

Plantation Management Guidance on Wildlife Management Areas

- I. Summary:** This document provides guidance and procedures for managing plantations on all lands administered by the Bureau of Wildlife including Wildlife Management Areas (WMAs) and select Multiple Use Areas (MUAs) and Unique Areas.
- II. Guidance:** It is preferred by the DEC Division of Fish, Wildlife and Marine Resources (Division) to manage plantations on WMAs and select MUAs and Unique Areas in a manner that fosters their conversion to natural forest succession and promotes the diversity of forest age classes required by numerous wildlife species. It is also preferred by the Division that the replacement of plantations with natural forest succession will be achieved primarily through thinning, conversion cuttings, or allowing natural succession. However, the Division is aware that under certain circumstances it may be beneficial to some wildlife species to maintain current plantations or establish new plantations.
NOTE: This guidance does not apply to naturally regenerated stands, stands with less than one hundred (100) individual stems planted per acre within any five-year period of time, or stands less than one (1) acre in size.
- III. Purpose:** The purpose of this policy is to promote conversion of plantations to naturally regenerated forest stands wherever feasible and consistent with ecological and biodiversity goals for the benefit of wildlife species that rely on forest habitats.
- IV. Background:** Wildlife Management Areas (WMAs) are lands owned by New York State under the control and management of the Department of Environmental Conservation's Division of Fish, Wildlife and Marine Resources. These lands have been acquired primarily for the production and use of wildlife.

The WMA program is part of a long term effort to establish permanent access to lands in New York State for the protection and promotion of its fish and wildlife resources. Beginning in the early 1900s with the acquisition of abandoned farm lands and fields, DEC and its predecessor (NYS Conservation Department) have worked with the federal government, state government and sportsmen and women to secure these land parcels for public use.

Money used to acquire lands included in the WMA system has been a combination of state and federal funding. The Conservation Fund (begun in 1925) was the first dependable source followed by two federal programs in the 1930s: 1) the Federal Resettlement Administration bought marginal and worn-out farmland and later donated it to the state for wildlife management purposes, and 2) the Pittman-Robertson Act, still in effect today, places an excise tax on guns and ammunition to fund restoration and management efforts for wildlife,

including purchase of habitat. In addition, several New York State Bond Acts (1960, 1972 and 1986) have also helped expand the WMA system.

WMAs provide unique areas for the public to interact with a wide variety of wildlife species. Since sportsmen and women have funded the acquisition of a large portion of the WMAs through their license fees and the federal tax on guns and ammunition, the emphasis is on game species.

However, while fishing, hunting and trapping are the most widely practiced activities on many WMAs, they are not limited to these activities. Most WMAs also provide good opportunities for hiking, cross-country skiing, bird watching, or just enjoying nature.

WMAs also provide areas for research on various wildlife species. A grouse study conducted on Connecticut Hill WMA is considered the standard reference on ruffed grouse in the Northeast. In addition, habitat management methods and techniques such as mowing, use of controlled burns, and planting of wildlife shrubs and food plots have been established and refined on WMAs.

Soil erosion and nutrient depletion were serious problems on the newly acquired lands because they had been, in many cases, cleared for farming. To solve these problems, a massive tree planting campaign began. The labor used to establish these plantations was provided by the Civilian Conservation Corps (CCC). The CCC planted millions of trees on hundreds of thousands of acres of reforestation areas in the 1930's and 40's. Department work crews and crews from correction camps planted trees in the 1950's, 60's and 70's on reforestation and multiple use areas.

In areas where there has been extensive loss of native conifers, conifer plantations on State Forests provide a type of habitat not commonly found on the landscape. Maintaining conifer and mixed conifer/hardwood stands is an important component of ecosystem management. Conifer stands, whether natural or planted, satisfy a variety of wildlife needs. Some species derive most or all of their year-round requirements from conifer stands, while an even greater array of species incorporate conifers as an essential or highly desirable component of their habitat on a year-round or seasonal basis. Conifers provide thermal cover in the winter and escape cover year-round. The limited amount of early-stage growth of native conifers in some areas, particularly of hemlock, limits the abundance of some wildlife species. Management programs which provide for the creation and maintenance of several stages of conifer growth (both natural and planted) are essential to the needs of many wildlife species and desirable to the maintenance of wildlife species richness². In most cases however, most if not all of these needs are more effectively met by natural forest stands than by plantations.

