

## Policy Statement:

### **Silviculture for Natural Forests<sup>i</sup>**

*Originally approved by Forest Stewards Guild Members, Spring, 1999*

*Revised version approved by the Membership and Policy Council on October 9, 2018*

*Revised version approved by a majority of voting members in May 2019.*

As the 21st Century advances, human societies have become increasingly aware of the many benefits we receive from the healthy function of natural forest ecosystems. These *ecosystem services* are essential for human well-being and, all too frequently, we have taken them for granted. The role of forests in sequestering carbon and providing clean water are fundamental to our existence, yet these benefits are increasingly under threat from a range of factors driven by a changing climate and land-use practices that are often short-sighted or single-minded. Achieving the mission of the Forest Stewards Guild, to *practice and promote responsible forestry as a means of sustaining the integrity of forest ecosystems and the human communities dependent upon them*, requires an application of silvicultural systems in natural forests that is guided by a framework capable of supporting the complex needs of both society and forest ecosystems, themselves. This *Silviculture for Natural Forests* Policy Statement, updated from the prior version approved by the Forest Stewards Guild membership in 1999<sup>ii</sup>, is intended to provide guidance to Forest Stewards Guild (hereafter, “the Guild”) members in their diverse roles as stewards of natural forest ecosystems. The principles and values incorporated herein are germane to all foresters endeavoring to practice responsible forest management.

Silviculture is the management of a forest over time to achieve or maintain desired conditions. Silviculture can enable the continuous provision of ecosystem services including but not limited to commercial wood products, carbon sequestration, water filtration, wildlife habitat, recreation, and aesthetic beauty for human enjoyment. Guild foresters stress that active management of all forest lands is not necessary to sustain the provision of many ecosystem services. Because of societal expectations and special resource characteristics, some forest areas are most appropriately reserved from active management. Likewise, Guild foresters recognize that there is a place and need for high yield/fiber production plantations<sup>iii</sup> and other areas of intensive management. However, the intensive silviculture associated with short rotation, monoculture plantation forestry should seldom occur at the expense of natural forests.

Guild foresters act on the understanding that maintenance and enhancement of our natural forests is both ecologically wise and economically rational. When actively managing natural forests, silvicultural best practices should be selected and implemented so as to maintain the continuity of natural forest structure, complexity, and diversity, over time and at ecologically-appropriate spatial scales. The choice of appropriate silvicultural system should be guided by the foundational principles of ecological forestry, such as those articulated by Palik and D’Amato (2017)<sup>iv</sup>: 1) continuity; 2) complexity; 3) timing; and, 4) context.

*Continuity* refers to the maintenance, over time, of the ecologically important structures and biological legacies of a forest, which can include species diversity, dead wood, large trees, and soil biota. The Guild believes that appropriate silvicultural systems maintain continuity by creating conditions that support appropriate species persistence and regeneration and ensure that the ecological function of the forest can continue.

Silvicultural systems that support the maintenance or development of the intrinsic *complexity* of forest structure and diversity should be implemented at the appropriate spatial scales (from stand, to ownership, to landscape). Objectives for maintaining complexity should also account for the potential impacts of climate change and work to develop appropriate strategies for adaptation and resilience.

Consideration of the appropriate *timing* of silvicultural interventions is also important for the maintenance of continuity and complexity of the forest ecosystem. The timing of interventions should consider, but not necessarily emulate, natural disturbance regimes appropriate to the forest community, the land use history, and the changing climate.

Designing silvicultural systems that address the principles of continuity, complexity, and timing must be based on an understanding of the *context* of a managed forest in terms of its location and relative importance on the landscape, objectives of the landowner, and potential external threats to the forest such as pests and pathogens.

Artfully melding these principles into a well-managed yet essentially natural forest is at the core of what Guild members strive to achieve.

