

CH. 132
GUIDANCE DOCUMENT

MASSACHUSETTS FOREST CUTTING PRACTICES ACT
(M.G.L. CH. 132, §. 40-46)

Massachusetts Department of Conservation and Recreation
Division of State Parks and Recreation
Bureau of Forestry

Effective: January 1, 2004

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INTRODUCTION

This guidance document is meant to provide information about the Massachusetts Forest Cutting Practices Act (M.G.L. Chapter 132, Sections 40-46), assist in the proper preparation of a forest cutting plan and provide the necessary forms and references. The first section provides the historical background and key revisions to the law over the past 60 years **including an overview of the most recent changes effective January 1, 2004**. The second section provides the section text of Chapter 132 and discusses the relationships between Chapter 132 and other Massachusetts laws. The third section contains the directions for preparing a forest cutting plan and the cutting plan forms. Finally, this section is followed by a series of supporting appendices that will aid plan preparers.

It is hoped that this guidance document will answer most questions you may have regarding the Forest Cutting Practices Act. If any questions remain unanswered you are urged to contact a DCR Service Forester for assistance.

HISTORY OF THE MASSACHUSETTS FOREST CUTTING PRACTICES ACT

This section provides the historical background and some of the forest biological and engineering relationships that were used as a basis for the original Forest Cutting practices Act and regulations. The section should be read by those who wish to gain a general understanding of the development of the statute and the philosophical approach to the regulations taken by the State Forestry Committee.

The Beginnings of Chapter 132

Several factors led to the Massachusetts Forest Cutting Practices Act. In the early 1900s, a growing concern among the public emerged over indiscriminate cutting in the forests of Massachusetts, particularly for wooden box manufacturing. In addition, the 1938 hurricane which laid waste to millions of board feet of timber created a shocking awareness of the importance of the forest for the Commonwealth's citizens. Moreover, there was considerable concern that the federal government was poised to pass federal regulation of state forest cutting practices. As a result, Governor Leverett Saltonstall appointed a special advisory committee in 1940 to study forestry issues facing the Commonwealth. This committee recommended that legislation be passed to:

- Create regional state forestry committees to develop standards leading to the elimination of destructive cutting practice;
- Change the tax law related to forestland and limit assessments to no more than five dollars and acre and create a method to defer taxes on timber until a harvest;
- Provide for demonstrations of forestry practices by state foresters for owners of woodlands.

The 1943 and 1957 regulations

The Forest Cutting Practice Act, Ch. 132, Sections 40-45 was passed in 1943. The sections included a declaration of forest policy for all forest lands in the Commonwealth, set up a state forestry committee to develop forest cutting practices, and provided for administration of these practices. Section 41 required that “trees of desirable species and of suitable size shall be retained and uncut so as to stand singly or in groups and be distributed in the manner and in the numbers best designed to secure restocking; except that provision shall be made for clear cutting in such individual cases as shall be approved by said director”.

Ensuing regulations required the landowner to give notice of intent to cut and charged the Director of the Division of Forests and Parks with preparing cutting plans and checking on their performance. In 1957 section 46 was added to permit licensing of timber harvesters.

The 1983 changes

It eventually became too time consuming for state personnel to prepare all the necessary plans and effectively administer the Act. In 1977, a Governors Policy Committee called for radical revision of sections 40 through 46 that would change state responsibilities. Several critical changes were made and signed into law in January 1983. These changes specified that the minimum cutting practices to promote the public interest were no longer set up in the act, rather their design was left to a State Forestry Committee and, these standards were expanded to represent a cross section of forest interests. Most important, the owner was charged with presenting a complete cutting plan along with the notice of intent to cut to the Division of Forests and Parks regional offices. Failure to submit a plan, or to follow it once approved, could be punishable by a fine of not more than 100 dollars per acre cut. The state was now responsible only for approving the plan and inspecting work on the ground to insure compliance and the Director or his agent could issue a stop order if cutting was not in accordance with the plan. These changes formalized the state’s role to one of administration and enforcement of the Forest Cutting Practices Act. As part of these changes, a report of the State Forestry Committee was called for that not only outlined the law, but provided the underlying justification for the practices. This report is very useful in putting the modern laws in context and is available from the regional offices.

The 1995 Revisions

More than nine years of intensive review preceded the 1995 revisions to the Massachusetts Forest Cutting Practices Act (FCPA) regulations. The primary focus of the review was the impact of forestry practices on water quality, the coordination of wetlands and forestry regulations, and the efficiency of the Department of Environmental Management’s (DEM) administration of the regulations.

In 1986, as a result of concerns from the environmental community over potential impacts to water quality and wetlands, the DEM initiated a statewide review of environmental impacts from forestland management practices under the Massachusetts Environmental Policy Act (MEPA) review process. This process called for the preparation of a Generic Environmental Impact Report (GEIR) to study the impact of forestry practices, particularly those regulated

by the Forest Cutting Practices Act, on water quality and other environmental elements. The final GEIR, published in 1992, included a variety of recommendations for improvement to the cutting practices regulations and strongly urged DEM and DEP to work together through training programs and Memoranda of Understanding (MOU).

Following the acceptance of the GEIR by the Secretary of Environmental Affairs, the State Forestry Committee began the process of revising the cutting practices regulations. This was accomplished by forming a forestry subcommittee of the Farmland Advisory Committee. This subcommittee was composed of individuals with broad and diverse backgrounds in forestry and environmental protection and charged with the task of revising the Wetlands Protection Act regulations governing agricultural exemptions and the forest cutting practices regulations.

In late 1994, the State Forestry Committee reviewed and approved this subcommittee's recommendations. In February and March of 1995, public hearings were held jointly for both sets of regulations (FCPA and WPA). In September, 1995 the regulations were submitted to the Secretary of State for promulgation and went into effect January 1, 1996.

The most obvious change to the Forest Cutting Practices regulations (304 CMR 11.00) in 1995 was a change in their format. The sequence of the regulations was changed to make them easier to understand. Procedural requirements were gathered into one section and placed in sequential order. In addition, the regulations dealt with a number of specific issues including the following:

- land use changes;
- clarification of the relationship between the Forest Cutting Practices Act and the Wetlands Protection Act;
- treatment of permanent crossings of streams and wetlands (they must be reviewed and approved by the local Conservation Commission);
- Natural Heritage and Endangered Species (NHESP) program review procedures;
- landowner's objectives;
- cutting standards for silviculture.

This set of regulations is still in effect today.

The 2004 changes (effective January 1, 2004)

The previous changes to Chapter 132 were regulatory in nature. These processes resulted in forest cutting plans that were effective for resource professionals, but quite confusing to the average forest landowner. The purpose of the 2004 changes was to add educational elements to the forest cutting plans without regulatory changes. The goal was a plan that would help landowners make educated harvesting decisions and place a renewed emphasis on the landowner's objectives.

Meetings were held in the spring of 2002 with interested parties to present and discuss proposed changes to the Forest Cutting Plan forms. The Bureau of Forestry was represented at membership or board meetings of the Massachusetts Wood Producers Association, the Massachusetts Association of Professional Foresters, the Massachusetts Forestry Association,

the Forest Stewards Guild and the State Forestry Committee. The Bureau also received many written comments and suggestions from groups and individuals in the wider forestry community. It was apparent from the interest and discussions that all groups shared a long-term concern and desire to promote sound forestry in the state. Additional modifications were made to strengthen the educational value of the cutting plan without any additional regulations. Three public meetings of the state forestry committee were conducted in the fall and early winter of 2002 during which additional input was given and modifications were made. After approval of the changes to the cutting plan form by the Director of Forests and Parks, the changes became effective January 1, 2004. It was agreed that these changes would be revisited in 18 months to determine how well they worked and if modifications are needed in the future. The highlights of the changes are as follows:

1. Landowner Information Sheet: The first two pages of the modified cutting plan are used to provide information to the landowner. The information includes background on the Forest Cutting Practices Act, the importance of the landowner's objectives, the landowner's responsibilities and forest management planning. These pages are part of the complete forest cutting plan. They can be removed and retained by the landowner after they have been read and the cutting plan has been signed.

2. New Information: The new information required on page 3 of the cutting plan form includes the following:

- A blank spaces included in the "DCR Only section" for the Service Forester to record the type of impact of the proposed harvest on endangered species as provided by the Mass. Natural Heritage and Endangered Species Program.
- The plan preparer is asked to indicate the category that best describes the preparer. The categories are Mass. Licensed Forester, Licensed Timber Harvester, Landowner, Timber Buyer or Other.
- Licensed foresters are asked to provide their license number. It is required when cutting land classified under Ch. 61,61A or enrolled in Forest Stewardship.

3. Verification Statement: The following statement has been inserted under the Cutting Standards Section on page 4: "Volumes and values indicated in the Plan are as reported by the plan preparer and have not been independently verified by the service forester upon approval".

4. Landowner Signature: The landowner is asked to choose between two objectives, Long-term Management (LT), or Short-term Harvest (ST). Long-term Forest Management means the planned management of the forest to achieve one or more of the following objectives: maximizing long-term income, maintaining or enhancing wildlife habitat, improving recreational opportunities, protecting soil and water quality or improving forest aesthetics. Short-term Harvest means the selection of trees for cutting based on the economic value of individual trees which commonly results in a residual forest stand dominated by poor quality trees and low value species. The appointment of agent has been moved to a separate form.

