

PINELANDS COMMISSION

Pinelands Comprehensive Management Plan

Forestry

Proposed Amendments: N.J.A.C. 7:50-2.11, 6.41 and 6.43 through 6.46

New Rules: N.J.A.C. 7:50-6.47 and 6.48

Authorized By:

_____/_____/_____
New Jersey Pinelands Commission,
John C. Stokes, Executive Director

Authority: N.J.S.A. 13:18A-6j

Calendar Reference: See Summary below for explanation of exception to calendar requirement

Proposal Number:

A **public hearing** concerning this proposal will be held on:

Wednesday, July 22, 2009 at 7:00 P.M.
Richard J. Sullivan Center
15C Springfield Road
New Lisbon, New Jersey

Submit written comments by regular mail, facsimile or e-mail by August 14, 2009 to:

Susan R. Grogan, P.P., AICP
Chief Planner
Pinelands Commission
P.O. Box 7
New Lisbon, NJ 08064
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The commenter's name and mailing address must be submitted with all public comments.

The agency proposal follows:

Summary

The New Jersey Pinelands Commission proposes to amend subchapters 2, Interpretations and Definitions, and 6, Management Programs and Minimum Standards, Part IV Forestry of the Pinelands Comprehensive Management Plan (CMP). The CMP has been guiding land use and development activities in the Pinelands since it took effect on January 14, 1981. Since that time, the CMP has been revised a number of times, most recently in 2009 through a set of amendments related to on-site clustering of residential development in Forest and Rural Development Areas, development transfer programs (so called off-site clustering) in the Forest and Rural Development Areas and stormwater management for public development.

The amendments now being proposed by the Commission relate to forestry management practices in the Pinelands. The Comprehensive Management Plan, adopted in 1980, recognized that more than any other feature the unique vegetation of the Pinelands, its dense pine and oak forests, cedar and hardwood swamps, pitch pine lowlands, bogs and marshes gives the region its distinctive and essential character. The CMP acknowledges that proper management of Pinelands forests will increase their economic value to their owners and simultaneously preserve and sustain the overall ecological character of the Pinelands. The CMP states that the natural resources of the Pinelands must be preserved, protected, and enhanced and that “opportunities for traditional lifestyles that are related to and compatible with the overall ecological values of the Pinelands” must be maintained. The Commission’s forestry program is

intended to meet the objectives of these policies by providing opportunities for the continuing use of the region's forest resources that are compatible with the maintenance of the Pinelands environment. This will be accomplished by ensuring proper management of the forests through the application of sound management techniques, and through public education.

Between September 17, 1984 and March 18, 1987, the Pinelands Commission and the New Jersey Department of Environmental Protection, Forestry Service (NJDEP) entered into a series of related agreements establishing an administrative process to facilitate review of forestry activities in the Pinelands Area. On November 6, 1987 the Commission adopted Resolution No. PC4-87-113, creating a Forestry Advisory Committee. This resolution established that the purpose of the Forestry Advisory Committee is to assist the Commission's Executive Director in reviewing harvesting and forestry management plans of state agencies. The resolution also indicates that, at the request of the Commission or the Executive Director, the Forestry Advisory Committee would advise on other forestry-related matters.

In 1996 the Commission adopted a set of new forestry standards developed in response to recommendations made during its second comprehensive review of the CMP, which was undertaken in the Spring of 1991. These new rules clarified that forestry included planting, cultivating and harvesting trees. The rules prohibited municipalities from requiring site plan approval for forestry activities and exempted certain small-scale forestry activities from the Pinelands application process. The rules also simplified the

Commission's application process by using participation in other existing State Programs such as the State's woodland assessment program as a basis for permit approval, thereby keeping Pinelands requirements to a minimum. In addition, the rules replaced existing standards by implementing a system that relied on silvicultural and best management practices established by the Department of Environmental Protection.

With the objective of reinvigorating forestry, on February 13, 2004, then Pinelands Commission Chairman James J. Florio announced a series of new appointments to the Pinelands Forestry Advisory Committee. He also assigned a new charge to this reactivated Committee, directing it to review, clarify and refine the forestry provisions of the Pinelands Comprehensive Management Plan. In particular, the Committee was directed to recommend management practices designed to ensure that forestry activities conducted in the Pinelands are consistent with the Commission's mandate to protect and maintain the Pinelands environment while ensuring that forestry remains a viable economic and cultural resource.

The reconstituted Forestry Advisory Committee convened its first meeting on March 11, 2004 with the objective of evaluating current and new reforestation practices and identifying best management practices to assure that forestry will continue to be an important and effective environmental management tool in the Pinelands. The Committee acknowledged that forestry activity within the Pinelands and throughout the state has declined considerably since the beginning of the 21st century. Data from the New Jersey Department of Agriculture,

Agriculture Statistical Service underscores the Committee's observation. This data reveals that the total annual value of forest products sold in New Jersey between 2001 and 2006 was approximately \$1,000,000. In 2006, the last date for which data was generally available, the value of forest products represented approximately 0.13% of the total value of crop production in the State (\$765,211,000 - Source: New Jersey: Value Added to the U.S. Economy by the Agricultural Sector via the Production of Goods and Services, 2001-2006, New Jersey Department of Agriculture, Agriculture Statistical Service). Furthermore, according to data provided by the New Jersey Department of Environmental Protection, Division of Forestry, only 775,000 board feet of saw timber and 5,224 cords of wood were harvested on properties enrolled in the Farmland Assessment program state-wide in 2008, as compared to the estimated 82,000 cords of pine and oak that were harvested throughout the Pinelands in the 1970s (Source: Statement on Viable Commercial Forestry, Robert R. Williams, 01.05.09).

The Committee also observed that disturbance related to forestry as well as wildfires helped to shape the Pinelands environment. Yet disturbance has diminished with the marked decline in forestry and the natural fire cycle has largely been controlled in order to protect the increasing number of people and structures found throughout the Pinelands. The Committee concluded that, in view of these factors, promoting and expanding appropriate forestry will be essential to maintain and perpetuate the ecological as well as economic and cultural values of the Pinelands.

Between March, 2004 and February, 2006 the Committee conducted a total of 17 meetings. The Committee also conducted field visits to witness the effects of various forestry techniques and invited experts to participate in the Committee's meetings to discuss Pinelands ecology and forest management practices.

The meetings of the Committee culminated in the preparation of a detailed report, dated March, 2006, entitled "*Recommended Forestry Management Practices*" that is available on the Commission's web site at www.nj.gov/pinelands. The report suggests that Forestry, "*if practiced in accordance with sound management practices, can provide wood and wood products, and insure the protection of water quality and critical habitats for wildlife as well as a way of life and culture that will otherwise vanish*". The report describes broad goals for forestry activity, suggests methods to improve forest management planning on both private and state-owned properties, and recommends silvicultural practices for the Pinelands. The Committee presented their report to the Commission on March 7, 2006, and the Commission used the report to guide the preparation of amendments to the Forestry provisions of the CMP set forth at N.J.A.C. 7:50-6.41 through 7:50-6.47. The proposed amendments are described below.

The existing provisions of the CMP relating to forestry (N.J.A.C. 7:50-6, Part IV) set forth standards that all forestry activities in the Pinelands must meet, including a requirement that these practices must be conducted in accordance with the Society of American Foresters Forestry Handbook. However, the CMP

provisions do not currently describe specific silvicultural and reforestation practices. The intent of the amendments being proposed by the Commission is to provide more direct and specific guidance to potential applicants regarding the practices that could be employed to manage Pinelands forests by incorporating descriptions of such practices within the body of the Forestry rules. These descriptions indicate where and how a particular practice should be conducted and what controls should be applied to avoid potentially negative impacts. In addition to describing the conditions under which the use of a given practice would be appropriate, it is necessary to add the following new terms to N.J.A.C. 7:50-2.11 (Definitions). These terms define proposed silvicultural techniques.