Unless they are initially planted or regenerated on lands with a sufficient amount of stored seed, plantations generally have less vertical and species diversity than natural stands, and thus provide fewer ecological niches and less biodiversity than natural, more diverse

forests. As a further result, such plantations are less resistant to forest insect and disease threats than stands with more diverse forest composition. For these reasons, converting existing plantations to natural forest when they reach maturity is generally preferred over perpetuating plantations.

- V. Responsibility:** The responsibility for interpretation and update of this document and the overall management of plantations on WMAs and select MUAs and Unique Areas shall reside with the Office of Natural Resources Division Fish, Wildlife and Marine Resources or its successor.

VI. Definitions:

Clearcut - A regeneration or harvest method that removes essentially all trees in a stand – *note* depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration (Helms, 1998).

Coppice – To cut the main stem (particularly of broadleaved species) at the base or to injure the roots to stimulate the production of new shoots for regeneration (Helms, 1998).

Intermediate treatment – Any treatment or tending designed to enhance growth, quality, vigor, and composition of the stand after establishment or regeneration and prior to final harvest (Helms, 1998).

Overstory Removal - The cutting of trees constituting an upper canopy layer to release trees or other vegetation in an understory (Helms, 1998).

Plantation - A stand in which 50% or more of the basal area is composed of similar species, aged and sized trees planted by humans in a uniform manner.

Regeneration cutting– In even-aged silvicultural systems, any removal of trees intended to assist regeneration already present or to make regeneration possible (ex. clearcut, overstory removal) (Helms, 1998).

Viewshed – The landscape that can be directly seen from a viewpoint or along a transportation corridor (Helms, 1998).

VII. Procedure:

1. All plantations will be tended to promote the health and vigor of the planted trees and to encourage natural regeneration of either the plantation species or surrounding native forest species. Exceptions will be considered when ecological and biodiversity goals will be served knowing that under certain circumstances it may be beneficial to some wildlife species to maintain current plantations or establish new plantations. Deviations from these guidelines shall be addressed in individual stand prescriptions.
2. Harvest access and technique during intermediate treatments should be designed to minimize residual stand damage in canopy and sub-canopy trees and minimize ground disturbance and soil compaction in the general harvest area. The upper threshold of acceptable damage to the

residual stand will be established by the sale administrator and added as a contract term in the Notice of Sale, and shall not exceed 10%.