5. Modified Narrative Page: The narrative page has been modified to help the plan preparer provide the currently required information. No new information is required.

TEXT OF THE FOREST CUTTING PRACTICES ACT M.G.L. CH 132, §.
40-46

Sections 40 – 46 make up the actual Forest Cutting Practices Act. These sections are presented below for reference and further context.

Section 40. Declaration of policy of commonwealth - It is hereby declared that the public welfare requires the rehabilitation, maintenance, and protection of forest lands for the purpose of conserving water, preventing floods and soil erosion, improving the conditions for wildlife and recreation, protecting and improving air and water quality, and providing a continuing and increasing supply of forest products for public consumption, farm use, and for the wood using industries of the commonwealth.

Therefore, it is hereby declared to be the policy of the commonwealth that all lands devoted to forest growth shall be kept in such condition as shall not jeopardize the public interests, and that the policy of the commonwealth shall further be one of cooperation with the landowners and other agencies interested in forestry practices for the proper and profitable management of all forest lands in the interest of the owner, the public and the users of forest products.

Section 41. State forestry committee; forest cutting practices and guidelines. - The governor shall appoint a state forestry committee, to consist of eight members representing, respectively: forest land owners; primary wood using industries; licensed timber harvesters; consulting foresters; environmental organizations; water supply agencies; fisheries and wildlife; and one member representing the public at large. The director of the division of forests and parks, hereinafter referred to as the director, shall be an ex officio member of the committee and shall vote only in case of a tie.

In the initial appointments of said committee members, three shall be appointed for a one year term, three for a two year term, and two for a three year term. Thereafter, as the term of a committee member expires, his successor, with like qualifications as his predecessor shall be appointed for a term of three years. Said committee shall select its own chairman. The members of said committee shall serve without pay, but shall be reimbursed for actual traveling expenses within the commonwealth, when approved by said director.

The state forestry committee, with recommendations of such other advisory committees as the director in his discretion may appoint, shall prepare tentative minimum forest cutting practices and guidelines. Before recommending any forest practices, said committee shall hold hearings, with due notice being given, in conformance with chapter thirty A, in at least three places conveniently located throughout the commonwealth. Said committee may thereafter recommend such practices or modifications thereof and submit them to the director of forests and parks. Said director shall, subject to the approval by the commissioner of environmental management, thereupon adopt the practices and place them in effect, by posting in all city and town halls in the region affected and by publication in at least one daily newspaper in every county affected. Such approved practices may be amended at any time by said committee in the same manner, on its own motion or upon the petition of not less than twenty-five forest owners or licensed timber harvesters of the commonwealth or

upon petition of any person authorized under section four of chapter thirty A.

Section 42. Notice of proposed cutting of forest products; final work order; report to director; appeal of decision of director. - Every owner of land who proposes to cut forest products on land devoted to forest purposes, or to cause such products to be cut, except as provided in section forty-four, shall send by certified mail or hand deliver written notice of his intention to begin any cutting operation to the abutters of record on file with the assessors of the town in which the land lies, and whose closest boundary is within two hundred feet of the edge of the cutting area, at least ten days prior to operations; and shall send by certified mail or hand deliver, written notice of his intention to begin any cutting operation, and his proposed cutting operation, and his proposed cutting plan, including information as may be necessary to describe such proposed activity, to the director or his agent at the appropriate regional office and to the conservation commission of the town in which the land lies at least ten days prior to operations; and in the case of classified forest land, the owner shall provide a reasonable estimate on the stumpage value of the forest products to be cut and properly paint or blaze any boundaries located within fifty feet of the cutting area.

No work may commence until a final work order, with a designated file number, is issued to the landowner by said director or his agent except as hereinafter provided.

The licensed timber harvester shall have a copy of the final work order on the site whenever work is done, for inspection by the director or his agent, who shall give final approval or disapproval to the operation and report in writing to said director the nature of the operation, its extent, the amount of product cut, and such other information as said director may require.

In the event that the director, or his agent, does not act on the notice of intent within the designated ten days from day of receipt of the notice, work may commence, except in wetland areas as defined in section forty of chapter one hundred and thirty-one, in conformity with the submitted plan, provided the licensed timber harvester shall have a copy of the submitted plan on the site of the operation whenever work is done.

An applicant landowner or licensed timber harvester who is aggrieved by any decision of the director or his agent may appeal said decision within ten days of receipt of the decision to the director or his designee who shall act as hearing officer and will hold an informal hearing within ten days and render his written decision to said aggrieved party within five days of the hearing. An applicant landowner or licensed timber harvester further aggrieved by the decision of the director may appeal said decision within thirty days to the superior court.

Section 43. Failure to give notice. - Whoever, not being exempt from section forty-two and forty-three under the provisions of section forty-four, fails to give notice and a written plan, to said director or his agent as provided by said section forty-two, or whoever, either as land or stumpage owner or independent contractor fails to follow the plan of operations approved or not disapproved by said director or his agent shall be punished by a fine of not more than one hundred dollars for each acre of land on which cutting occurred in violation of, or in the absence of, said plan and final work order except as provided by section forty-two. The director or his agent is hereby authorized to issue a stop order to shut down immediately any operation that fails to meet the law or regulations until such deficiency is corrected to the satisfaction of the director's agent, or if not corrected, until the director holds a hearing

relative to revocation of the harvester's license as provided in section forty-six.

Section 44. Exempted cuttings. - The provisions of sections forty-two and forty-three shall not apply to (1) cutting by an owner or tenant of any forest product for his own noncommercial use; (2) cutting or sale of such products by any owner to an amount not exceeding twenty-five thousand board feet or fifty cords on any parcel of land at any one time; (3) cutting for clearance or maintenance on rights of way pertaining to public utilities and public highways; (4) clearing land for building or for purposes of cultivation or (5) maintenance cutting in pastures.

Section 45. Cooperation with other agencies; passage through or over private property. - For the purpose of sections forty to forty-four, inclusive, said director may cooperate with the University of Massachusetts, the United States Forest Service, and any other appropriate public or private organization and may authorize their employees to perform the duties outlined in section forty-two, subject to the approval of the director. The members of said committee, the director, his agents and other designated persons may in the performance of their duties under said sections pass through or over private property.

Section 46. License to harvest forest products. - No person, firm or corporation engaged in the business of harvesting timber or other forest products for hire or profit shall cut such products on land devoted to forest purposes and for purposes not exempted by section forty-four without first obtaining a license to do so from the director who is hereby authorized to issue such licenses, and to withhold or revoke such licenses after hearing for failure to comply with sections forty-two to forty-six, inclusive. Applicants shall demonstrate general familiarity with the laws of the commonwealth that concern timber harvesting and provide the director such reasonable information as he may require concerning the amount and type of forest products cut by him during the previous year. The fee for the issuance of such license, which shall expire on June thirtieth of each year, shall be determined annually by the commissioner of administration under the provision of section three B of chapter seven for the filing thereof. Each licensed timber harvester shall, upon request, be provided with a copy of current laws and regulations concerning timber harvesting in the commonwealth.

Whoever violates any provision of this section shall be punished by a fine of not more than five hundred dollars for each violation. The superior court shall have jurisdiction in equity to enforce the provisions of sections forty-two to forty-six, inclusive, and remedy any violations thereof.

Text of the Slash Law M.G.L. ChAPTER 48, §.16-16A

Section 16. For the purposes of this section and section sixteen A, the following words and phrases shall have the following meanings:

“Forest or woods road”, any permanently maintained road that is not a highway, the primary use of which is access to forest lands for the purpose of forest management or pre-suppression and suppression of forest fires.

“Highways”, any state road or land maintained by the department of public works of the commonwealth or any municipal or county maintained road, or private road other than a forest or woods road, of sufficient width to permit the simultaneous passage of two to more vehicles.

“Slash”, tops, branches, damaged trees, slabs, sawdust from milling operations, or debris left from logging or land clearing operations.

Every owner, lessee, tenant or occupant of lands or any rights or interests therein, except electric, telephone and telegraph companies, who cuts or permits the cutting of brush, wood or timber on lands which border upon woodland of another, or upon a highway or railroad location, or upon any forest or woods road to which the public has authorized access, shall dispose of the slash caused by such cutting in accordance with the following manner:

(a) hardwood slash shall not remain more than two feet above the ground within forty feet of any woodland of another, or of any railroad location, or of the outer edge of the boundary of any highway, or twenty feet of the outer edge of a woods road;

(b) softwood slash shall not remain on the ground within forty feet of any woodland of another, or of any railroad, location, or of the outer edge of the boundary of any highway, and shall not lie more than two feet above the ground between forty feet and one hundred feet of the outer edge of the boundary of any highway, or twenty-five feet from the edge of any forest or woods road.

(c) all slash resulting from such cutting operations shall be disposed of in such a manner as to minimize the damage from fire. No slash shall be permitted within twenty-five feet of any continuously flowing brook or stream, pond, river or water supply. The director of the division of forests and parks may make exceptions to this procedure in the preparation or approval of cutting plan; provided, however, that any exceptions made on lands adjacent to a state highway shall be approved by the commissioner of the department of public works.

This section shall apply to cutting operation subject to the provisions of chapter one hundred and thirty-two.