- “Artificial regeneration” is the establishment of tree cover through direct or supplemental seeding or planting;
- “Bedding” is the preparation of land before planting in the form of small mounds so as to concentrate topsoil and elevate the root zone of seedlings above temporary standing water;
- “Broadcast Scarification” means dragging cut trees or other objects across a parcel to remove or reduce above-ground shrub cover, debris, leaf litter and humus without disturbing mineral soil horizons and associated roots;
- “Clearcutting” is the removal of an entire forest stand in one cutting for purposes of regeneration either obtained artificially, by natural seed or from advanced regeneration. Clearcutting typically results in the removal of all woody vegetation from a parcel in preparation for the establishment of new trees; however, some trees may be left on the parcel;

- “Coppicing” is the production of forest stands from vegetative sprouting by the trees that are harvested (stump sprouts, root suckers, and naturally rooted layers). Coppicing typically involves short rotations with dense stands of short trees;
- “Disking” involves drawing one or more heavy, round, concave, sharpened, freely rotating steel disks across a site for the purposes of cutting through soil and roots or cutting or turning a furrow over an area;
- “Drum chopping” involves drawing a large cylindrical drum with cutting blades mounted parallel to its axis across a site to break up slash, crush scrubby vegetation prior to burning or planting or to chop up and disturb the organic turf and roots in the upper foot of soil;
- “Group selection” means periodically selecting a group of trees to be removed from a large area so that age and size classes of the reproduction are mixed;
- “Individual selection” means periodically selecting a single tree to be removed from a large area so that age and size classes of the reproduction are mixed;
- “Natural regeneration” is the establishment of a plant or plant age class from natural seeding, sprouting, suckering or layering;
- “Root raking” means drawing a set of tines, mounted on the front or trailed behind a tractor, over an area to thoroughly disturb tree and vegetation roots and/or to collect stumps and slash;

- “Seed tree cut” is the removal of an old forest stand in one cutting, except for a small number of trees left singly, in small groups or narrow strips, as a source of seed for natural regeneration;
- “Shelterwood cut” is the establishment of a new, essentially even-aged forest stand from release, typically in a series of cuttings, of new trees started under the old forest stand. A shelterwood cut involves the establishment of the new forest stand before the old forest stand is removed;
- “Thinning” is the removal of competing trees to favor certain species, sizes and qualities of trees.

“Forestry”, as currently defined at N.J.A.C. 7:50-2.11, means planting, cultivating and harvesting trees for the production of wood products, including firewood. Under the proposed amendments this term is being expanded to include “forest health” as one of the acceptable end points of forestry activities. In addition, the definition is also being expanded to include a list of silvicultural practices.

The term “Forest stand”, which currently is defined as a uniform group of trees of similar species, size, and age, is being expanded to include “composition” and “similar forest structure” as factors that characterize a forest stand.

The definition of “Forestry management plan” is also being amended so that it will refer to the new forestry application requirements at 7:50-6.44(b)7.

The current forestry purpose clause, N.J.A.C. 7:50-6.41, encourages commercial forestry that will maximize forest land values and provide for the long-term economic and environmental integrity of the Pinelands. These provisions are being expanded to encourage such commercial forestry for economic and conservation purposes on both public and private lands.

A new section is being inserted at N.J.A.C. 7:50-6.43 that describes Pinelands Native Forest Types. With the exception of encouraging reforestation of Atlantic white cedar in cedar and hardwood swamps as presently set forth in N.J.A.C. 7:50-6.45(a)4, and conserving Atlantic white cedar on state conservation lands as presently set forth in N.J.A.C. 7:50-6.46(a)1i, the current provisions of the CMP pertaining to Forestry do not reference forest types. Appendix II of the Forestry Advisory Committee's Report presented descriptions of broad-scale Native Forest Types. In many instances these descriptions included limitations on the use of various forestry management methods based on these forest types. Consequently, the amendments being proposed by the Commission incorporate the Forestry Advisory Committee's Report descriptions of the following Upland Native Forest Types: "Oak-dominated Native Forest Type", "Pine-Dominated Native Forest Type", "Pine-Shrub Oak Native Forest Type", "Pine Plains Native Forest Type" and "Upland Savannas and Grassland Native Forest Type".

It is important to note that for descriptions of Wetland Native Forest Types the proposed amendments refer to the current provisions of the CMP at N.J.A.C. 7:50-6.4 and 6.5.

The current forestry provisions of the CMP distinguish among three different categories of forestry applications. Presently, no applications to the Commission are required for forestry activities proposed on parcels of land that are enrolled under the New Jersey Forest Stewardship Program. (The Forest Stewardship Program is a federally funded forest management program designed by the US Forest Service and National Association of State Foresters. The program is authorized by the Cooperative Forestry Assistance Act of 1978, as amended, 16 U.S.C. 2103A, and is intended to encourage management of private forestland for non-commodity benefits, such as wildlife, recreation, aesthetics and water quality as well as traditional commodities like timber and wood products. Under the direction of the State Forester, the NJ Forest Stewardship Committee maintains a state master plan and meets on a regular basis to manage the program. The committee includes representatives from: The NJ Forest Service; Rutgers Cooperative Extension; USDA Forest Service; USDA Farm Service Agency; USDA Natural Resources Conservation Service; NJ State Soil Conservation Committee; Soil Conservation Districts; NJ Division of Fish and Wildlife; US Fish and Wildlife Service; NJ Audubon Society; NJ Forestry Association; NJ Consulting Foresters; NJ Conservation Foundation; and NJ Tree Farm Program.) However, such activities are subject to local (municipal) permitting procedures and must comply with the standards of the CMP. Forest Stewardship Plans are reviewed by Pinelands Commission staff to ensure that the CMP standards are addressed. An application to the Commission is required for forestry activities on parcels of land approved for woodland assessment. An application must also be

filed for forestry on a parcel neither enrolled in the Forest Stewardship Program nor approved for woodland assessment. This application must provide all of the information currently required for applications relating to parcels approved for woodland assessment plus additional, detailed descriptions of each forest stand on the subject parcel.

The proposed amendments, N.J.A.C. 7:50-6.44, Application Requirements (previously N.J.A.C. 7:50-6.43), retain the provisions that exclude application to the Commission for forestry activities proposed on parcels of land that are enrolled under the New Jersey Forest Stewardship Program as well as the proviso that such operations are subject to local permitting procedures. However, under these amendments, the application requirements for forestry operations on parcels of land approved for woodland assessment and forestry operation on a parcel neither enrolled in the Forest Stewardship Program nor approved for woodland assessment, have been combined. These requirements have also been expanded to include specific and additional requirements. According to proposed N.J.A.C. 7:50-6.44(b)7i such applications shall include a forestry management plan that has a detailed cover page listing the name and contact information of the parcel owner, the municipality, address, block and lot designation of the parcel on which the forestry activity will be undertaken and the period the plan is intended to cover. N.J.A.C. 7:50-6.44(b)7ii requires that the forestry plan describe the short- (5-year) and long-term (20-year) objectives for all forestry management techniques that will be used. N.J.A.C. 7:50-6.44(b)7iii requires that the forestry plan include a detailed description (including photographs) of the existing

conditions of the subject parcel and each of the forestry stands in which a proposed forestry management activity will occur. The description must include: the number of acres affected; the condition and quality of each forest stand; the overall site quality; an inventory and map of the Pinelands Native Forest Types found on the subject parcel broken into stands; the age of representative trees, species composition; stand-cohort composition; percent forest coverage; basal area; the forest structure including age classes, diameter breast height (D.B.H.) classes and crown classes; the condition and species composition of advanced regeneration when applicable; a stocking table showing growth rates and volume; projections of future stand characteristics at 10-, 20- and 40-year intervals; a detailed description of the proposed forest management activities including stand improvement practices, site preparation, harvesting, site improvements (roads, stream crossings, landings, loading areas, skid trails); regeneration and reforestation practices; proposed herbicide treatments; silvicultural treatment alternatives; if trees will be planted to accomplish reforestation, seed source records if such records are available; implementation instructions; measures to prevent the potential spread of exotic (non-indigenous to North America) plant species or Phragmites in wetlands; and finally, a description of the forest products that will be harvested. N.J.A.C. 7:50-6.44(b)7iv requires the submission of a scaled map of the entire parcel of land where the forestry activity will take place; including the location of all property lines, physical site features (roads, streams and structures), soils types; and the location of the area and acreage where each

forestry management practice will be performed; and a legend that defines all map symbols.

Since the objective of the proposed amendments is to define the range of silvicultural practices that can be employed for management of Pinelands forests within the body of the rules, it is no longer necessary to refer to the Society of American Foresters Forestry Handbook. Therefore, that requirement, previously set forth at N.J.A.C. 7:50-6.43(b)12, is being deleted.

As noted above, under the proposed amendments the application requirement for forestry operations on parcels of land approved for woodland assessment and forestry operation on a parcel neither enrolled in the Forest Stewardship Program nor approved for woodland assessment are being combined. Consequently, the application requirements for parcels not approved for woodland assessment, currently set forth at N.J.A.C. 7:50-6.43(c), are being eliminated.

