

# RESTORING SUSTAINABILITY FOR WHITE OAK AND UPLAND OAK COMMUNITIES: AN ASSESSMENT AND CONSERVATION PLAN

## *A Brief Overview....*

*by Darren Morris and Jeff Stringer*

White oak (*Quercus alba*) is considered the most important hardwood tree species in the eastern United States. Most, regardless of whether focused on wildlife, timber, or recreation, agree. White oak is also one of the most widely distributed of all the oaks, growing on a wide range of soils and sites throughout a very large geographic area. For this reason, white oak is considered a cornerstone species when managing for healthy and diverse upland oak forests.

Most forests throughout Kentucky are dominated by white oak and other oaks. While large oak trees are common in these upland oak forests, over the last several decades there has been a noticeable decline in the number of young oak seedlings and saplings, indicating a problem with oak forests being able to regenerate themselves. To regenerate, oak forests must produce enough acorns that will successfully germinate into small oak seedlings and have the proper conditions for these seedlings to grow into saplings and eventually overstory trees. While this sounds simple, in reality the story is complex.

In 2017 the University of Kentucky, the American Forest Foundation, and the Dendrifund established the White Oak Initiative (WOI) to shed light on white oak sustainability and the insufficient regeneration and recruitment of white oak and other upland oaks throughout most of the eastern United States. A steering committee was formed, representing a broad range of white oak stakeholders throughout the geographic range of white oak, to help guide the initiative. One of the first goals of the effort was the development of a foundational, region-wide assessment and conservation plan for white oak.

The White Oak Initiative Assessment and Conservation Plan was generated with input and review from hundreds of forestry experts, oak researchers, stakeholders, and other professionals. This plan also

represents the first-ever range-wide plan, covering most of the eastern United States, which addresses upland oak management with white oak as a cornerstone species. The White Oak Initiative and those involved in the development of this plan recognize the importance of future involvement of state foresters, universities, conservation organizations, forest industries, private landowners, and others interested in healthy white oak forests to ensure the continued success of the project's goals.

Regardless of one's level of involvement with white oak and white oak forest management, the 64-page Assessment and Conservation Plan (A&CP) was designed to provide valuable information for anyone interested in learning more about white oak and upland oak forests.

The A&CP Introduction section provides a basic overview of white oak as well as a look back at key events that led to the development of the White Oak Initiative. This introduction also covers a brief history of some of the challenges associated with white oak management and lists some of the hurdles that must be overcome in efforts to maintain healthy upland oak forests. The Assessment section begins with a technical introduction to white oak forests and highlights important concerns regarding insufficient white oak regeneration. Next, the Spatial Assessment section is broken down into three parts, including an ecological assessment of white oak; a section focusing on the economic, social, and wildlife benefits of white oak-dominated forests; and finally a spatial assessment of the potential for oak regeneration and growth among 146 EcoStates throughout the range of white oak. An EcoState is defined as an ecological region that shares similarities while respecting state boundaries. A scoring protocol for each EcoState provides information on the suitability of that region to accomplish management work that improves and maintains white oak sustainability. The document also includes the results of a Family Forest Owner Survey, in which