Section 16A. Every owner, lessee, tenant or occupant of lands or of any rights or interests therein, except electric, telephone and telegraph companies, who cuts or permits the cutting of brush, wood or timber on lands which border upon the woodland of another, or upon a highway or railroad location, shall dispose of the slash caused by such cutting in such a manner that the same will not remain on the ground within forty feet of any woodland of another, or of any railroad location, or within one hundred feet from the center of any highway, and all slash resulting from such cutting operations shall be cut and scattered in such a manner as to minimize the danger from fire. Wherever multiple highway systems exist adjacent to cuttings, no slash shall be permitted within one hundred feet from the outer edge of the highway. No slash shall be permitted within twenty-five feet of any brook, stream, pond, river or water supply.

This section shall apply to cutting or clearing operations not subject to the provisions of chapter one hundred and thirty-two.

Relationship of the Forest Cutting Practices and the Wetlands Protection Acts

The Wetlands Protection Act (WPA) regulates activities that either occur within a wetland resource area and its buffer zone (100 feet), or causes an impact to the resource area. The WPA requires the filing of a notice of intent with the local Conservation Commission before undertaking any activity within a wetland or its buffer zone.

The WPA regulations (310 CMR 10.00) define forestry as an agricultural activity. The WPA, furthermore, provides an exemption for work performed for normal maintenance and improvement of land in agricultural use. For forestry, normal maintenance activities are those that involve the management and harvesting of forest products, either for commercial sale or for one's own use, within certain thresholds. The activities that are considered to be normal maintenance and improvement of land in agricultural use are described in 310 CMR 10.04 "Agriculture", and include a variety of forestry management practices. For our purposes here we will deal strictly with the harvesting of forest products.

For a forest harvest to qualify for the WPA exemption, the land must be devoted to the continued production of forest products. An approved forest cutting plan, because it is designed to reflect principles of silviculture and forest management, is evidence of this continued forest land use. Land being cut for a change from forest to some other use, however, does not qualify as land maintained in forest use. If such a cut occurs in a wetland resource area or buffer it would not be exempt from the wetland regulations.

The following conditions must be met for a forest cutting to be exempt from the wetlands regulations:

1. Wetland resource areas are properly identified on the forest cutting plan;
2. The applicant files a copy of the cutting plan with the local conservation commission(s) at least ten business days prior to the start of cutting;
3. The cutting plan is approved by the Director or the Director's agent;
4. The Director or the Director's agent sends a copy of the approved cutting plan to the appropriate DEP regional office; and,
5. The landowner faithfully executes the approved cutting plan.

In addition to harvests normally covered by Chapter 132, commercial harvests of 25,000 board feet or 50 cords or less, and noncommercial harvests can also qualify for the exemption by meeting steps 1 through 5 above.

It is important to remember that the exemption exists only as long as the work affecting wetlands adheres to the approved cutting plan. The local conservation commission or DEP can issue stop orders and enforcement orders for violations of the WPA if work affecting wetlands is not done in compliance with the cutting plan.

It is also important to remember that work cannot begin in a wetland resource area until the cutting plan is approved by the Director or the Director's agent, even if the ten day notice period has already elapsed.

In order to better coordinate their efforts in enforcing these provisions DCR and DEP have drafted a Memorandum of Understanding (MOU). The MOU spells out the responsibilities of both agencies in regards to Ch. 132 and the WPA. It also creates a framework for dealing with operations which may be in violation of the regulations. In regards to harvesting operations covered by an approved cutting plan, the conservation commissions are urged to let the DCR Service Forester handle any violations through the provisions of the Forest Cutting Practices Act.

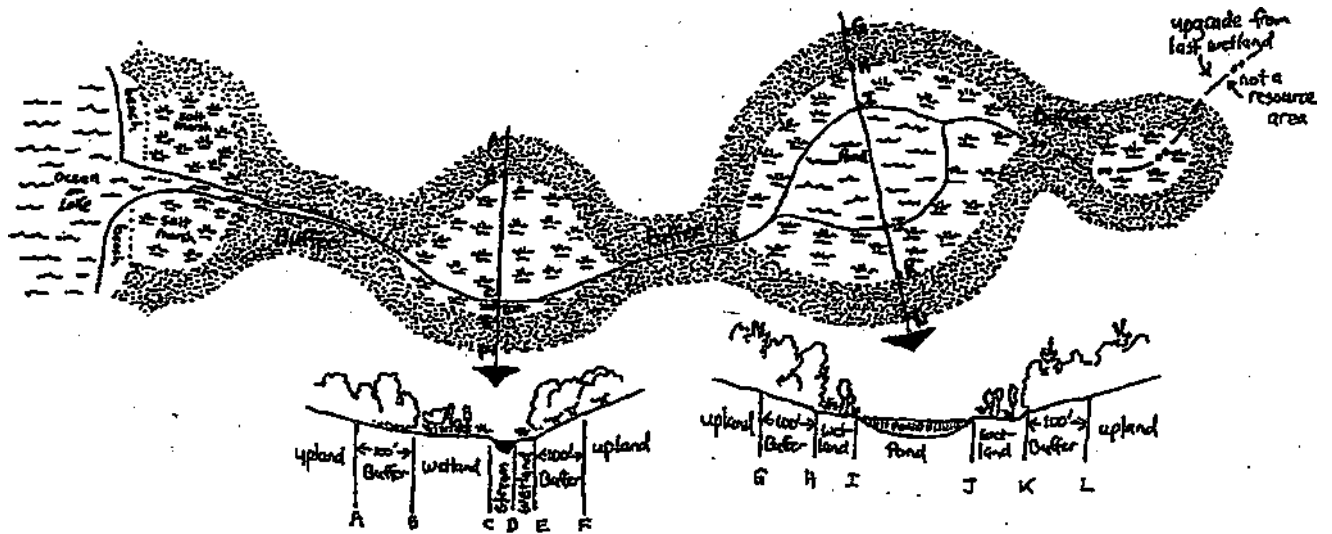
Construction and maintenance of access ways for commercial harvests or for cutting of forest products for owner use may be exempt from the wetland regulations provided that certain conditions spelled out in 310 CMR 10.04(b)(16) are met. An access way may only be located in a resource area if it is impractical to avoid it. Where access through resource areas cannot be avoided, the impacts to the resource area are to be minimized. This includes: conducting the activity when the soil is dry, frozen, or otherwise stable; preventing erosion into resource areas; designing the access way to allow the unobstructed passage of flows from the 25 year storm; removing any structures or fill within one year of the completion of the harvest; and, substantially restoring the topography and site to allow for the restoration of preexisting vegetation. As these requirements are also in the Ch. 132 regulations, an operation in compliance with those regulations will also satisfy the wetlands regulations.

Any owner wishing to install permanent improvements in streams and wetland resource areas must file a WPA Notice of Intent (NOI) with the local conservation commission. Constructing an access way to remain in place after a harvest or converting a temporary accessway to permanent status are "limited projects". In these cases an NOI must be filed and an order of conditions must be issued. Forestry "Limited Projects" must meet some general requirements such as the utilization of best management practices. In addition, the work must be carried out under a forest cutting plan or on land subject to a permanent conservation restriction. Conservation commissions also have the discretion to add other conditions as needed to contribute to the interests identified in the act.

The harvesting of no more than 5,000 board feet or 10 cords from wetland resource areas or buffer zones for the landowners own use is exempt from both the Cutting Practices act and the WPA. Harvesting between 5,000 and 10,000 board feet (10 to 20 cords) from these areas for the owners own use is exempt from the WPA if the cutting is covered by an approved cutting plan. Harvesting over these amounts for the owner's own use requires the filing of a WPA NOI.

The ability to properly identify wetland resource areas is critical for person involved with the harvest of forest products. The figure on page 11 provides a general description of wetland resource areas. The state service foresters have been trained in wetlands identification and can provide assistance upon request. In cases of dispute the DEP will be the final arbitrator of wetland boundaries. DEP conducts wetlands delineation workshops for conservation commissioners and other interested parties. These workshops may provide a training opportunity for foresters and loggers.

Wetland Resource Areas plus 100 foot buffer



Cross-section

Cross-section

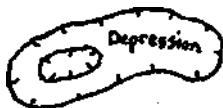
marsh or swamp
perennial stream



100' buffer
intermittent
stream



In addition to the above:



1) Isolated areas subject to flooding at least once a year to an average depth of six feet and at least ¼ acre foot. 2) Also, bordering land subject to flooding. Far, low-lying land back as far as the 100-year flood or highest ever observed.

Protected vegetated wetlands are those that: (1) border on rivers, streams, ponds and lakes, (2) where the soils are annually saturated and show features of wetness (mottles, grey color, rust), (3) at least 50% of the plant community consists of wetlands, vegetation, and, (4) the topography is low and flat

MOU between the DEP and the DCR

Relative to the Forestry Exemption
of the WPA and the Requirements of the Forest Cutting Practices Act

I. Parties and Statement of Agreement

This Memorandum of Understanding (MOU) is entered into this *20th* day of *September*, 1995 by and between the Department of Environmental Protection (DEP) and the Department of Environmental Management (DCR). The MOU addresses procedures and responsibilities for each agency relating to forestry activities under the Wetlands Protection Act (WPA), M.G.L. Chapter 131 Section 40 and regulations at 310 CMR 10.00 et seq., and the Forest Cutting Practices Act (FCPA), M.G.L. Chapter 132, Sections 40-46, and regulations at 304 CMR 11.00 et seq.