N.J.A.C. 7:50-6.45, Forestry Standards, which will become N.J.A.C. 7:50-6.46 under the proposed amendments, is being revised to eliminate provisions that indicate that unless specifically addressed, management programs and minimum standards of the forestry rules shall not apply to forestry operations. In addition, N.J.A.C. 7:50-6.45(a)1, requiring that all silvicultural practices conform to the standards set forth in the Society of American Foresters Forestry Handbook, is deleted under the proposed amendments since this reference is no longer necessary, as noted above. This paragraph is replaced with the provisions currently at N.J.A.C. 7:50-6.46(a)3, which have been modified to replace “silvicultural and reforestation practices” with “forestry activities” but continue to

indicate that such activities shall serve to maintain Pinelands native forest types. N.J.A.C. 7:50-6.45(a)5, which is now N.J.A.C. 7:50-6.46(a)4, has been revised to reference Appendix I – Endangered Animals, dated March 2006 of the Forestry Management Practices Report as a resource that can be used to help guide the design of forestry practices so that they comply with the CMP standards that address impacts on threatened and endangered plants and wildlife (N.J.A.C. 7:50-6.27 and 6.33). N.J.A.C. 7:50-6.45(a)6, which is now proposed N.J.A.C. 7:50-6.46(a)5, will continue to require that forestry activities comply with the standards for land application of waste set forth elsewhere in the CMP; however, an exception is added to address situations which such land application activities may be authorized as part of a forestry operation consistent with the CMP. N.J.A.C. 7:50-6.45(a)9, now proposed N.J.A.C. 7:50-6.46(a)7, continues to require the establishment or maintenance of vegetated streamside management zones except where Atlantic White Cedar is proposed to be harvested. This exception will now also apply where Atlantic White Cedar is proposed to be established, restored or regenerated as well.

The proposed amendments introduce a new N.J.A.C. 7:50-6.46(a)9 that describes the standards that will be applied to silvicultural practices used for site preparation, either before or after harvesting. N.J.A.C. 7:50-6.46(a)9i indicates that an undisturbed, 25-foot wide buffer must be maintained along roads to catch soils particles during site preparation of areas where the slope is greater than 10%. The objective of which is to reduce the potential for soil erosion and water quality disturbance. The herbicide treatment provisions, previously at N.J.A.C. 7:50-

6.45(a)8 and now at N.J.A.C. 7:50-6.46(a)9ii, have been clarified and expanded. Specifically, N.J.A.C. 7:50-6.46(a)9ii(3) indicates that herbicide treatments shall be permitted provided that the control of competitive plant species by other, non-chemical means is not “*practical*” whereas the current CMP requirement uses the term “*feasible*”. It is important to emphasize the distinction being made in this context. *Feasible* is generally construed to imply that an action is technically possible with little weight placed on economic considerations. However, *practical* considers technical aspects while giving greater weight to economic factors. Therefore, the proposed language makes it clear that a determination of whether non-chemical methods are practical will be based on both technical **and** economic considerations. Proposed N.J.A.C. 7:50-6.46(a)9ii(5) is being added to indicate that in Pine-Shrub Oak Native Forest Types, herbicide treatments shall be permitted only in areas where pine regeneration is the management objective identified in the forestry application submitted pursuant to N.J.A.C. 7:50-6.44. All such herbicide treatments shall be applied in a targeted manner so that there will be no significant reduction in tree or shrub-oak re-sprouting outside these areas. Disking will not be permitted in Pine Plains Native Forest Types and will only be permitted in Pine-Shrub Oak Native Forest Types where pine regeneration is the management objective identified in the forestry application submitted pursuant to N.J.A.C. 7:50-6.44. Furthermore, disking will not be permitted in wetlands except when it’s necessary to establish, restore or regenerate Atlantic White Cedar, in which case it will only be permitted on shrub-dominated parcels and recently abandoned agricultural lands. Disking must follow land contours when slopes are

evident. Similarly, N.J.A.C. 7:50-6.46(a)9v indicates that root-raking shall be permitted but not in Pine-Shrub Oak Native Forest Types or Pine Plains Native Forest Types. Furthermore, root-raking will not be permitted in wetlands except when it's necessary to restore or regenerate Atlantic White Cedar in which case it will only be permitted on shrub-dominated parcels and recently abandoned agricultural lands. Finally, debris from root-raking must not be piled in wetlands. N.J.A.C. 7:50-6.46(a)9vi indicates that bedding is permitted only in recently abandoned, cultivated wetlands where there are no established Pinelands Native Forest types. N.J.A.C. 7:50-6.46(a)9vii indicates that drum chopping is permitted but in Pine Plains Native Forest Types drum chopping can only be used to create road shoulder fuel breaks or to create scattered, early successional habitats under 2-acres in size. No more than two drum passes will be permitted (except to create scattered early successional habitats under 2-acres in size). Furthermore, unfilled drums must be used during the dormant season. Drum chopping must run up and down the slope on a parcel so that depressions made by the cleats and chopper blades run parallel to the contours of the land so that channeled surface erosion is minimized. Similarly, cleat and chopper blade indentations must run parallel to a wetland or water body. Finally, short-radius 180° turns at the end of straight passes should be avoided.

A new N.J.A.C. 7:50-6.46(a)10 describes the standards that will be applied to harvesting practices. N.J.A.C. 7:50-6.46(a)10i indicates that clear cutting is permitted but not in Pine Plains Native Forest Types. Where clear cutting is permitted, it will be limited to 300 acres or 5% of a parcel, whichever is greater,

during any forestry permit period (which typically runs for 10 years). Where clear cutting occurs, a minimum 50'-wide buffer strip must be maintained between the clear cut and the parcel boundaries. A buffer must also be provided between each 25-acre or larger clear cut and other 25-acre or larger clear cuts, coppice cuts and seed tree cuts. The buffer between two 25-acre harvests must be 50 feet wide and increase by 1' in width for each additional acre of that harvest above 25 to a maximum buffer width of 300'. The edges of a clear cut must be contoured unless the boundary of the clear cut serves as a firebreak in which case straight edges may be used. Finally, a minimum of 18 dead snags per acre of at least 10" D.B.H. and 6' in height must be left on the parcel for a minimum of 5 years.

N.J.A.C. 7:50-6.46(a)10ii, relating to coppice cuts, and N.J.A.C. 7:50-6.46(a)10iii, relating to seed tree cuts, indicate that coppice and seed tree cutting is permitted in all Pinelands native forest types. Where such cuts are permitted they will be limited to 500 acres or 10% of a parcel, whichever is greater, during any permit period. As with clear cuts, where coppice cuts or seed tree cuts occur, a minimum 50'-wide buffer strip must be maintained between the cuts and the parcel boundaries. A buffer must also be provided between each 25-acre or larger coppice or seed tree cut and other 25-acre or larger clear cuts, coppice cuts and seed tree cuts. The buffer between two 25-acre harvests must be 50 feet wide and increase by 1' in width for each additional acre of that harvest above 25 acres to a maximum buffer width of 300'. The edges of a coppice or a seed tree cut must be contoured unless the boundary of the cut serves as a firebreak in which case straight edges may be used. Finally, a minimum of 18 dead snags per acre of at

least 10" D.B.H. and 6' in height must be left on the parcel for a minimum of 5 years. In the case of seed tree cuts, at least 7 dominant residual seed trees shall be retained per acre and distributed evenly throughout the parcel.

N.J.A.C. 7:50-6.46(a)10iv indicates that shelterwood cutting, group selection and individual selection are permitted in all Pinelands Native Forest Types.

A new N.J.A.C. 7:50-6.46(a)11 describes the standards that will be applied to forest regeneration. N.J.A.C. 7:50-6.46(a)11i indicates that natural regeneration is permitted in all Pinelands Native Forest Types. Natural regeneration is required in the Pine Plains Native Forest Type except where artificial regeneration is used.

N.J.A.C. 7:50-6.46(a)11ii indicates that artificial regeneration is permitted in all Pinelands Native Forest Types provided that non-native cutting or seeds are not used; hybrid cuttings are permitted only if they are obtained from a locally native, naturally occurring hybrid that will be planted within its natural range and habitat; cuttings must be collected and used in a manner that ensures genetic diversity. In the Pine Plains Native Forest Type, artificial regeneration may only be used to restore sites that have been extensively disturbed and only if the seeds that are used are obtained from the immediate vicinity and collected from genetically similar sources.

A new N.J.A.C. 7:50-6.46(a)12 indicates that slash that remains after site preparation and harvesting must be retained in piles on the parcel, distributed throughout the parcel, removed from the parcel or burned. A new N.J.A.C. 7:50-6.46(a)13 indicates that thinning, as an intermediate treatment to maintain an

understory of native plants and/or manage stand composition, density, growth and spatial heterogeneity, is permitted in all Pinelands Native Forest Types.

Finally, N.J.A.C. 7:50-6.47 (previously N.J.A.C. 7:50-6.46) of the proposed forestry rules provides that forestry practices undertaken on behalf of any State agency on State conservation lands must seek to maintain biological diversity and landscape integrity by conserving existing Atlantic White Cedar stands and exemplary forest stands. By combining and expanding the provisions previously at N.J.A.C. 7:50-6.46(b) and N.J.A.C. 7:50-6.46(c) into a new N.J.A.C. 7:50-6.47(b), the proposed amendments make it clear that the Commission has latitude to allow modifications of its standards for State forestry practices if such modifications are necessary to facilitate specific research efforts designed to regenerate Atlantic White Cedar, or create habitat patches for threatened and endangered plant and animal species. The amendments also expand the Commission's ability to allow such modification of its standards in order to facilitate the assessment of the ecological impacts of silvicultural techniques. The Forestry Advisory Committee concluded that opportunity to perform such experiments was necessary in light of the absence of sufficient data documenting the outcome of many of the silvicultural techniques that may be used to conduct forest management. Additionally, the proposed amendments stipulate that in order for the Commission to approve modifications to facilitate Atlantic White Cedar regeneration research, habitat patch creation or silvicultural techniques evaluation, these efforts must include short- and long-term monitoring, the results of which must be documented and reported to the Commission.