The Guild believes that no single silvicultural technique is inherently inappropriate for use on the natural forests of North America. Rather, most problems and issues facing the forestry profession stem from improper uses of silvicultural treatments and exploitative harvest practices carried out without regard for the past or future forest. The result is the loss of the ecological complexity of managed forests at many scales which ultimately reduces the ability of the forest to self-perpetuate and to support human well-being. Silviculture for natural forests must be as varied and complex as the forests it is applied to and the ownerships it is applied on. But, the need for flexibility is not a blanket endorsement of “anything goes.” The Forest Stewards Guild promotes silviculture that honors the natural processes of forest ecosystems and that lays a thoughtful hand on the land. Furthermore, we recognize that in being thoughtful we are often asking forest stewards and owners to defer, or pass by, maximum gains in one area (financial or other) in favor of a more holistic approach to forest management.

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<sup>1</sup> We adopt the Forest Stewardship Council (FSC) definition of ‘natural forests’: “Natural Forest: A forest area with many of the principal characteristics and key elements of native ecosystems, such as complexity, structure and biological diversity, including soil characteristics, flora and fauna, in which all or almost all the trees are native species, not classified as plantations. ‘Natural forest’ includes the following categories: 1. Forest affected by harvesting or other disturbances, in which trees are being or have been regenerated by a combination of natural and artificial regeneration with species typical of natural forests in that site, and where many of the above-ground and below-ground characteristics of the natural forest are still present. In boreal and north temperate forests which are naturally composed of only one or few tree species, a combination of natural and artificial regeneration to regenerate forest of the same native species, with most of the principal characteristics and key elements of

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native ecosystems of that site, is not by itself considered as conversion to plantations. 2. Natural forests which are maintained by traditional silvicultural practices including natural or assisted natural regeneration. 3. Well-developed secondary or colonizing forest of native species which has regenerated in non-forest areas. 4. The definition of 'natural forest' may include areas described as wooded ecosystems, woodland and savanna. Natural forest does not include land that is not dominated by trees, was previously not forest, and that does not yet contain many of the characteristics and elements of native ecosystems. Young regeneration may be considered as natural forest after some years of ecological progression." Source: FSC-STD-01-001 V5-2

<sup>ii</sup> Guild policy statements are generally intended to address broad issues with unrestricted time horizons and/or wide geographic relevance. The Membership and Policy Council (MPC) periodically reviews existing policy statements to evaluate the continued relevance and changing science and contexts on which the statements were based. In reviewing the 1999 statement, the MPC agreed that the statement could be updated to reflect the changing context of forestry in a changing climate and could be framed in broader terms that reflect a philosophy of silviculture rather than a list of practices to be used or avoided. Many of the practices have varied definitions or in fact could be appropriate in different contexts. The revised statement is intended to maintain the spirit of the 1999 statement, while enhancing the relevance for current issues likely to be encountered by Guild members.

<sup>iii</sup> As with the definition of 'natural forests', we have also adopted the FSC definition of 'plantation'. "Plantation: A forest area established by planting or sowing with using either alien or native species, often with one or few species, regular spacing and even ages, and which lacks most of the principal characteristics and key elements of natural forests." Source: FSC-STD-01-001 V5-2

<sup>iv</sup> Palik, Brian J.; D'Amato, Anthony W. 2017. Ecological forestry: Much more than retention harvesting. *Journal of Forestry*. 115(1): 51-53.

In addition, this policy statement was influenced by a growing body of literature and foundational writings on the topic of "ecological forestry", such as:

Evans, A.M., Clark, F.A. 2017. Putting the Forest First. *Journal of Forestry*, 115, 54–55;

Franklin, J. F., Johnson, K. N., & Johnson, D. L. 2018.) *Ecological Forest Management*. Waveland Press;

Sample, V. A. 2018. Normative and ethical foundations of ecological forestry in the United States. *Journal of Forestry*, 116(4), 374-381; and,

Lindenmayer, D. B., & Franklin, J. F. 2002. *Conserving forest biodiversity: a comprehensive multiscaled approach*. Island press.