The following procedures and responsibilities are supported by both DCR and DEP based on the understanding that it is mutually advantageous to cooperate in the undertaking described in this agreement.

II. Purpose

The purpose of this MOU is to establish a basis for cooperation between the two agencies, to identify the roles that each will play in permitting and enforcement to coordinate the implementation of the wetland regulations and the forest cutting plan regulations and to advise conversation commissions and persons involved in forestry activities. This MOU does not address those sections of the wetland regulations pertaining to forestry where a forest cutting plan is not needed to meet the conditions of the exemption {cutting no more than 5,000 board feet or 10 cords by owners for their own use, normal maintenance activities under 10.04 (Agriculture) (b) (4), or normal improvement activities 10.04 (Agriculture) (c) (1) (a)} or projects requesting limited project status under 310 CMR 10.53 (3) (c., r. or s.).

III. Procedures and Responsibilities

When forestry activities subject to and covered by the FCPA are to occur in wetland resource areas or the buffer zone as defined in the wetland regulations, the activity will be exempt from the provisions of the WPA if carried out in accordance with an affirmatively approved cutting plan and if conducted in accordance with the conditions in the wetland regulations 310 CMR 10.4 Agriculture relative to forestry. An affirmatively approved forest cutting plan is a forest cutting plan that has been reviewed and approved by a DCR Service Forester. A forest cutting plan that is granted approval solely due to a lapsed review period is not an affirmatively approved forest cutting plan.

DCR and DEP agree that:

1. It is DCR's responsibility to enforce the rules and regulations regarding forest cutting plans and to see that the requirements for a forest cutting plan have been fulfilled by the applicant. The Best Management Practices Section of the forest cutting plan is to be completed. This section shall describe wetland impacts and shall include a master or supplemental map identifying bordering vegetated wetlands (BVM5). All forest cutting plans must also be sent to the conservation commission so that it is received ten (10) business days before the work begins. Failure to do so may delay approval or may be cause for

denial of the forest cutting plan.

2. All decisions relative to the approval or disapproval of the submitted forest cutting plan will be made by the DCR Service Foresters who are agents of the Director of the Division of Forests and Parks.
3. All forest cutting plans will be checked by the Director's agent against the current edition of the Massachusetts Natural Heritage Atlas. Forest cutting plans falling within estimated habitat areas will be immediately forwarded to the Natural Heritage and Endangered Species Program of the Division of Fisheries and Wildlife for review and comment.
4. DCR will mail an informational letter to each conservation commission on an annual basis. The letter will identify the forest cutting plan requirements, the ability of the conservation commission to comment on forest cutting plans, and the DCR offices that can be contacted in the event of questions.
5. As required by the FCPA regulations, the Director's agent will make a site inspection prior to taking action on forest cutting plans involving work in wetland resource areas, endangered species habitat or Certified Vernal Pools. If requested by the conservation commission, the Director's agent will meet with the conservation commission to review the wetland boundaries and cutting plan activities.
6. If DCR has taken no action to approve or disapprove the forest cutting plan within ten (10) business days after submission of the forest cutting plan, harvesting can begin only on upland areas. Work in BVWs cannot occur until a forest cutting plan has been affirmatively approved and a Certificate has been issued by DCR.
7. DCR will simultaneously send a copy of the approved forest cutting plan and certificate, or disapproved forest cutting plan to the applicant, local conservation commission and the DEP Regional Office.
8. An activity occurring within or causing alteration of a wetland resource area that does not comply with an approved forest cutting plan vacates the exemption under the WPA as described in the first paragraph of Section III above. DCR agrees to coordinate with the conservation commission and DEP to bring the activity into compliance.
9. DCR agrees to conduct a final inspection and issue a final report in accordance with the approved forest cutting plan. Forest cutting plans will require disturbed areas to be substantially restored to allow pre-existing vegetation to be reestablished, and access across BVWs and streams will be removed within one year of completion of work. DEP has the authority to ensure compliance of these conditions and agrees to coordinate with DCR to achieve compliance.
10. DCR Service Foresters will attend at least one wetlands delineation workshop sponsored by DEP.
11. It is DEP's responsibility to enforce the wetland regulations and to determine if the activity is in compliance with the conditions stated in 310 CMR 10.04

Agriculture. An activity occurring within or causing alteration of a wetland resource area that does not comply with the general conditions of 10.04 (b) or the specific conditions of 310 CMR

10.04 Agriculture (b) (14) (a-e) vacates the exemption under the Wetlands Protection Act. DEP agrees to coordinate with DCR to bring the activity into compliance.

12. DEP agrees to assist in the delineation of a BVW boundary when requested by DCR.
13. DCR and DEP agree to establish a review committee to evaluate the effectiveness of the revisions proposed for the forest cutting plan regulations and wetland regulations to be promulgated by the end of calendar year 1995. The committee will report its findings to the Farmland Advisory Committee on a yearly basis until such time that the review committee has fulfilled its purpose. The review committee will be comprised of one at-large member appointed by the Farmland Advisory Committee and one representative each from DCR, DEP, the Massachusetts Society of Municipal Conservation Professionals, the Massachusetts Association of Conservation Commissions and the State Forestry Committee.

IV. Recommended Procedures for Conservation Commissions

DCR and DEP agree to recommend and support the adoption of the following procedures by conservation commissions:

1. The conservation commission will have the opportunity to comment on forest cutting plans, including the Best Management Practices Section. Comments should be submitted to the DCR Service Forester during the cutting plan notification 10 day comment period. However, comments on the activity relative to wetland impacts may be submitted to DCR at any time.
2. It is suggested that at least one conservation commission member be designated the contact for forestry activity review. The designated member (s) should be responsible for review of the forest cutting plan and for contacting the DCR Service Forester.
3. Upon review of the forest cutting plan the conservation commission should contact the DCR Service Forester if any of the following occur:
 - a. wetland resource areas have been inaccurately identified;
 - b. the Best Management Practices Section of the forest cutting plan was not completed
 - c. the conservation commission has any questions regarding the forest cutting plan.
4. The conservation commission should coordinate with DCR if any of the following occur after the forest cutting plan 10 day comment period has ended (Conservation commission should not initiate enforcement actions if these situations arise, as it is the responsibility of DCR to ensure compliance with the FCPA):

- a. work has begun in wetland resource areas before an affirmatively approved forest cutting plan has been issued;
 - b. work is not in compliance with the approved forest cutting plan including working in wetland resource areas that were not described as being part of the forest cutting plan;
5. If work is taking place in wetland resource areas without an approved forest cutting plan, for those activities where a forest cutting plan is needed for the exemption, the conservation commission may issue an enforcement order stopping work in wetland resource areas. Until a forest cutting plan is submitted to and approved by DCR, the requirements for an exemption have not been met.
6. If there is a forestry activity that requires a forest cutting plan occurring in wetland resource areas of the buffer zone and a forest cutting plan has not been affirmatively approved, the conservation commission should notify the landowner that the activity may be in violation of the WPA and possibly the FCPA.

V. Outreach and Training

DCR and DEP will develop an outreach and training program on the interrelationship between the FCPA regulations and the WPA regulations. The purpose of this outreach and training program will be to inform DCR Distinct Service Foresters, DEP Regional Wetland staff, conservation commissions, and persons involved in forestry activities (consulting foresters, loggers, natural resource managers, etc.) of the pertinent regulations and this Memorandum of Understanding.

VI. Cooperative Problem Resolution

Realizing that this memorandum cannot cover all possible circumstances and that protecting our natural resources is a common goal, the DCR and DE will work together and cooperatively with local conservation commissions toward the resolution of problems.

VII. Duration

This MOU shall remain in effect until it is amended by the parties or, due to changes in the law or regulations or otherwise, the parties determine it is no longer advantageous or appropriate for the terms hereof to be followed.

9/22/95
Date


Peter C. Webber, Commissioner
Department of Environmental Management

9/13/95
Date


David B. Struhs, Commissioner
Department of Environmental Protection

Rare and Endangered Species Requirements of Ch. 132

DCR checks submitted forest cutting plans for occurrences of estimated habitats of rare wetlands wildlife or high priority sites of rare species habitat. Plans falling within these habitats are sent to the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP) for their review. Plans proposing activities that could damage this habitat are amended to add protection for the habitat.

The Massachusetts Endangered Species Act, M.G.L. Ch. 131A, and its regulations (321 CMR 10.00) prohibit the taking of any state-listed rare plant or animal species. The review of the cutting plan helps to alert the landowner to the presence of these species and help to avoid accidental takings. If the required process is followed and the landowner complies with the approved forest cutting plan, it shall be presumed that the landowner has avoided any potential violations of the state endangered species act.

The Natural Heritage Program regularly updates and publishes an atlas containing the estimated habitats of rare and endangered species and the high priority sites of rare species habitat. Each service forester is provided with a copy, and any applicant can view these atlases at the DCR regional offices. The service forester must review all submitted plans against these maps, and any plan falling within the estimated habitats must be submitted to Natural Heritage for their review. In the case of Wetlands habitat they must complete their review within 15 business days. In the case of priority habitats they have 10 business days. If NHESP does not responded within the required time period the Director or the Director's agent shall presume that the forest cutting plan will not affect rare wildlife habitat.