Furthermore, this paragraph states that the protocols presented in the “Recommended Forestry Management Practices Report,” Appendix III – Research and Monitoring, dated March 2006, as amended and supplemented, may be used to guide the development of such research and monitoring techniques. It is important to point out that forestry proposals on State lands must meet the requirements of N.J.A.C. 7:50-6.47 as well as all of the forestry standards that will now be set forth in N.J.A.C. 7:50-6.46.

It is anticipated that the Forestry Advisory Committee will continue to participate in the review of forestry applications before the Commission and that this role will be expanded to encompass review not only of State forest management plans and forestry practices but private forestry applications as well. In addition, the FAC will audit the permitting process as the new rules are implemented and periodically report to the Commission on amount of forestry activity undertaken throughout the Pinelands. Finally, the FAC has offered to conduct a comprehensive review of the forestry rules 5 years after they take effect to determine the extent to which they rules enable forestry activity.

It is important to emphasize that the proposed amendments are not intended to in any way control or limit prescribed burning or the establishment of fuel and/or fire breaks that are expressly intended to reduce the risks and hazards associated with wildfires. Such activities typically do not involve planting, cultivating or harvesting trees to produce wood products and therefore do not fall within the definition of “forestry” set forth at N.J.A.C. 7:50-2.11. Also, N.J.A.C. 7:50-4.1(a)17 expressly lists prescribed burning and the clearing and maintenance

of fire breaks as activities for which an application to the Commission is not required. Neither this application exemption, nor those set forth at N.J.A.C. 7:50-4.1(a)16 relating to specific forestry activities, are modified by the proposed amendments.

As the Commission has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement, pursuant to N.J.A.C. 1:30-3.3(a)5.

Social Impact

The proposed amendments are expected to provide positive benefits to the forest industry and traditional cultural activities. The amendments are expected to have no adverse social impacts. Society as a whole benefits from the protection of the Pinelands and the proposed amendments are designed to do just that. Furthermore, active forest management will help to significantly reduce wildfire hazards and thereby address a considerable health and safety risk that is particularly acute at points throughout the Pinelands where forest boundaries and human settlements coincide. Consequently, any social impacts that do result from the enactment of the proposed amendments are expected to be positive.

Economic Impact

One of the objectives of the proposed amendments is to encourage more forestry management activities to occur on private as well as public lands within the Pinelands. To the extent that this objective is achieved it will potentially

increase opportunities for commercial forestry operations to thrive, which, in turn, should result in a positive impact on the Pinelands economy. It is noted that the new rules do establish new and added application requirements and set harvest limits that do not exist under the current rules. Such requirements may result in greater expense to develop forestry proposals and limit the number of acres that can be harvested on any single property during a given permit period. However, such impacts should be offset by the greater opportunity that the proposed amendments provide to conduct forestry activity. Furthermore, with respect to the new harvesting limitations, the Commission believes it is unlikely these limitations will affect the vast majority of private landowners and applicants in the Pinelands Area. The proposed harvesting limitations (see N.J.A.C. 7:50-6.46(a)10i-iii) allow for a total of 1,300 acres to be harvested during any forestry permit period, 300 acres through clearcutting, 500 acres through coppicing and 500 acres through seed tree cutting. Alternately, a maximum of 25 percent of a parcel may be subject to harvesting if that equates to more than 1,300 acres. Based on its nearly 30 years of experience reviewing forestry applications in the Pinelands Area, the Commission believes it will be the rare private landowner who proposes or is even able to accomplish harvests of this size. The applicant most likely to be affected is the State, given its large landholdings in the Pinelands Area.

Environmental Impact

The proposed amendments will have a positive impact on the Pinelands environment. The CMP recognizes that proper forest management can accomplish

important ecological as well as economic objectives. Forest management techniques such as ecologically-based harvesting and reforestation can help to maintain and perpetuate the patterns of plant and animal species distribution in the Pinelands by imitating the disturbances that helped to create these patterns. Furthermore, the proposed regulations incorporate environmental protection safeguards by establishing limits on site preparation, harvesting and reforestation practices, such as clear-cutting, disking, drum-chopping and the use of non-native and hybrid seeds or cuttings, the specific intent of which is to protect rare Pinelands forest types. Similarly, the proposed regulations help to ensure that forestry management will benefit threatened or endangered animal species by limiting the periods when certain invasive techniques may be used (i.e. only unfilled drums may be used during the dormant season to avoid disturbing hibernacula) or requiring that dead snags be retained on site following harvests, which create potential habitat.

It should be emphasized that the proposed amendments are also designed to encourage the preparation comprehensive forest management plans for all State lands. (In the Pinelands, State-owned open-space land comprises approximately 343,000 acres. Source: NJDEP Green Acres Program, August 2008.) The objective is to promote forest management at a landscape level in order to best improve forest health and protect and increase habitat for rare and endangered plants and animals. Such coordinated and comprehensive planning will result in considerable positive environmental benefit.

Federal Standards Statement

Section 502 of the National Parks and Recreation Act of 1978 (16 U.S.C. §471i) called upon the State of New Jersey to develop a comprehensive management plan for the Pinelands National Reserve. The original plan adopted in 1980 was subject to the approval of the United States Secretary of the Interior, as are all amendments to the plan.

The Federal Pinelands legislation sets forth rigorous goals that the plan must meet, including the protection, preservation and enhancement of the land and water resources of the Pinelands. The proposed amendments are designed to meet those goals by encouraging the use of effective management techniques that are intended to sustain and improve the health of Pinelands forests.

Jobs Impact

To the extent that the proposed amendments result in increased forest management, they may help to stimulate job growth in commercial forestry businesses that would perform these management practices on private properties. However, any job growth that does occur is not expected to be extensive.

Agriculture Industry Impact

The proposed amendments are expected to have limited but positive impacts on the agriculture industry in the Pinelands. Farmers within the Pinelands who cultivate trees for resale to landscapers or nurseries, are considered to be engaged in horticultural activities in accordance with the definition of “Agricultural or horticultural purpose or use” set forth in the CMP. These types of

activities are not subject to the current forestry application requirements and the proposed amendments do not alter this definition in any way. The proposed amendments are intended to provide greater flexibility to harvest and manage forests for productive purposes; consequently, for those farmers who retain a portion of their property as woodlots, the amendments will result in increased opportunity to realize a financial return from these lands. Therefore the proposed amendments should positively benefit the agriculture industry in the Pinelands.

Regulatory Flexibility Analysis

Most businesses in the Pinelands may be characterized as small in size and employment compared to the remainder of New Jersey. It is expected that many landowners and/or forestry consultants seeking approval of forestry activities in the Pinelands Area will constitute small businesses. However, the proposed amendments and new rules do not differentiate by size of business and thus impact on all businesses equally.

The proposed amendments do require that an applicant submit more detailed information to the Commission as part of a forestry application than was previously required. There will likely be an additional cost to do so; however, it is not possible for the Commission to estimate such costs as they will vary widely based on the size of the property involved, the proposed forestry activities and a number of other factors. The proposed amendments also establish maximum harvesting limits for clearcuts, seed tree cuts and coppicing. Previous CMP forestry standards did not include such absolute limitations. The imposition of these limitations could conceivably constrain the forestry activities of a small

business. However, the Commission believes this is likely to be the exception, rather than the rule, given its nearly 30 years of experience with forestry operations in the Pinelands Area, the size of private landholdings and the relatively large amount of lands that would be permitted to be harvested when clearcuts, seed tree cuts and coppicing are considered in a cumulative fashion.

The intent of the proposed amendments and new rules is to encourage more forestry activity, to provide greater clarity in terms of what site preparation, harvesting and management practices are appropriate in the range of Pinelands forest types and to afford greater flexibility to landowners who harvest and manage forests for productive purposes. This enhancement of potential financial return is expected to more than offset any additional costs associated with application preparation or harvesting limits.

Smart Growth Impacts

Executive Order No. 4 (2002) requires State agencies that adopt, amend or repeal any rule adopted pursuant to the Administrative Procedure Act (N.J.S.A. 52:14B-4(a)) to describe the impact of the proposed rule on the achievement of smart growth and implementation of the New Jersey State Development and Redevelopment Plan (State Plan). The Commission has evaluated the proposed amendments which are the subject of this rulemaking effort to determine the nature and extent of their impact on smart growth and implementation of the State Plan. To the extent that Smart Growth promotes the integration of the built environment, habitat protection and preservation of natural resources, this

amendment is consistent with and advances the State Plan smart growth policies and objectives.