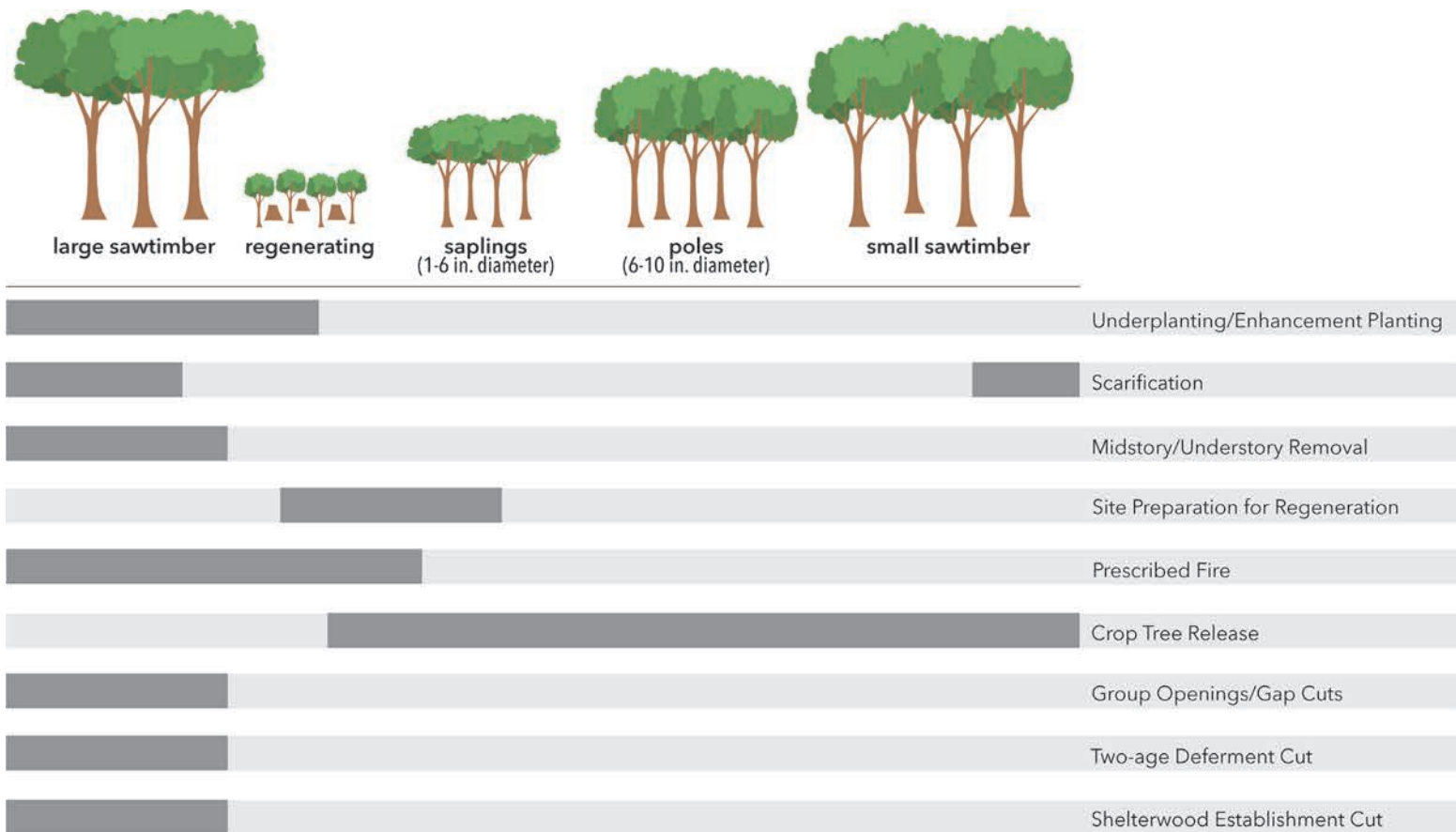


Figure 1 shows a range of developmental stages of a forest, with a mature forest on the far left progressing through regeneration that is released after a harvest and then growing to sawtimber size over time. While this figure is designed in a manner that indicates an intensive harvest of a mature forest, it is not meant to imply that all forests are to be managed in this manner. It does however provide the range of forest conditions that are likely to be encountered and indicates what practices are typically prescribed for a specific developmental stage. The figure shows each of the management practices (excluding afforestation) and when they occur during each development stage of a typical upland hardwood forest.

landowners provided feedback into their thoughts, experience, and willingness to become involved in white oak management. The report ends with a fairly deep dive into the management techniques that can be incorporated into upland oak forests of any age or condition, creating a healthy, productive forest (Figure 1). The final section of the A&CP is the Conservation Plan section. This section outlines the guiding principles through which short-term and ultimately long-term goals will be achieved.

Also throughout the A&CP are short articles about white oak, how the WOI was started, the WOI Executive Committee, Dendrifund, a tree farmer's perspective, and more. The A&CP was written for landowners, foresters, forest managers, policymakers, and anyone who enjoys healthy upland oak forests. To download or print a copy of the plan, visit <https://www.whiteoakinitiative.org>. From the white

oak initiative home page, scroll down to the green bar labeled "ASSESSMENT & CONSERVATION PLAN" and click the link. Then scroll down to the Assessment & Conservation Plan section and click "Restoring Sustainability for White Oak and Upland Oak Communities: An Assessment and Conservation Plan."

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