If NHESP determines that the proposed forest cutting plan shall negatively impact the estimated habitat, it shall advise the Director or the Director's agent of its finding and recommend mitigation of the impact to the estimated habitat. If NHESP determines that the proposed harvest may result in the taking of rare species, it shall advise DCR of its findings and make recommendations to avoid the potential taking.

Upon receipt of NHESP's recommendations, the Director or the Director's Agent shall modify the forest cutting plan to avoid negative impacts to the estimated habitat or a potential taking of rare species. NHESP will be sent a copy of the approved forest cutting plan. If the above process has been followed and the landowner complies with the approved forest cutting plan, it shall be presumed that the landowner has avoided any potential violations of the Massachusetts Endangered Species Act.

When this process begins DCR will inform the landowner that rare and endangered species habitat is located on the property and that a review of the plan will delay its approval. In the event that the ten day waiting period elapses before the plan is approved the landowner shall be notified that no work can be conducted in areas subject to the Wetlands Protection Act until the forest cutting plan has been approved. The landowner shall also be notified that any work conducted before the forest cutting plan has been approved may result in the taking of a rare species in violation of the Massachusetts Endangered Species Act.

DIRECTIONS for FILING and PREPARING the FOREST CUTTING PLAN M.G.L. CH 132 § 40-46

This section is presented as a guide for the preparation and filing of the forest cutting plan. Every possible situation cannot be covered in a guide such as this. If you have problems filing out the forms please contact your district service forester at the appropriate DCR regional office.

Filing of the Cutting Plan

Who Must File – M.G.L. Ch. 132, section 42 requires that any owner of forest lands who proposes to cut forest products (except as exempted by section 44) shall provide written notice to the regional office of the Department of Conservation and Recreation (DCR), Division of State Parks and Recreation, to the conservation commission of the town(s) in which cutting will occur and to any abutting landowner within 200 feet of the cutting area.

The exemptions are:

- (1.) Cutting by an owner or a tenant for his own non-commercial use;
- (2.) Cutting or sale of products to an amount not exceeding 25,000 board feet or 50 cords;
- (3.) Cutting for clearance or maintenance on rights of way pertaining to public utilities and public highways;
- (4.) Clearing land for building or purposes of cultivation;
- (5.) Maintenance cutting in pastures.

Although an operation may be exempt because it is non-commercial or under the threshold volume, the owner conducting such a harvest may still file a forest cutting plan under the provisions of this act and obtain a forestry exemption from the Wetlands Protection Act.

Notification of Abutters – Notification of abutting landowners must be made using the “Notice of Intent to Abutters” form provided by the Director of State Parks and Recreation. The notice must be sent certified mail of hand delivered at least ten business days before cutting begins.

Any abutting landowner of record on file with the assessors whose property is within 200 feet of the cutting area and is not separated from the cutting area by a publicly maintained way must be notified. Abutters of record on file with the assessors means: (a.) the abutters shown on the current town property map, or (b.) if there is no map, the abutters shown on the current assessment card of the property being cut or (c.) abutters otherwise known to the landowner.

Notification of Conservation Commissions – The conservation commission of the town(s) in which cutting will occur is notified through submission of a completed forest cutting plan. The cutting plan must be sent certified mail or hand delivered, and it must be received at the town hall at least ten business days before cutting begins. The notice to the conservation

commission should be sent at the same time as the notice to DCR. DCR will not provide this notice for landowners.

Notification to DCR – The notification of DCR consists of the filing of a completed forest cutting plan. The plan must be sent by certified mail or hand delivered. It must be received in the appropriate DCR regional office at least ten business days before cutting begins. The appropriate regional office is the office serving the district in which the cutting will take place. The ten day waiting period begins on the first business day following the receipt of the plan in the regional office. No cutting can take place until the full ten days has passed.

Preparing the Cutting Plan

The blank cutting plan forms are found at the end of this section. Additional blank forms are available at the DCR regional offices or can be downloaded from the forestry section of the DCR website at: <http://www.state.ma.us/dem/programs/forestry/index.htm>.

A completed cutting plan consists of a minimum of five pages plus maps. The first two pages must remain with the plan until it is signed by the landowner. The remaining pages are filed with the DCR and the appropriate conservation commission(s).

Pages 1 and 2 – The Landowner Information Sheet

These two pages are designed to provide basic information to a landowner about the Forest Cutting Practices Act, choice of objectives for the property, responsibilities, and information on additional forest management programs. **THESE TWO PAGES MUST REMAIN ATTACHED TO THE CUTTING PLAN UNTIL THE LANDOWNER SIGNS THE COMPLETED PLAN.** By signing a completed plan, the landowner is attesting to reading the information sheet and understanding their management options.

Page 3

For DCR Use Only: This box is to be filed out by DCR, not the landowner. The landowner may want to refer to this box when the approved plan is received from DCR, as it will indicate the file number, earliest legal start date, whether the lot falls within an ACEC or public drinking water supply watershed (Pub. Dr. Wat.), or whether rare or endangered species habitat is found on the lot (Nat. Hert.) and the possible impacts of the harvest on that habitat or species (Nat. Hert. Imp.).

Site Information

This section provides information on the location of the site and the people involved. Complete addresses and phone numbers must be provided for the landowner, plan preparer and licensed timber harvester.

Location:

Town - town(s) in which cutting will occur

Road - main road which will provide access into the lot

Acres - acres to be harvested (not necessarily the total acres in ownership)

Proposed Start Date - proposed start date (a month and year is satisfactory)

Vol. MBF - standing volume of sawlogs in thousands of board feet to be harvested

Vol. Cds - standing volume of cordwood in cords to be harvested

Vol. Tons - standing volume of pulp or chips in tons to be harvested

Landowner:

Name - full name(s) of the legal landowner(s) of record

Mailing Address – mailing address for the landowner(s)

Town, State – town, state and ZIP for the mailing address of the landowner

Phone – current home or business phone (including area code) for the landowner(s)

***Ch61, Ch61A, Stew** – Check the appropriate box(es) if the property is currently enrolled in one or more of these programs.

***Plan #** - case number for the approved forest management plan if enrolled in one of the programs listed above (case number found on the front page of the plan)

***Est. Stumpage Value** – estimated value for stumpage if the property is enrolled in the Chapter 61 program (can be left blank for all other properties)

Plan Preparer:

Name - full name of the plan preparer

Address – mailing address for the plan preparer

Town, State, ZIP – town, state and ZIP for the mailing address

Phone – current home or business phone (including area code) for the plan preparer

Type of Preparer –category that best describes the plan preparer using the codes at the bottom of the page using the codes at the bottom of the page

***Mass Licensed Forester #** - Only MA licensed forester can prepare cutting plans for land classified under Ch61, Ch61A or enrolled under the Forest Stewardship Program.

*This information is required for all lands under Ch61, Ch61A, or Forest Stewardship. Failure to submit this information will result in the plan being returned as incomplete.

Licensed Timber Harvester: **

Name - full name of the Massachusetts licensed timber harvester

Address – mailing address for the licensed timber harvester

Town, State, ZIP – town, state and ZIP for the mailing address

Phone – current home or business phone (including area code) for the timber harvester

Mass. License Timber Harvester - license number for the Massachusetts licensed timber harvester

This information may be supplied after the plan is approved, **but before work begins.

Best Management Practices (BMPs)

This section uses codes to provide information on the impacts of the operation to wetlands and water bodies and on best management practices that will be used to minimize these impacts and prevent soil erosion. The Massachusetts Forestry Best Management Practices

Manual, which is available from DCR, should be used to determine required and suggested best management practices for forestry operations.

The applicant is required to accurately map all regulated resource areas including streams, wetlands, vernal pools and other wetland resources within the operating area on the master map. All stream and wetlands crossings, filter strips and buffer strips must be clearly labeled on this map. In addition, all crossings must be flagged or painted on the site before the forest cutting plan is submitted.

If Other (OT) is used in any category an explanation must be given on the narrative page (see page 5, BMPs)

Stream Crossings: Use one column for each stream crossing. Indicate crossing locations on the master map using the code at the top of the column and flag or paint each location in the field before submitting the plan.

Type of Crossing – Use the codes at the bottom of the page to indicate the type of crossing.

Existing Structure – Use a Y (Yes) or N (No) to indicate if the structure listed under type of crossing was in place before the operation began.

Type of Bottom – Use the codes at the bottom of the page to describe the condition of the stream bottom at the crossing site.

Bank Height – Indicate the average height in feet of the stream banks at the crossing site.

Stabilization – Use the codes at the bottom of the page to indicate the type(s) of mitigation that will be used to stabilize disturbed soil and prevent sedimentation during and after the operation.

Harvesting in Wetlands: Use one column for each area of wetland to be harvested. Indicate wetland harvest locations on the master map using the code at the top of the column.

Forest Type – Use the codes at the bottom of page 4 to indicate the forest type of the wetland to be harvested.

Acres to be Harvested – Provide the estimated acreage of wetland that will be harvested.

Residual Basal Area (greater than 50%) – The regulations restrict harvesting in wetlands to no more than 50% of the existing basal area. The residual basal area must be composed of healthy trees well distributed over the area. Answer Y (Yes) to indicate that the harvest will adhere to these standards. Equipment may not be operated in wetlands except at approved crossings. Any equipment operation in the wetlands should be separately addressed in the wetland crossing section.

Wetland Crossings: Use one column for each wetland crossing. Indicate crossing locations on the master map using the code at the top of the column, and flag or paint each location in the field before submitting the plan.