Housing Affordability Impacts

In accordance with Subsection (a) of Section 4 of P.L.1968, c.410 (C.52:14B-4), all proposed rules amendments must consider such amendments' potential impacts on housing affordability. The proposed amendments to the current Forestry rules in the CMP are expected to have no impact on costs associated with housing. This conclusion is based, in part, upon the fact that the proposed amendments are intended to perpetuate existing forested areas through the application of proper management practices, including harvesting. Tree harvesting is construed to be a forest regeneration technique. Under the current provisions of the CMP, neither the removal of trees necessitated by the development of a parcel for residential use nor the removal of trees located on a parcel of land one acre or less in size on which a dwelling has been constructed is defined as forestry. Consequently the proposed amendments will have no effect on the production of housing. Moreover, the Pinelands Preservation Area District and Forest Area, where forest management activity would be most prevalent, are not the portions of the Pinelands Area where affordable housing is targeted or anticipated. Therefore, the proposed amendments will neither discourage nor encourage housing development and, as a result, are expected to have no housing affordability implications.

Smart Growth Development Impacts

In accordance with Subsection (a) of Section 4 of P.L.1968, c.410 (C.52:14B-4), all proposed rules amendments must describe: (1) the type and number of housing units to which the proposed rule will apply, (2) the estimated increase or decrease in the availability of affordable housing that will be affected by the proposed rule; and (3) whether the proposed rule will affect, in any manner, new construction with Planning Areas 1 or 2 or within designated centers under the State Development and Redevelopment Plan.

It is extremely unlikely that the proposed amendments to Forestry provisions of the CMP will have any impact on the production of new housing units within the Pinelands. As noted above, this conclusion is based upon the fact that neither the removal of trees necessitated by the development of a parcel nor the removal of trees located on a parcel of land one acre or less in size on which a dwelling has been constructed is defined as forestry under the current CMP provisions. Under the proposed amendments, these provisions will remain unchanged. The proposed amendments will not affect new construction in Planning Areas 1 and 2 as designated by the State Development and Redevelopment Plan because these State Planning Areas do not exist in the Pinelands Area. In terms of designated centers, all Pinelands Towns and Villages in the Pinelands Area are accorded such status by virtue of the 1999 Memorandum of Agreement between the Pinelands Commission and the State Planning Commission. However, as noted above, the proposed amendments will

have no affect on these areas in view of the fact that removing trees to permit development is not viewed as forestry under the CMP.

As the Commission has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement, pursuant to N.J.A.C. 1:30-3.3(a)5.

Additions to existing rules are indicated by underlining. Existing rule provisions to be deleted are shown in [brackets].

7:50-2.11 Definitions

When used in this Plan, the following terms shall have the meanings ascribed to them.

...

“Artificial regeneration” means the establishment of tree cover through direct or supplemental seeding or planting.

“Bedding” means a silvicultural practice involving the preparation of land before planting in the form of small mounds so as to concentrate topsoil and elevate the root zone of seedlings above temporary standing water.

“Broadcast Scarification” means a silvicultural practice involving the dragging of cut trees or other objects across a parcel to remove or reduce above-ground shrub cover, debris, leaf litter and humus without disturbance to mineral soil horizons and associated roots.

“Clearcutting” means a silvicultural practice involving removal of an entire forest stand in one cutting for purposes of regeneration either obtained artificially, by natural seed or from advanced regeneration. Clearcutting typically results in the removal of all woody vegetation from a parcel in preparation for the establishment of new trees; however, some trees may be left on the parcel.

“Coppicing” means a silvicultural practice involving the production of forest stands from vegetative sprouting by the trees that are harvested (stump sprouts, root suckers, and naturally rooted layers). Coppicing typically involves short rotations with dense stands of short trees.

“Disking” means a silvicultural practice involving the drawing of one or more heavy, round, concave, sharpened, freely rotating steel disks across a site for the purposes of cutting through soil and roots or cutting and turning a furrow over an area.

“Drum chopping” means a silvicultural practice involving the drawing of a large cylindrical drum with cutting blades mounted parallel to its axis across a site to break up slash, crush scrubby vegetation prior to burning or planting or to chop up and disturb the organic turf and roots in the upper foot of soil.

“Forestry” means the planting, cultivating and harvesting of trees for the production of wood products, including firewood or for forest health. It includes such practices as reforestation, site preparation and other silvicultural practices, including but not limited to artificial regeneration, bedding, broadcast scarification, clearcutting, coppicing, disking, drum chopping, group selection, individual selection, natural regeneration, root raking, seed tree cut, shelterwood

cut and thinning. For purposes of this definition, the following activities shall not be defined as forestry:

1.-6. (No change.)

“Forest stand” means a uniform group of trees of similar species, composition, size, [and] age and similar forest structure.

“Forestry management plan”. See N.J.A.C. 7:50-[4.2(b)6ii] 6.44(b)7.

“Group selection” means a silvicultural practice whereby a group of trees is periodically selected to be removed from a large area so that age and size classes of the reproduction are mixed.

“Individual selection” means a silvicultural practice whereby single trees are periodically selected to be removed from a large area so that age and size classes of the reproduction are mixed.

“Natural regeneration” means the establishment of a plant or plant age class from natural seeding, sprouting, suckering or layering.

“Root raking” means a silvicultural practice involving the drawing of a set of tines, mounted on the front or trailed behind a tractor, over an area to thoroughly disturb tree and vegetation roots and/or to collect stumps and slash.

“Seed tree cut” means a silvicultural practice involving the removal of old forest stand in one cutting, except for a small number of trees left singly, in small groups or narrow strips, as a source of seed for natural regeneration.

“Shelterwood cut” means a silvicultural practice involving the establishment of a new, essentially even-aged forest stand from release, typically in a series of

cuttings, of new trees started under the old forest stand. A shelterwood cut involves the establishment of the new forest stand before the old forest stand is removed.

“Thinning” means a silvicultural practice involving the removal of competing trees to favor certain species, sizes and qualities of trees.

7:50-6.41 Purpose

Forest vegetation represents a unique and potentially financially valuable part of the essential character of the Pinelands. If they are properly managed, Pinelands forests represent significant economic opportunities to their owners while perpetuating the overall ecological value of the Pinelands. This Part encourages forestry for both economic and conservation purposes on public and private lands and also establishes standards for commercial forestry that [will] seek to maximize forest land values and provide for the long-term economic and environmental integrity of the Pinelands.

7:50-6.43 Pinelands Native Forest Types

(a) For purposes of this Part, the following constitute Pinelands Native Forest Types:

1. Upland Native Forest Types:

- i. Oak-dominated Native Forest Type. This forest type is found throughout the Pinelands in areas where fires were naturally infrequent, such as broad uplands with loamy soil, mesic coastal

sites, the Pinelands periphery, or in the lee of wetlands firebreaks.

This forest type has the following characteristics:

- (1) Tree-oak cover is 50-100 percent. Oak species can include various combinations of white oak, scarlet oak, black oak, chestnut oak, and post oak throughout the Pinelands, plus southern red oak, willow oak and swamp chestnut oak in peripheral or southern parts of the Pinelands, especially mesic sites;
- (2) Pine cover (pitch pine, shortleaf pine and rarely Virginia pine) is typically under fifty percent and often under five percent;
- (3) Hickory, mesophytic hardwoods (red maple sweet gum, beech, tulip poplar, flowering dogwood) and holly can be present in small amounts in peripheral or southern parts of the Pinelands, especially mesic sites;
- (4) Total canopy cover is typically between 75 and 100 percent, but less canopy cover can occur;
- (5) Shrub oak cover (blackjack oak, scrub oak) is absent or under five percent; and
- (6) Shrub cover is dominated by black huckleberry and lowbush blueberry, as well as dangleberry, mountain laurel, sweet pepperbush or inkberry in more mesic sites.