3. During intermediate treatment and regeneration cuttings efforts should be made to protect existing, desirable, advanced regeneration and retention elements where possible by employing harvesting techniques such as directional felling or utilizing mechanical harvesting equipment and appropriate sale layout to minimize impacts and, when possible, by harvesting during winter months when snow levels are sufficient to provide protection from felled trees and harvesting equipment.
4. When conducting overstory removals, the following standards apply:
 - 4.1. Overstory removals should only be conducted when there is adequate desirable advanced regeneration.
 - 4.1.1. Adequate desirable advanced regeneration should be demonstrated by citing appropriate scientific sources and conducting the necessary regeneration inventory prior to harvest. Sources and inventory outcomes should be documented in the stand prescription and should match the desirable future conditions for the stand.
 - 4.2. When advanced regeneration is less than five feet tall and/or less than 2" DBH, individual stems are generally resilient to post harvest wind throw and snow and ice damage (wind and weather damage) and should progress sufficiently in a natural state. No additional treatment is required at this time.
 - 4.3. When advanced regeneration is between 2" and 6" DBH and/or greater than five feet tall, attempts should be made to minimize impact from management activities that might damage tree crowns or stem. Additionally, past management activities have shown this size class to be susceptible to wind and weather damage within the first few years after the harvest. Should 50% or more of the advanced regeneration succumb to wind and weather damage within 5 years of the over-story removal it is recommended to treat:
 - 4.3.1. Affected hardwoods by cutting damaged stems at the base to promote coppice.
 - 4.3.2. Affected softwoods by cutting the damaged stem and replacing with planted stock (artificial regeneration) appropriate for the site and if the desire is to maintain a softwood component within the stand.
 - 4.4. When advanced regeneration is over 6" DBH and larger than 30 feet tall, attempts should be made to minimize impact from management activities that might damage tree crowns or stem. Individual stems at this size should be resilient to post harvest wind and weather damage and should progress sufficiently in a natural state. No additional treatment is required at this time.
5. When conducting an overstory removal or clearcut greater than five (5) contiguous acres in size, a visual assessment must be completed and included with the stand prescription that describes how the forester plans to mitigate potential viewshed impacts. Mitigation practices may include, but are not limited to, buffers along public roads, use of retention (DFWMR Guidance for Retention on Wildlife Management Areas); timing of harvest, irregularly shaped treatment areas, signage, public notice and/or other methods.

6. The Chief Wildlife Biologist may modify this policy or approve exceptions on a case-by-case basis, at any time, if such modifications or exceptions provide equal or greater tree and stand protection or address site specific, unique circumstances (control of invasive species, spread of insects and disease, hazardous conditions or other forest health or public safety issues). Depending on site conditions, plantation management prescriptions may need to be more restrictive or more flexible. *Deviations from this guidance to meet the habitat needs of specific YFI target species are allowed and shall be addressed in the individual stand prescription.*

7. **Artificial regeneration:** The Division recognizes that certain conditions may require artificial regeneration after a clearcut. Under these circumstances, justification as to why artificial regeneration is preferred over natural regeneration must be documented in the stand prescription including species planted, seedling count, and spacing. (Examples of justification for artificial regeneration include but are not limited to the presence of undesirable vegetation in surrounding stands, the lack of a seed source for desirable species, evidence of repeated intermediate treatments that have not resulted in adequate desirable regeneration, failed regeneration from deer browse, establishment of artificial regeneration for wildlife or ecological considerations or other unique conditions.)
 - 7.1 When artificially regenerating a stand, foresters should consider establishing a mixture of species over a mono-type. Species types should be documented in the stand prescription and should demonstrate the justification for the decision made.
 - 7.2 Artificial regeneration using non-native species (species not native to North America prior to European settlement) may be considered only if it is determined the non-native species does not have invasive properties (outcompetes native species in a natural state), has a New York invasive risk assessment of medium, low or none, is more suited for the site due to soil and other properties, is resistant to wildlife impacts, can outcompete undesirable vegetation, is most appropriate to reach desired wildlife or ecological goals, and is available. Justification for the use of non-native species must be clearly defined within the stand prescription.

8. If modifications are required after the operation begins, documentation showing detailed justification should be kept on file in the WMA Habitat Management Plan, Appendix II kept at the regional DEC office.

VIII. Related References:

1. Strategic Plan for State Forest Management
2. Management Rules for Establishment of Special Management Zones on State Forests
3. Policy # ONR-DLF-2, Retention on State Forests
4. Policy # ONR-DLF-3, Clearcutting on State Forests
5. <http://www.natureserve.org/explorer/>
6. http://www.nyis.info/Resources/IS_Risk_Assessment.aspx

¹ Draft Principle 10 (Plantations) of the FSC-US Forest Management Standard 2010 - 2014

²Chambers, Robert E. 1983. Integrating Timber and Wildlife Management Handbook. State University of New York College of Environmental Science and Forestry, New York State Department of Environmental Conservation

^{3,4,5,6,7}The Dictionary of Forestry, Helms, John A., Editor, The Society of American Foresters, 1998