Length of Crossing – Indicate the total length in feet of the crossing.

Mitigation – Use the codes at the bottom of the page to describe the measures that will be employed *during* the operation to minimize impacts to the wetland.

Stabilization – Use the codes at the bottom of the page to indicate the type(s) of measures that will be used to stabilize disturbed soil during and/or after the operation.

Filter Strips: Filter strips must be used along all water bodies (ponds, lakes, streams, etc). The use of equipment and the cutting of trees in filter strips is restricted as described in the regulations (11.05 (1)(d) and 11.05 (2)(c)) and the BMP Manual. Use one column for each filter strip. Indicate filter strip locations on the master map using the code at the top of the column.

Width – Indicate if the filter strip width will be 50’, 100’ or variable. If variable, list the percent slope and the appropriate width using the table found in the BMP Manual.

Service Forester Comments: This area will be used by the service forester to make comments, clarifications, or indicate additional requirements. These notes and/or requirements become part of the approved cutting plan and must be followed.

Page 4

Forest Products

Products to be Harvested: For each species to be harvested provide the total volume harvested and the units. MBF (thousand board feet) will be assumed if no units are given. It is not necessary to break out cords by species, but you can designate both MBF and cords by placing a slash (/) between the volumes. Example Red Oak 35/40 would indicate 35 MBF and 40 cords. If the final volumes differ from those reported, the landowner must report the corrected volumes to the service forester upon completion.

Stand Treatment

This section describes the proposed harvest in each stand (a relatively uniform, contiguous group of trees) chosen to meet the landowner’s objectives. A general description of silvicultural systems can be found in Ch. 132 Guidance Document, Appendix A. It is critical that the information in this section is accurate to avoid delays in plan approval.

Cutting Standards: Use one column for stand treated. Indicate stand locations on the master map using the code at the top of the column.

Forest Type – Use the codes at the bottom of the page to indicate the forest type of the stand. A brief description of each type is found in the regulations in 304 11.05(1)(a)7.

Acres – Provide the acres to be cut in each stand. The sum of this row for all stands should equal the acres listed in the location section on page 3.

Landowner Objective – This is the individual objective for each stand and, like the overall property objective, is either long term management or short term harvest. The stand objectives may differ from the overall property objective. However, the stand(s) with objectives differing from the overall objective for the property must constitute a substantial minority of the total acreage covered by the cutting plan.

Designation of Trees – Use the codes at the bottom of the page to indicate the marking system used. If the trees are not marked, the regulations require that the applicant describe which trees will be cut on the narrative page (see page 5, Designation of Trees).

Type of Cut – Use the codes at the bottom of the page to describe the type of cut. If a non-standard system is used, the regulations require that the applicant describe the cut on the narrative page (see page 5, Type of Cut and Future Condition) based on silvicultural principles and state the desired future condition.

Source of Regeneration – Use the codes at the bottom of the page to indicate the anticipated source of regeneration. A stocking level of 1000 seedlings/saplings per acre within five years is the standard for successful regeneration. This section can be left blank if the type of cut is Commercial Thin (CT) or Non Commercial Thin (NT).

Landowner

Landowner Signature: After reading the Forest Cutting Plan Information Sheet (pages 1 and 2) and the statements, the landowner should indicate the management objective for the property by checking the appropriate box and signing and dating the cutting plan. It is important for the landowner to read through and understand the information in this section.

Service Forester

Determination and Status: This box is to be filled out by DCR, not the landowner. The landowner may want to refer to this section when the approved plan is received from DCR, as it will indicate the status (approved or disapproved) and the expiration date of the cutting plan. Two one year extension can be granted to a cutting plan if the landowner requests an extension in writing at least 30 days before a plan expires.

Final Report and Comments: The landowner must notify DCR when the operation is complete so that the final inspection can be conducted in a timely manner. The service forester will inspect the operation and, if all conditions of the plan and the regulations have been met, will sign the final report section. Copies of the plan will be distributed to all parties involved in the harvest. If a plan expires, a final inspection will be made and any required work to meet the regulations must be completed immediately.

Page 5

Narrative Page

This page must be used if any of the following apply.

- Other (OT) is used in any category on pages 3 or 4, an explanation must be given.
- If the trees were not marked, a description of the trees harvested and/or retained must be provided.
- If a non-standard cut is used in the Stand Treatment Section, a narrative based on silvicultural principles must be used to justify the treatment.

BMPs: Use this top section to provide further explanation if Other (OT) was used in any category in the Best Management Practices Section on Page 3. This section can also be used as a general narrative section for the forest cutting plan.

Designation of Trees: Use this middle section to describe the types of trees to be harvested and/or retained if the trees were not marked on the lot. The applicant is required to provide a description of the trees to be cut by species, size, quality, and the percent basal area removed from each stand. This description should be written in such a way to allow the service forester to determine which individual trees will be harvested during the operation. Provide any clarification as needed to prevent delays in the approval process.

Regeneration and Future Condition: Use this bottom section to provide further explanation if a non-standard system (HG, DL, or OT) was used for the Type of Cut in the Stand Treatment section on page 4. The applicant is required to provide information on the expected source of regeneration, a description of how the regeneration will be protected and/or obtained, and a description of the desired future condition of the stand. This section is meant to justify the use of non-standard harvest systems, and should be based on silvicultural principles and the landowner's objectives.

Maps

Maps

At least two maps must be attached to the forest cutting plan: a master map and a locus map. In addition, if in the judgment of the service forester, the inclusion of wetland and other critical area information on the master map makes it unreadable, a supplemental map may be required for clarification.

All maps must be on standard 8.5" X 11" paper at a scale adequate to clearly show the proposed operation. All maps must state the landowners name and include a north arrow and scale.

Master Map: The master map (and/or supplemental map) must include the following:

1. appropriate exterior boundaries of the property to be operated;
2. location of the stands to be cut, designated with a code from the stand treatment section of the cutting plan (ST-1, ST-2, etc.);
3. location of public and private roads/trails within the harvest area;
4. location of all buffer strips;
5. existing and proposed haul roads, landings and main skid roads;
6. location of all wetland resource areas (including wetlands, streams, ponds, lakes and vernal pools);
7. location of all stream crossings, designated with a code from the BMP section of the cutting plan (SC-1, SC-2, etc.);
8. location of all wetland crossings, designated with a code from the BMP section of the cutting plan (WC-1, WC-2, etc.);

9. location of all filter strips along water bodies, designated with a code from the BMP section of the cutting plan (FS-1, FS-2, etc.);
10. location of all wetland harvesting, designated with a code from the BMP section of the cutting plan (WH-1, WH-2, etc.);
11. location of all steep slopes, clear cuts, important BMPs and other critical or reference areas.

Locus Map: Clearly outline the area where the cutting will take place on a USGS topographic map. Any other information you can provide to help locate the property will speed up the inspection/approval process (ex. flag the landing, etc).

Forest Cutting Plan

Landowner Information Sheet for
Chapter 132 – The Forest Cutting
Practices Act, 304 CMR 11.00
Effective Date: 1/1/04

Please Read **BEFORE** signing your Cutting Plan and keep for your own records.

If you have any questions, call the nearest DCR regional office (listed on page 2) or

1 800-783-2311

<http://www.state.ma.us/dem/forestry/programs/index.htm>

The Massachusetts Forest Cutting Practices Act:

The Massachusetts Forest Cutting Practices Act (the “Act”) requires the improvement, maintenance, and protection of forest lands for the purpose of conserving water, preventing floods and soil erosion, improving the conditions for wildlife and recreation, protecting and improving air and water quality, and providing a continuing and increasing supply of forest products. The Act requires that a Forest Cutting Plan be filed with the appropriate Department of Conservation and Recreation (DCR) Regional office before harvesting timber to ensure that these values are protected. The cutting plan is meant to satisfy the law, reflect **your objectives for your land**, and help you understand the proposed harvest.

Your Objectives:

The most important information on a Forest Cutting Plan is the landowner’s objectives. You will be asked to choose between Long-term Forest Management or a Short-term Harvest. This choice will determine which trees will be harvested and which will remain; **this decision will also determine the future condition of the forest for decades to come.** You will indicate your objective by checking one of two boxes in the Landowner Signature Section on page 4. Information on the two choices is provided below.

Long-term Forest Management

Long-term Forest Management means the planned management of the forest to achieve one or more of the following objectives: produce immediate and maximize long-term income from harvesting activity, maintain or enhance wildlife habitat, improve recreational opportunities, protect soil and water quality, or produce forest specialty products such as maple syrup.

This strategy employs the science and art of forestry to help you manage your property to achieve multiple objectives, preserve future management options, and maximize economic return.

Short-term Harvest

Short-term Harvest means the selection of trees for cutting based on the economic value of individual trees which commonly results in a residual forest stand dominated by poor quality trees and low value species. While this strategy produces immediate income and meets the **minimum** standards of the act, it does little to improve the future condition of the forest. A Short-Term harvest can limit future income and management options by:

- Removing trees before they reach economic maturity
- Leaving little value for future harvests
- Retaining slow growing or poor quality trees
- Removing mostly large diameter or high value species (such as oak) that could act as a seed source for growing future high quality trees or provide food for wildlife

As the landowner, the type of management implemented on your property is ultimately your decision.