- ii. Pine-Dominated Native Forest Type. This forest type is found in the central Pinelands where fires were infrequent or moderately frequent, or where a cutting or clearing history favored regeneration of pine over tree-oak. This forest type has the following characteristics:
- (1) Pine cover (pitch pine, shortleaf pine and rarely Virginia pine) is typically over 50 percent. Pine cover can be as low as 25 percent in some open canopy forms of pine upland;
 - (2) Tree-oak cover ranges from 25 to 50 percent in pine-oak forest, five to 25 percent in pine-oak upland and under five percent in pine upland, depending on forest stand history. Oak species can include black oak, post oak, scarlet oak, chestnut oak, white oak and southern red oak;
 - (3) Total canopy cover is typically between 75 and 100 percent, but less canopy cover can occur;
 - (4) Shrub oak cover is absent or under five percent;
 - (5) Low shrub cover is dominated by black huckleberry and lowbush blueberry in most types; and
 - (6) One pine upland type, pine-sedge upland, is often associated with old clearings and has a more open pine canopy, minimal shrub cover and a ground cover dominated by Pennsylvania sedge or grasses.

iii. Pine-Shrub Oak Native Forest Type. This forest type is found in the large, frequently burned firesheds of the central Pinelands, or on low sandy terraces adjacent to pitch pine lowlands or other wetlands or the central Pinelands. This forest type has the following characteristics:

- (1) Pine cover (pitch pine, shortleaf pine) is over 25 percent and typically 50-75 percent;
- (2) Tree-oak cover is absent or under 5 percent in most pine-shrub oak “barrens” types, and 5-25 percent in pine-oak-shrub oak “woodland” types. If present, tree-oak species often include black oak, post oak, arborescent blackjack oak, and scarlet oak, and rarely chestnut oak, white oak and southern red oak;
- (3) Shrub oak cover (blackjack oak, scrub oak) is over five percent and is typically between 25 and 100 percent;
- (4) Low shrub cover is dominated by black huckleberry and lowbush blueberry; and
- (5) Ground cover often includes early successional species such as bearberry, pyxie moss, pine barrens hudsonia, sandwort, Pennsylvania sedge, little bluestem, and lichens, especially where an open pine canopy is maintained.

- iv. Pine Plains Native Forest Type. This forest type is found only in the central Pinelands and is characterized by a dense sprout-growth of dwarf serotinous pitch pine often less than six feet tall. This forest type has the following characteristics:
- (1) Dwarf pitch pine cover dominates this shrubland canopy and is typically over 50 percent, but may drop below 50 percent for a few years after top killing fire. Heights are typically between three to twelve feet but can reach fifteen to eighteen feet at ecotones. Serotiny is near 100 percent;
 - (2) Shrub oak cover (blackjack oak, scrub oak) is over five percent, and usually between 25 and 50 percent;
 - (3) Arborescent pine cover over six meters tall and tree-oak cover are absent or rare;
 - (4) Low shrub cover is dominated by black huckleberry and lowbush blueberry; and
 - (5) Ground cover includes early successional species such as bearberry, pyxie moss, pine barrens hudsonia, Pennsylvania sedge, little bluestem, and lichens; also broom crowberry locally in sandy openings.
- v. Upland Savannas and Grassland Native Forest Type. This forest type is largely the product of succession after severe man-made

disturbance such as agriculture. This forest type has the following characteristics:

- (1) Ground cover is dominated by native grasses, especially little bluestem, switchgrass, panic grasses, broomsedge, wiregrass and/or Pennsylvania sedge;
- (2) Shrub cover is less than 25 percent and can include sweetfern, black huckleberry and lowbush blueberry;
- (3) An open tree stratum of pine or oak exists with between five and 25 percent cover, although greater cover may be possible.

2. Wetland Native Forest Types, as described at N.J.A.C. 7:50-6.4 and 6.5.

7:50-[6.43] 6.44 Application requirements

- (a) The filing of an application with the Pinelands Commission pursuant to N.J.A.C. 7:50-4.13 or 4.33 for forestry operations on those parcels of land enrolled in the New Jersey Forest Stewardship Program shall not be required. Such forestry operations shall continue to be subject to the standards of this Part, the local permitting procedures required by N.J.A.C. 7:50-3.39(a)5 and the review procedures of N.J.A.C. 7:50-4.19 and 4.22 or 4.37 and 4.40.

(b) Unless the submission requirements are modified or waived pursuant to N.J.A.C. 7:50-4.2(b)3, [an application] all other forestry applications [filed pursuant to N.J.A.C. 7:50-4.13 or 4.33 for a forestry operation on a parcel of land approved for woodland assessment] shall include at least the following information:

- 1.-2. (No change.)
3. The [legal] description, including block and lot designation and street address, if any, of the subject parcel;
- 4.-6. (No change.)
7. [A scaled map or statement indicating how the standards set forth in N.J.A.C. 7:50-6.45(a)2, 3, 4, 6, 9 and 10 will be met;] A forestry management plan that includes, as appropriate:
 - i. A cover page for the plan containing:
 - (1) The name, mailing address and telephone number of the owner of the subject parcel;
 - (2) The municipality and county in which the subject parcel is located;
 - (3) The block and lot designation and street address, if any, of the subject parcel;
 - (4) The name and address of the forester who prepared the plan, if not prepared by the owner of the subject parcel;
and

- (5) The date the plan was prepared, subsequent revision dates and the period of time the plan is intended to cover;
- ii. A clear and concise statement of the owner's objectives for undertaking the proposed forestry activities, including a description of the short- (5 years) and long-term (20 years) objectives for all proposed silvicultural techniques that will be used to manage the parcel;
- iii. A description of the existing conditions of the subject parcel and of each forest stand in which a proposed activity, prescription or practice will occur. These stand descriptions shall include photographs of each stand taken at eye level showing the location of all Pinelands Native Forest Types, as identified at N.J.A.C. 7:50-6.43, and shall be keyed to an activity map that shall include, as appropriate, the following information:
 - (1) The number of acres;
 - (2) The general condition and quality of each stand;
 - (3) The overall site quality, relative to the management goals and objectives identified in (b)7ii above;
 - (4) An inventory and map of Pinelands Native Forest Types with Native Forest Types broken into "stands", including information on type, size and volume by species;
 - (5) Age of representative trees;

- (6) The species composition, including overstory, understory, ground layer structure and composition;
- (7) Stand cohort composition;
- (8) Percent cover;
- (9) Basal area;
- (10) The structure, including age classes, diameter breast height (DBH) classes and crown classes;
- (11) The condition and species composition of advanced regeneration when applicable;
- (12) A stocking table showing the stocking levels, growth rates and volume;
- (13) Projections of intended future stand characteristics at 10, 20, and 40-year intervals;
- (14) A description of the forestry activities, silvicultural prescriptions, management activities and practices proposed during the permit period and the acreage proposed for each activity. These may include, but are not necessarily limited to, a description of:
 - (A) Stand improvement practices;
 - (B) Site preparation practices;
 - (C) Harvesting practices;

- (D) Regeneration and reforestation practices;
 - (E) Improvements, including road construction, stream crossings, landings, loading areas and skid trails;
 - (F) Herbicide treatments;
 - (G) Silvicultural treatment alternatives;
 - (H) If planting will occur to accomplish reforestation, the application shall include seed sources records, if such records are available;
 - (I) Implementation instructions; and
 - (J) Measures that will be taken to prevent the potential spread of exotic plant species or Phragmites into wetlands.
- (15) A description, if appropriate, of the forest products to be harvested, including volume expressed in cords and board feet; diameter breast height (DBH) classes and average diameter; age; heights; and number of trees per acre; and
- iv. A map of the entire parcel which includes the following:
- (1) The owner's name, address and the date the map was prepared;
 - (2) An arrow designating the north direction;

- (3) A scale which is not smaller than one inch equals 2,000 feet or larger than one inch equals 400 feet;
 - (4) The location of all property lines;
 - (5) A delineation of the physical features such as roads, streams and structures;
 - (6) The identification of soil types (a separate map may be used for this purpose);
 - (7) A map inset showing the location of the parcel in relation to the local area;
 - (8) Clear location of the area and acreage in which each proposed activity, prescription or practice will occur. If shown on other than the property map, the map or maps shall note the scale, which shall not be smaller than one inch equals 2,000 feet or larger than one inch equals 400 feet, and shall be appropriately keyed to the property map;
and
 - (9) A legend defining the symbols appearing on the map.
8. A letter from the Office of Natural Lands Management identifying any threatened or endangered plants or animals reported on or in the immediate vicinity of the parcel and a detailed description by the applicant of the measures proposed [by the applicant] to meet the standards set forth in N.J.A.C. 7:50-6.27[, and 6.33] and this Part;

9. (No change.)
10. A statement identifying the type, location and frequency of any proposed herbicide treatments and how such treatments will comply with the standards set forth in N.J.A.C. [7:50-6.45(a)8] 7:50-6.46(a)9ii;
11. (No change.)
- [12. Written certification from the New Jersey State Forester that the proposed forestry activities adhere to the silvicultural practices contained in the Society of American Foresters Forestry Handbook, Second Edition, incorporated herein by reference, as contained in pages 413 through 455, dated 1984, as amended (available at the principal office of the Commission);]
- [13.] 12. Written comments from the New Jersey State Forester concerning the extent to which the proposed forestry activities are consistent with the guidelines provided in the New Jersey Forestry and Wetlands Best Management Practices Manual developed by the New Jersey Department of Environmental Protection, dated October 1995, as amended. Any such comments which indicate that the proposed activities are not consistent with said Manual must be addressed by the applicant in terms of their potential impact on the standards set forth in N.J.A.C. [7:50-6.45(a)9 and 10)] 7:50-6.46.

