identified and PROTECTED. For biodiversity, carbon storage, climate stability, watershed protection and scenic beauty.

Respectfully submitted both as an individual

and as authorized on behalf of the Regional Association of Concerned Environmentalists (RACE)

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ATTACHMENT: old growth comments.rtf - this is the same content that is coded in text box, it was also included as an attachment

ATTACHMENT: dyer et al.pdf - Revisiting the Deciduous Forests of Eastern North America JAMES M. DYER

ATTACHMENT: ne_1991_iverson001.pdf - Forest Resources of Illinois: What Do We Have and What Are They Doing for Us? Louis R. Iverson, Illinois Natural History Survey

ATTACHMENT: gtr_srs016 old growth definitions.pdf - An Old-Growth Definition for Western and Mixed Mesophytic Forests, Cathryn H. Greenberg, Donald E. McLeod, and David L. Loftis, A Section sf the Old-Growth Definition Series