The DCR hopes you will consider taking a long-term management approach, but most importantly, we want you to make an informed decision by having your forest management options explained. DCR service foresters can provide more information about these options. Contact the nearest office listed below.

Your Responsibilities

A harvest of forest products can have significant impact on your forest and your finances. The cutting plan identifies the standards for cutting, logging, and engineering minimally necessary for protecting the named public values established in the Forest Cutting Practices Act (MGL Ch 132). It is your responsibility to ensure that the harvesting activity complies with the approved forest cutting plan.

The DCR recommends that landowners protect their interests when selling timber. You are encouraged to explore all your options including hiring a licensed professional to plan, oversee or conduct your timber sale, obtaining competitive proposals from licensed foresters for their professional services or inviting competitive bids from licensed loggers. In addition, you should have a separate timber sale contract that addresses your own expectations for items such as payment schedules, road conditions, aesthetics, and other concerns not covered by the Forest Cutting Practices Act and its regulations.

A Forest Management Plan (Chapter 61, Chapter 61A, Forest Stewardship Plans)

The DCR recommends the best way to make decisions about implementing long-term objectives is within the framework of a forest management plan prepared by a Massachusetts licensed forester. Forest management plans provide you with maps, forest stand descriptions, and management recommendations based on objectives that you identify. A forest management plan is one requirement to receive favorable tax treatment for your forestland under M.G.L. Chapter 61 or Chapter 61A. You may also elect to join the Forest Stewardship Program, in which cost-sharing may reimburse a portion of the expense of having a forest management plan prepared. This Stewardship Plan makes you eligible to receive additional cost-share to do a variety of forest management practices. Current DCR policy stipulates that forest cutting plans for forest lands classified under Ch. 61 or 61A or certified under the Forest Stewardship Program must be prepared by a Massachusetts licensed forester or the landowner. Contact a DCR service forester for more information on all of these programs, or visit our website at <http://www.mass.gov/dcr/stewardship/forestry/> and click on Service Forestry.

DCR Regional Offices

Southeastern Massachusetts
Region 1 Headquarters
(508) 866-2580

Northeastern Massachusetts
Region 2 Headquarters
(978) 369-3350

Central Massachusetts
Region 3 Headquarters
(978) 368-0126

Connecticut Valley
Region 4 Headquarters
(413) 545-5993

Berkshires
Region 5 Headquarters
(413) 442-8928

If you are not sure which
office to call dial:
(800) 783-2311

Forest Cutting Plan

and Notice of Intent under M.G.L.
Chapter 132 – The Forest Cutting
Practices Act, 304 CMR 11.00
(Effective Date: 1/1/04)

For DCR Use Only:

File Number _____	Case No. _____
Date Rec'd _____	Nat. Hert. _____ / _____
Earliest Start _____	Nat. Hert. Imp. _____
River Basin _____	Pub. Dr. Wat. _____
Gen. Obj. _____	ACEC _____

Site Information

Location

Town _____
Road _____
Acres _____ Proposed Start Date _____
Vol. MBF _____ Vol. Cds. _____ Vol. Tons _____

Plan Preparer

Name _____
Address _____

Town, State, Zip _____
Phone _____
Type of Preparer _____
*Mass. Forester License # _____
*Required for land under Ch61, Ch61A or Forest Stewardship

Landowner

Name _____
Mailing Address _____

Town, State, Zip _____
Phone _____
Ch61 61A 61B Stew *Case # _____
CR CR Holder _____

Licensed Timber Harvester**

Name _____
Address _____
Town, State, Zip _____
Phone _____
Mass. Lic. Harvester # _____
**This information may be supplied after the plan is approved, but before work begins.

Best Management Practices

Stream Crossings

Indicate location on map	SC-1	SC-2	SC-3	SC-4
Type of Crossing				
Existing Structure				
Type of Bottom				
Bank Height (ft)				
Stabilization				

Wetland Crossings

Indicate location on map	WC-1	WC-2	WC-3	WC-4
Length of Crossing				
Mitigation				
Stabilization				

Filter Strips

Indicate location on map	FS-1	FS-2	FS-3	FS-4
Width (50', 100', or VA)				

Harvesting in Wetlands

Indicate location on map	HW-1	HW-2	HW-3	HW-4
Forest Type (see pg 2)				
Acres to be Harvested				
Resid. Basal Area (>50%)				

Service Forester Comments

Codes

Type of Preparer	Type of Crossing	Stabilization	Mitigation	Type of Bottom
LF Mass. Lic. For.	CU Culvert	SE Seed	FR Frozen	LE Ledge
TH Lic. Tim. Har	BR Bridge	MU Mulch	DR Dry	ST Stony
TB Timber Buyer	FO Ford	CO Corduroy	OT Other	MU Mud
LO Landowner	PO Poled	ST Stone		GR Gravel
OT Other	OT Other	HB Hay Bales		OT Other
		OT Other		

Note:
Applicant must provide DCR with all relevant information before plan may be approved and cutting may begin. Some forestry activities, such as prescribed burning and pesticide or fertilizer application may require additional permits. Consult MA Forestry BMP Manual for further information.

If Other (OT) is used in any category an explanation must be given on an attached narrative page

pg 3 of 5

Products to be Harvested*

Species	Mbf/Cds		Mbf/Cds
White Pine		Red Maple	
Red Pine		Sugar Maple	
Pitch Pine		Red Oak	
Hemlock		Black Oak	
Spruce		White Oak	
Other Sftwd.		Other Hdwd.	
White Ash		Total Mbf	
Beech		Cordwood (Cds)	
White Birch		SW Pulp (Tons)	
B & Y Birch		HW Pulp (Tons)	
Black Cherry		Chips (Tons)	

*Note: Volumes and values indicated in the Plan are as reported by the plan preparer and have not been independently verified by the service forester upon approval. **Mbf** = thousand board feet.

Cutting Standards

Indicate location on map	ST-1	ST-2	ST-3	ST-4
Forest Type				
Acres				
Landowner Objective				
Designation of Trees				
Type of Cut				
Source of Regeneration				

Landowner Signature

The most important information on a cutting plan is the Landowner's objective, as this will determine which trees will be harvested and which will remain; **this decision will also determine the future condition of the forest for decades to come.** After having read the Massachusetts Forest Cutting Plan Information Sheet on page one, indicate your objective by checking the appropriate box below.

LT – Long-term Forest Management

Planned management of the forest to achieve one or more of the following objectives: produce immediate and maximize long-term income, enhance wildlife habitat, improve recreational opportunities, protect soil and water quality, or produce forest specialty products.

ST - Short-term Harvest

Harvest of trees with the main intention of producing short-term income with minimal consideration given to improving the future forest condition, which often results in a forest dominated by poor quality and low value species.

I (we) have read the Massachusetts Cutting Plan Information Sheet, and am aware of my (our) management options.

I (we) hereby certify that I (we) have the legal authority to carry out the operation described above.

I (we) certify that I (we) have notified the Conservation Commission in the town in which the operation is to take place and the abutters of record within two hundred feet of the area to be harvested.

I (we) understand that the volumes and values (Ch61 only) in this plan have not been independently verified by the service forester upon approval and will report final values and volumes to the Director or his/her agent if the final figures differ from those reported.

Signature of landowner(s)

Date

Determination and Status

Approved Disapproved Expires _____
Cutting Plan

Signature of Service Forester/Director's Agent

Date

Extension 1 2 Expires / / Ser. For. Ints. / /

Amendment App 1 Dis 1 App 2 Dis 2 / /

Final Report and Comments

I hereby certify that the afore described Forest Cutting Plan and all relevant statutes have been substantially complied with.

Signature of Service Forester/Director's Agent

Date

<u>Forest Types</u>				<u>Designation of Trees</u>	<u>Type of Cut</u>	<u>Source of Regeneration</u>
WP White Pine	HK Hemlock	OM Mixed Oak		CT Cut Tree	SH Shelterwood	AD Advanced
WK WP Hem	HH Hem Hdwd	RM Red Maple		LT Leave Tree	ST Seed Tree	SE Natural Seed
WH WP Hdwd	BC Bick Cherry	BE Beech		SB Stand Boundary	CC Clear Cut	NT Non Com Thin
WO WP Oak	BB Bee/Bir/Map	SF Spruce/Fir		OT Other	SE Selection	PL Plant
RP Red Pine	OH Oak Hdwd	SM Sugar Maple		<u>Landowner Objective</u>	SA Salvage	CO Coppice
SR Red Spruce	OR N Red Oak	PP Pitch Pine		LT Long-term Mgt.	SN Sanitation	DS Direct Seed
				ST Short-term Har.	OT Other*	OT Other

*If Other (OT) or a non-standard system is used an explanation must be given on attached narrative page

Forest Cutting Plan

Narrative Page (Effective Date: 1/1/04)

Use this page to provide further explanation or if Other (OT) was used in any category on pages 3 or 4.

Landowner _____

Town _____

File Number _____

BMPs

Use this Section to provide further explanation or if Other (OT) was used in any category in the Best Management Practices Section on Page 3.

Designation of Trees

Use this Section to describe the types of trees to be harvested and/or retained if Other (OT) was used for "Designation of Trees" in the Stand Treatment Section on page 4.