[14. A copy of the woodland management plan, the scaled map of the parcel and a completed woodland data form, prepared pursuant to the farmland assessment requirements of N.J.A.C. 18:15-2.7 through 2.15.]

[(c) Unless the submission requirements are modified or waived pursuant to N.J.A.C. 7:50-4.2(b)3, an application filed pursuant to N.J.A.C. 7:50-4.13 or 4.33 for a forestry operation on a parcel of land that has not been approved for woodland assessment shall include at least the following information:

1. The information required in (b)1 through 14 above; and
2. A forestry activity plan which includes, as appropriate:
 - i. A cover page for the plan containing:
 - (1) The name, mailing address and telephone number of the owner of the subject parcel;
 - (2) The municipality and county in which the subject parcel is located;
 - (3) The block and lot designation and street address, if any, of the subject parcel;
 - (4) The name and address of the forester who prepared the plan, if not prepared by the owner of the subject parcel; and
 - (5) The date the plan was prepared and the period of time the plan is intended to cover;

- ii. A clear and concise statement of the owner's objectives for undertaking the proposed forestry activities, silvicultural prescriptions and management practices;
- iii. A description of each forest stand in which a proposed activity, prescription or practice will occur. These stand descriptions shall be keyed to an activity map and shall include, as appropriate, the following information:
 - (1) The number of acres;
 - (2) The species composition, including overstory and understory;
 - (3) The general condition and quality;
 - (4) The structure, including age classes, diameter breast height (DBH) classes and crown classes;
 - (5) The overall site quality;
 - (6) The condition and species composition of advanced regeneration when applicable; and
 - (7) The stocking levels, growth rates and volume;
- iv. A description of the forestry activities, silvicultural prescriptions, management activities and practices proposed during the permit period. These may include, but are not necessarily limited to, a description of:
 - (1) Stand improvement practices;
 - (2) Site preparation practices;

- (3) Harvesting practices;
 - (4) Regeneration and reforestation practices;
 - (5) Improvements, including road construction, stream crossings, landings, loading areas and skid trails; and
 - (6) Herbicide treatments;
- v. A description, if appropriate, of the forest products to be harvested, including the following:
- (1) Volume: cords, board feet;
 - (2) Diameter breast height (DBH) classes and average diameter;
 - (3) Age;
 - (4) Heights; and
 - (5) Number of trees per acre; and
- vi. A property map of the entire parcel which includes the following:
- (1) The owner's name, address and the date the map was prepared;
 - (2) An arrow designating the north direction;
 - (3) A scale which is not smaller than one inch equals 2,000 feet or larger than one inch equals 400 feet;
 - (4) The location of all property lines;
 - (5) A delineation of the physical features such as roads, streams and structures;

- (6) The identification of soil types (a separate map may be used for this purpose);
- (7) A map inset showing the location of the parcel in relation to the local area;
- (8) Clear location of the area and acreage in which each proposed activity, prescription or practice will occur. If shown on other than the property map, the map or maps shall note the scale, which shall not be smaller than one inch equals 2,000 feet or larger than one inch equals 400 feet, and shall be appropriately keyed to the property map; and
- (9) A legend defining the symbols appearing on the map.]

[(d)] (c) Upon receiving a written request from the applicant, the Pinelands Commission shall assume the responsibilities set forth in (b)9 above.

7:50-6.44 6.45 Time limit on forestry permits and approvals

Permits and approvals authorizing forestry operations shall be valid for a period of 10 years or, where applicable, for the remaining duration of any forestry plan approved for enrollment in the New Jersey Forest Stewardship Program. Nothing in this section shall be construed to prohibit any person from securing additional permits or approvals provided that the requirements of this Plan are met.

7:50-6.45 6.46 Forestry standards

- (a) Notwithstanding the other standards of this Subchapter, [F]forestry operations shall be approved only if the applicant can demonstrate that the standards set forth in this [subsection] Part are met. [Unless specifically addressed in this subsection, the management programs and minimum standards of this subchapter shall not apply to forestry operations.]
- [1. All silvicultural practices shall be conducted in accordance with the standards set forth in the Society of American Foresters Forestry Handbook, Second Edition, incorporated herein by reference, as contained in pages 413 through 455, dated 1984, as amended (available at the principal office of the Commission);]
1. All forestry activities shall serve to maintain Pinelands native forest types, including those which are locally characteristic, except in those stands where other forest types exist;
2. (No change.)
- [3. All silvicultural and reforestation practices shall serve to maintain native Pinelands forest types, including those that are locally characteristic, except on those parcels where other forest types exist;]
- [4]3. The following actions shall be required to encourage the establishment, restoration or regeneration of Atlantic White Cedar in cedar and hardwood swamps:
- i. Clearcutting cedar and managing slash

- ii. Controlling competition by other plant species;
 - iii. Utilizing fencing and other retardants, where necessary, to protect cedar from overbrowsing;
 - iv. Utilizing existing streams as cutting boundaries, where practical;
 - v. Harvesting during dry periods or when the ground is frozen; and
 - vi. Utilizing the least intrusive harvesting techniques, including the use of winches, corduroy roads and helicopters, where practical.
- [5]4. All forestry activities and practices shall be designed and carried out so as to comply with the standards set forth in N.J.A.C. 7:50-6.27 and 6.33. The species accounts provided in the “Recommended Forestry Management Practices Report,” Appendix I - Endangered Animals, dated March 2006, as amended and supplemented and available at the principal office of the Commission or at www.nj.gov/pinelands, may be utilized as a guide for meeting these standards;
- [6]5. All forestry activities and practices shall be designed and carried out so as to comply with the standards set forth in N.J.A.C. 7:50-6.79₂ except as expressly authorized in this Part;
- [7]6. All forestry activities and practices shall be designed and carried out so as to comply with the standards set forth in N.J.A.C. 7:50-6.151 through 6.158;
- [8. Herbicide treatments shall be permitted, provided that:

- i. The proposed treatment is identified in the forestry application submitted to the Commission pursuant to N.J.A.C. 7:50-6.43(b)10;
- ii. Control of competitive plant species is clearly necessary;
- iii. Control of competitive plant species by other, non-chemical means is not feasible; and
- iv. All chemicals shall be expressly labeled for forestry use and shall be used in a manner that is consistent with relevant State and Federal requirements.]

[9]7. A vegetated streamside management zone shall be maintained or established adjacent to streams, ponds, lakes and marshes, except that no streamside management zone shall be required when Atlantic White Cedar is proposed to be harvested, [or re-]established, restored or regenerated. The streamside management zone shall be at least 25 feet in width. Where soils are severely erodible, slopes exceed 10 percent or streamside vegetation is not vigorous, the streamside management zone shall be increased up to a maximum of 70 feet to buffer the water body from adjacent forestry activities;

[10]8. Stream crossings, access roads, timber harvesting, skid trails, log decks, portable sawmill sites, site preparation, and reforestation shall be designed and carried out so as to:

- i. Minimize changes to surface and ground water hydrology;

- ii. Minimize changes to temperature and other existing surface water quality and conditions;
- iii. Prevent unnecessary soil erosion, siltation and sedimentation; and
- iv. Minimize unnecessary disturbances to aquatic and forest habitats.

9. The following standards shall apply to silvicultural practices for site preparation, either before or after harvesting:

- i. In areas with slopes of greater than ten percent, an undisturbed buffer strip of at least 25 feet in width shall be maintained along roads during site preparation to catch soil particles;
- ii. Herbicide treatments shall be permitted, provided that:
 - (1) The proposed treatment is identified in the forestry application submitted to the Commission pursuant to N.J.A.C. 7:50-6.44(b)10;
 - (2) Control of competitive plant species is clearly necessary;
 - (3) Control of competitive plant species by other, non-chemical means is not practical;
 - (4) All chemicals shall be expressly labeled for forestry use and shall be used and mixed in a manner that is consistent with relevant State and Federal requirements; and

(5) In Pine-Shrub Oak Native Forest Types, herbicide treatments shall be permitted only in areas where pine regeneration is the management objective identified in the forestry application submitted pursuant to N.J.A.C. 7:50-6.44. All such herbicide treatments shall be applied in a targeted manner so that there will be no significant reduction in tree or shrub-oak re-sprouting outside these areas.

iii Broadcast scarification and mechanical weeding shall be permitted in all Pinelands Native Forest Types;

iv. Disking shall be permitted, provided that:

(1) It shall not be permitted in Pine Plains Native Forest Types.

(2) In Pine-Shrub Oak Native Forest Types, disking shall be permitted only in areas where pine regeneration is the management objective identified in the forestry application submitted pursuant to N.J.A.C. 7:50-6.44.

