



## Fire Management in the Forest Plan

By Jim Walker, Toccoa District Leader

While the overall fire policy as stated in the Land and Resource Management Plan, for the Chattahoochee-Oconee National Forests (The Plan) is unobjectionable, Georgia ForestWatch may have some differences of opinion with the Forest Service regarding underlying premises and will most likely disagree strongly with the Forest Service's implementation of its own fire policy, which seems to be driven by considerations not stated in the Plan. However, the Plan does provide the most effective tool for limiting the Forest Service to reasonable and acceptable use of prescribed fire.

Goal 57 of the Plan (Plan, p. 2-53) says, "Keep firefighter and public safety the highest priority in all fire management operations," and certainly no one will disagree with that.

Although Georgia ForestWatch questions the need for fuel reduction treatment anywhere in the Chattahoochee National Forest, the organization does not object to whatever fuel reduction treatment the Forest Service considers necessary in the wildland-urban interface (WUI). Of course, this raises the question, exactly what is the WUI? Presumably, it is a strip of National Forest land of a certain width adjacent to private property. But what is the width, and can it be adjacent to any private property, property with structures, or with inhabited buildings and structures? When the Forest Service issues scoping notices for prescribed burns, it seems reasonable to ask that they identify sites considered to be part of the WUI, and all sites not within the WUI have lower priority for fire management projects (Objective 58.2).

There is very little in the Plan to justify prescribed burning outside the WUI and much to argue against it. The key to all fire management policy on the Chattahoochee-Oconee National Forests is Goal 58 (Plan, p. 2-53), "Reduce the risks and consequences of wildfire through fuel treatments that restore and maintain fire regime Condition Class 1 to the extent practicable."

"A fire regime is a generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, predictability, seasonality, intensity, duration, scale (patch size), as well as regularity or variability."<sup>1</sup> "A natural fire regime is a general classification of the role fire would play across a landscape in

the absence of modern human mechanical intervention, but including the influence of aboriginal burning (Agee 1993, Brown 1995).”<sup>2</sup> “Condition Class 1 is characterized by: (a) fire regimes within or near an historical range, (b) low risk of losing key ecosystem components, (c) departure (either increased or decreased) from historical frequencies by no more than one return interval, and (d) intact and functioning vegetation attributes (species composition and structure) within an historical range. Condition Class 2 is characterized by ... (c) departure (either increased or decreased) from historical frequencies by more than one return interval ...” (Plan, p. 2-52).

In other words, if a stand has a historical wildfire return interval of, say, 50 years, it remains in Condition Class 1 until it has not been burned for at least 100 years (departure from the historical frequency by more than one return interval).

In order for the Forest Service and/or Georgia ForestWatch to apply this standard, the historical fire regime range and historical fire frequency must be known. They are not. And this allows for (or excuses) considerable differences of opinion regarding the need for prescribed burns to maintain Condition Class 1.

However, there is overwhelming evidence to support the contention that the historical return interval for wildfire in the Chattahoochee National Forest is very long.

The 10-Year Comprehensive Strategy Implementation Plan defines five Fire Regime Groups. In Groups I and II, the fire return interval is 0–35 years; in Groups III and IV, 35–100 years. “Group V is the long interval (infrequent), stand replacement fire regime and includes temperate rain forest, boreal forest, and high-elevation conifer species.”<sup>3</sup> “The highest amounts of precipitation (up to 125 inches per year) in the Appalachians occur in the region near the border of Georgia and the Carolinas. The climate of some Southern Appalachian forests is sufficiently humid to warrant a rain forest designation, making this area the only temperate rain forest in the U.S. east of the Mississippi (McCrone et al. 1982, pp. 11-12; Toops 1992, pp. 12, 15; Shanks 1954, p. 355; Redington 1978, pp. 12-13).”<sup>4</sup>

In the whole Forest Service Southern Region, lightning caused 12% of all wildfires in 1999–2003. In the Chattahoochee-Oconee National Forests, lightning was the cause of 3% of wildfires in 2003, burning a total of 3 acres, or 1% of the area burned by wildfire.<sup>5</sup> “In Great Smoky Mountains National Park, lightning fires average six per year over an area of approximately one million acres. Data from all sources indicate that approximately 15% of fires in the Southern Appalachian Assessment area are attributable to lightning .... Almost half of all lightning strikes occurs on ridge tops.”<sup>6</sup> Since 1985, the Chattahoochee National Forest has averaged 105 wildfires per year [all causes] with an average size of 11.4 acres (Plan, p. 3-32).

Obviously, the return interval for lightning-ignition wildfire in most of the Southern Appalachians and the Chattahoochee National Forest is extremely long – way more than 100 years.

However, some people argue that Indians used fire as an ecosystem management tool on a rather large scale, and therefore the historical fire regime is that which prevailed before the arrival of European settlers, with anthropogenic burning of the forest perhaps as frequently as every year. Others, such as Quentin Bass, an archaeologist with the Cherokee National Forest in Tennessee and 2003 winner of the Wilderness Society's Murie award, dispute these claims. A very cogent, concise explanation of this debate is given in "Effect of Wildfires on Ecosystems Hotly Debated."<sup>7</sup>

The highly questionable theory that Indians used fire not only to manage landscapes in the vicinity of their villages, but also to alter ecosystems over an extensive portion of the Southern Appalachian Mountains is the only justification the Forest Service has for the need to use prescribed burns to maintain Condition Class 1 in the Chattahoochee National Forest. There is very little evidence to support this theory, and it is intuitively false. The only other purpose of prescribed burns mentioned in the plan is to "expand the role of fire to recover and sustain short interval fire-adapted ecosystems" (Goal 61), but these occur on very limited areas, mostly xeric southern slopes and high ridges.

Even if this questionable, if not ludicrous, theory of large-scale Native American ecosystem management is accepted, there is still no chance of fuel buildup (with the possible exception of SPB affected stands) in the Chattahoochee National Forest, due to high precipitation, moisture content and rapid decay, and therefore no need for fuel reduction to restore and maintain historical fire regimes. Outside of the WUI and very limited areas for restoration of fire-adapted pine ecosystems, the Plan contains no other goals or objectives to justify prescribed burns. Objective 58.3 "Prescribe burn a three-year rolling average of 30,000 acres per year on the Chattahoochee and Oconee combined to meet plan goals and objectives," is inconsistent with the goals and objectives stated in the Plan.

There may be other goals and objectives requiring prescribed burns, but since they are not stated in the Plan they cannot be used to justify burn projects. Improvement of wildlife habitat and timber management (controlling white pine seedlings) are mentioned in some scoping notices, but these goals, even if they may be desirable and achievable, are incidental. According to the Plan, the only valid uses of prescribed burns are fuel reduction, which must be prioritized in favor of the WUI, and ecosystem restoration on areas that are suitable for recovery of fire-adapted ecosystems. Conclusions: The Forest Service's burn proposals need to be analyzed for specific sites, rather than just total acreage for each district. All fuel reduction burns should be in the WUI;

ecosystem restoration burns are acceptable on sites that can support fire-adapted ecosystems (xeric southern slopes and high ridges). For all other burns, the Forest Service should be required to document the site's present Condition Class according to the procedures in the Fire Regime Condition Class Field Method Guidebook.<sup>8</sup> Any prescribed burn outside of the WUI, suitable ecosystem restoration areas or Condition Class 2 or 3 is in violation the Plan.

## References

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