(3) It shall not occur in wetlands, except as may be necessary to establish, restore or regenerate Atlantic White Cedar. When so used, disking shall be limited to shrub-dominated parcels and recently abandoned agricultural lands; and

(4) It shall follow land contours when slopes are discernible.

v. Root Raking shall be permitted, provided that:

(1) It shall not be permitted in Pine-Shrub Oak Native Forest Types or Pine Plains Native Forest Types;

(2) When used to establish, restore or regenerate Atlantic White Cedar, root raking shall be limited to shrub-dominated parcels and recently abandoned agricultural lands; and

(3) Root raking debris shall not be piled in wetlands.

vi. Bedding shall be permitted only in recently abandoned, cultivated wetlands where there are no established Pinelands Native Forest Types;

vii. Drum chopping shall be permitted, provided that:

(1) It shall not be permitted in Pine Plains Native Forest Types except to create road shoulder fuelbreaks, which shall be limited to 25 feet in width, or to create scattered early successional habitats under two acres in size;

(2) It shall not be permitted in wetlands, except as may be necessary to establish, restore or regenerate Atlantic White Cedar. When so used, drum chopping shall be limited to shrub-dominated parcels and recently abandoned agricultural lands;

(3) It shall adhere to the following procedures:

- (a) No more than two passes shall be permitted except to create scattered early successional habitats under two acres in size;
- (b) Drums shall remain unfilled when used during the dormant season;
- (c) Chop up and down the slope on a parcel so the depressions made by the cleats and chopper blades run parallel to the contour of the land to help reduce the occurrence of channeled surface erosion;
- (d) Chop so the depressions made by the cleats and chopper blades run parallel to a wetland or water body; and
- (e) Avoid short-radius, 180-degree turns at the end of each straight pass.

10. The following standards shall apply to silvicultural practices for harvesting:

i. Clearcutting shall be permitted, provided that:

- (1) It shall not be permitted in Pine Plains Native Forest Types.
- (2) It shall be limited to 300 acres or five percent of a parcel, whichever is greater, during any permit period;

- (3) A 50 foot wide buffer strip, in which only periodic pruning and thinning may occur, shall be maintained between any clearcut and the parcel boundaries;
 - (4) A buffer strip, in which only periodic pruning and thinning may occur, shall also be maintained to separate each 25 acre or larger clearcut from other 25 acre or larger clearcuts, coppice cuts and seed tree cuts that occur within a 15 year period. The buffer strip separating two 25 acre harvests shall be 50 feet in width and, for a larger harvest, shall increase in width by one foot for each acre of that harvest above 25, to a maximum of 300 feet in width;
 - (5) Dead snags of at least 10 inches DBH and six feet in height, up to a maximum of 18 per acre, shall be left on the parcel for a minimum of five years;
 - (6) The area of the parcel subject to the clearcut shall have contoured edges unless the boundary of the clearcut serves as a firebreak in which case straight edges may be used;
and
- ii. Coppicing shall be permitted in all Pinelands Native Forest Types, provided that:
- (1) It shall be limited to 500 acres in size or 10 percent of a parcel, whichever is greater, during any permit period;

- (2) A 50 foot wide buffer strip, in which only periodic pruning and thinning may occur, shall be maintained between any coppice cut and the parcel boundaries;
- (3) A buffer strip, in which only periodic pruning and thinning may occur, shall also be maintained to separate each 25 acre or larger coppice cut from other 25 acre or larger clearcuts, coppice cuts and seed tree cuts that occur within a 15 year period. The buffer strip separating two 25 acre harvests shall be 50 feet in width and, for a larger harvest, shall increase in width by one foot for each acre of that harvest above 25, to a maximum of 300 feet in width;
- (4) Dead snags of at least 10 inches DBH and six feet in height, up to a maximum of 18 per acre, shall be left on the parcel for a minimum of five years; and
- (5) The area of the parcel subject to the coppice cut shall have contoured edges unless the boundary of the coppice cut serves as a firebreak in which case straight edges may be used.

iii. Seed tree cutting shall be permitted in all Pinelands Native

Forest Types, provided that:

- (1) It shall be limited to 500 acres in size or 10 percent of a parcel, whichever is greater, during any permit period;

- (2) A 50 foot wide buffer strip, in which only periodic pruning and thinning may occur, shall be maintained between any seed tree cut and the parcel boundaries;
- (3) A buffer strip, in which only periodic pruning and thinning may occur, shall also be maintained to separate each 25 acre or larger seed tree cut from other 25 acre or larger clearcuts, coppice cuts and seed tree cuts that occur within a 15 year period. The buffer strip separating two 25 acre harvests shall be 50 feet in width and, for a larger harvest, shall increase in width by one foot for each acre of that harvest above 25, to a maximum of 300 feet in width;
- (4) Dead snags of at least 10 inches DBH and six feet in height, up to a maximum of 18 per acre, shall be left on the parcel for a minimum of five years;
- (5) The area of the parcel subject to the seed tree cut shall have contoured edges unless the boundary of the seed tree cut serves as a firebreak in which case straight edges may be used;
- (6) Dominant residual seed trees shall be retained at a distribution of at least seven trees per acre; and
- (7) Residual seed trees shall be distributed evenly throughout the parcel;

iv. Shelterwood cutting, group selection and individual selection shall be permitted in all Pinelands Native Forest Types.

11. The following standards shall apply to silvicultural practices for forest regeneration:

i. Natural regeneration shall be permitted in all Pinelands Native Forest Types and shall be required in the Pine Plains Native Forest Type, except as provided in ii. below;

ii. Artificial regeneration shall be permitted in all Pinelands Native Forest Types provided that

(a) The use of non-native cuttings, seedlings or seeds shall not be permitted;

(b) The use of hybrid cuttings, seedlings or seeds shall be permitted if it can be demonstrated that the cutting is from a locally native, naturally occurring hybrid which will be planted within its natural range and habitat;

(c) Cuttings, seedlings or seeds shall be collected and utilized so as to ensure genetic diversity; and

(d) When used in Pine Plains native forest types, artificial regeneration shall only be permitted to restore drastically disturbed sites if seeds or seedlings from the immediate vicinity have been collected from local, genetically similar sources.

12. Following site preparation and harvesting activities, slash shall either be retained in piles on the parcel, distributed throughout the parcel, removed from the parcel or burned.

13. Thinning shall be permitted in all Pinelands Native Forest Types, including that which serves to maintain an understory of native plants and/or manage stand composition, density, growth and spatial heterogeneity; and

[11] 14. A copy of the approved municipal forestry permit shall be conspicuously posted on the parcel which is the site of the forestry activity.

- (b) The New Jersey Forestry and Wetlands Best Management Practices Manual developed by the New Jersey Department of Environmental Protection, dated October 1995, as amended, may be used as a guide in determining the extent to which the proposed forestry activity meets the standards of (a) [9 and 10] above.

7:50-[6.46] 6.47 Additional standards for State forestry practices

- (a) In addition to the standards in N.J.A.C. 7:50-[6.45] 6.46, forestry activities undertaken by or on behalf of any State agency shall meet the following additional standards:
1. (No change.)

[(b) Exceptions to the requirements in (a)1 above may be approved by the Commission as a means of carrying out specific research efforts targeted to the regeneration of Atlantic White Cedar or the creation of habitat patches for threatened or endangered plant and animal species.]

[(c)] (b) The standards of N.J.A.C. 7:50-6.46 and [T]the requirements of (a)1 above may be modified through the Commission’s approval of management plans for State Conservation lands pursuant to N.J.A.C. 7:50-4.51 through 4.58, provided that such modifications are necessary to: facilitate specific research efforts designed to regenerate Atlantic White Cedar; create habitat patches for threatened and endangered plant and animal species; or evaluate the ecological impacts of silvicultural techniques. Short-term and long-term monitoring that documents the outcomes of such Atlantic White Cedar regeneration research, habit patch creation or silvicultural techniques evaluation shall be performed and reported to the Commission. The protocols provided in the “Recommended Forestry Management Practices Report,” Appendix III – Research and Monitoring, dated March 2006, as amended and supplemented and available at the principal office of the Commission or at www.nj.gov/pinelands, may be used as a guide in the development of research and monitoring techniques.

7:50-6.[47] 48 Guidelines and requirements for financial sureties

- (a) Municipalities may require the posting of financial sureties for harvesting activities, provided that:
1. The surety shall be for the sole purpose of ensuring proper performance during the harvesting operation and shall not be intended to serve as a long-term maintenance guarantee;
 2. The surety shall not exceed \$500.00 or 10 percent of the stumpage value of the wood to be harvested during the duration of any approval which is granted, whichever is greater; and
 3. The surety shall not be required to be posted for a period exceeding two years. Nothing in this section shall be construed to prohibit a municipality from requiring the posting of sureties for succeeding two year periods, provided the requirements of this section are met.

7:50-6.[48] 49 through 7:50-6.50 (Reserved)