Stand No.	Species to be Cut	Size of Trees to be Cut	Quality of Trees to be Cut	% BA/Acre Removed
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Regeneration & Future Condition

Use this Section to describe how Chapter 132 requirements will be met if a non standard system (HG, DL, or OT) was used for the "Type of Cut" in the Cutting Standards Section on page 4.

Stand No.	Source of Regeneration (ex. AD, SE)	How will Regeneration be obtained/protected? If using AD - Describe the species present and how the regeneration will be protected If using SE - Describe the source of the seed and the number of seed trees/acre
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Stand No. _____ **Desired Future Condition**
Describe what the stand is expected to look like five years from the harvest, including the condition of the overstory & understory

_____	_____
_____	_____
_____	_____
_____	_____

Appendix A: Silvicultural Prescriptions

Regeneration - Treatment to allow the establishment of a new age class of trees or to assist regeneration already present. Methods of regeneration differ by intensity, timing, and tree arrangement. The particular regeneration system should be tailored to the site, species, and objectives of the particular property.

Even-aged Systems

1. Shelterwood

Preparation -- is an intermediate cut conducted with the objective of improving the seed bearing capacity of the residual stand. Openings are made in the canopy by removing the unacceptable growing stock, typically trees in the lower crown classes, to the extent necessary to permit the development of vigorous seed bearers. The cutting may also assist in the development of wind-firm trees. Well-tended stands usually have adequate numbers of vigorous trees for abundant seed production, in which case the preparatory cutting may be bypassed.

Seed Tree -- is conducted within a single operation with the objective of creating enough growing space in the canopy, as well as increasing light on the forest floor, in order to provide favorable conditions to establish regeneration. The trees that are retained as seed trees must be full-crowned, healthy trees with good form. Therefore, the trees removed in this stage are the least desirable remaining in the stand. It is important that trees of undesirable species be cut or killed regardless of crown class. Seed cuttings should be carried out during a year in which the target species bear seed in abundance. The intensity and pattern of the cutting should be adjusted to the target species so the residual stand provides optimum conditions for germination and establishment of the target species.

Removal -- the largest and most vigorous trees left from the seed tree cut usually have the greatest capacity to increase in value and are the ones reserved until the removal cut. This final cut removes the overstory once a new cohort has adequate numbers of desirable trees and they have grown to some minimal threshold size to assure their survival. In some instances a minimal number of trees may be left as “standards” that may be harvested in the future.

2. Seed Tree

Preparation -- is an intermediate cut conducted with the objective of improving the seed bearing capacity of the residual stand. Openings are made in the canopy by removing the unacceptable growing stock to the extent necessary to permit the development of vigorous seed bearers. The cutting may also assist the development of wind firm trees. Well-tended stands usually have adequate numbers of good-vigor trees for abundant seed production, in which case the preparatory cutting may be bypassed.

Seed Tree -- leaves only widely scattered trees of excellent phenotypes to serve as a seed source; but, unlike the shelterwood system, the sparse canopy cover has little effect on conditions of the environment near the ground. The seed trees must be light-seeded species with a full healthy crown, phenotypically superior, prolific in seeding, and sturdy and healthy enough to withstand wind and

exposure and remain alive until the removal cutting. The number of seed trees per acre retained will depend upon the target species' and their regeneration requirements. The trees removed in the seed cuttings are the least desirable remaining in the stand. It is particularly important that trees other than target species be cut or killed regardless of crown class. Seed cuttings should be carried out during a year in which the desirable species bear seed in abundance. The residual seed trees should be spaced to provide an adequate amount of seed to assure regeneration of the desired species.

Removal -- The largest and most vigorous trees left from the seed tree cut usually have the greatest capacity to increase in value and so are the ones most logically reserved until the removal cut. This final cut removes the overstory once a new cohort has adequate numbers of desirable trees and they have grown to some minimal threshold size to assure their survival. In some instances a minimal number of trees may be left as "standards" that may be harvested in the future.

3. **Clearcut** -- This cut involves the removal of the entire stand in one cutting, creating a new even-aged stand. Generally, it is specified that all trees greater than a particular diameter will be cut. The term clearcut, however, should not be applied to harvests that remove only the merchantable trees, leaving behind trees of small size, poor quality, or inferior species. Reproduction may be obtained artificially, by natural seeding, or from trees cut in the clearing operation. Clearcut size and shape will depend upon the seed availability of the target species. Common clearcut methods include patch, strip and stand.

Intermediate -- periodic releasing, improvement, and thinning treatments can be made over the rotation to improve stand health, composition, quality and to capture the value of mortality. The healthiest and highest quality trees should be retained until the regeneration harvest. The establishment of regeneration is a concern only at the end of the rotation.

Noncommercial Operations:

Weeding -- a treatment during the seedling stage to eliminate or suppress mainly herbaceous plants and shrubs that overtop or interfere with desirable young trees.

Cleaning -- a treatment during the sapling stage to free selected trees from competition of overtopping trees of comparable age, and to favor the trees of better species and quality. Cleaning may also include removing woody vines and shrubs that overtop or seem likely to suppress desirable trees not past sapling stage.

Liberation -- differs from weeding and cleaning in the kind and age of vegetation removed, and the nature of the stand treated. Liberation cutting frees trees not past sapling stage from competition of older overtopping trees and vegetation.

Pre-commercial thin -- is designed to increase the growth and enhance the quality of the stand. The cut material is too small or of such quality as to not be salable under normal market conditions.

Commercial Operations:

Improvement -- intermediate treatment in stands past sapling stage which remove damaged, defective, or otherwise imperfect trees in the main canopy. It is specifically designed to enhance the growth and development of the better trees that remain. It serves primarily to upgrade the quality of an intermediate-aged stand and does not necessarily regulate relative density.

Commercial thin -- is designed to enhance the growth and quality of healthy trees with dominant or co-dominant position exhibiting the best form. There is sufficient volume and quality removed to cover the costs of improvement work and may also return some profit to the landowner.

Examples include: thinning from above, thinning from below, mechanical and free.

Sanitation and **Salvage** cuttings do have some features in common with thinnings and other tending operations. First, they all remove potential mortality trees from forest stands, even though the reason differs from one method to another. Also, all of the cuttings have potential financial value by increasing recoverable yields. Salvage or sanitation cuttings serve primarily to reduce financial losses from a recognizable injurious agent.

Salvage – an intermediate treatment removing dead or badly damaged trees to recover their value. Salvage cutting address financial rather than ecological needs.

Sanitation – an intermediate treatment to utilize high risk trees as an early response to pending pest and disease problems. Sanitation cutting removes susceptible and host trees to prevent the build up or spread of insects and diseases.

Uneven-age

Selection – a selection system should be used to create or perpetuate stands with at least three age classes. It is an uneven-aged system in which regeneration and intermediate treatments are implemented in the same entry in order to create a stable stand structure in which diameter classes occupy an equal proportion of the site. Since the selection system removes only a relatively small part of the stocking at any single entry, compared to an even-aged system, the growing conditions created favor species of mid to high shade tolerance. The intensity of the cutting will be dependent on the length of the desired cutting cycle. In the selection system, consideration must be given to both a regeneration and intermediate component.

The **regeneration component** of the harvest involves the removal of large diameter trees in order to start a new age class. Harvesting should concentrate on removing unacceptable growing stock leaving the best quality trees for a seed source, to increase their value through growth and to help concentrate growth potential onto younger trees with desirable attributes. Two reproduction methods are generally recognized differing only in the spatial distribution of the financially mature trees to be harvested and the resulting regeneration.

Single-tree Selection Method creates regeneration openings that cover an area equivalent to the crown spread of a single mature tree. These openings are spaced more or less

uniformly across a stand to improve environmental conditions sufficiently to promote a new age class that is typically shade tolerant.

Group Selection Method creates regeneration openings by removing mature trees in small groups or clusters. These openings are fewer in number, but larger in size than the single-tree method. The group selection method is typically used in the regeneration of species with a mid-level shade tolerance.

Harvests that do not include the intermediate component of the selection system create unregulated crowding in the pole and sapling classes and a reduced production potential.

The **intermediate component** is an integral part of the selection system necessary to achieve the desired stand structure while assuring the stand's ability to provide a stable flow of values over a multi-year time frame. Intermediate treatments in the younger age-classes improve growth rates on acceptable growing stock by removing trees of poor form and vigor, freeing growing space and available resources for the better quality crop trees.

Non-system Harvests

CH. 132 Non-system Harvests: Exceptions to or deviations from the above listed silvicultural systems including diameter limit cutting and other non-standard harvests shall require a narrative justification and approval by the Director or Director's agent. The justification should be based upon silvicultural principles and shall state the future desired condition of the stand.

Appendix B: Procedure for Long-term Management/Short-term Harvest Determination

Although most operations will fall clearly into one category or the other, at times it will be necessary to apply field measurements to categorize a “mixed” or “borderline” sale. If a cutting plan is submitted under a long-term objective it will be up to the individual Service Forester to determine if the marking or prescription meets the requirement of maintaining or improving the Acceptable/Unacceptable Growing Stock ratio. If the service forester feels that the marking does not meet this requirement, the plan preparer will be contacted. If the plan preparer disagrees with the service forester’s determination, the service forester will undertake a standardized field measurement. The plan preparer will be invited to participate in the inventory. The inventory will be conducted as follows:

Variable 10 basal area factor (BAF) plots will be used. The number of plots will depend on the acreage of the area harvested. A minimum number will be 10 plots for the first 20 acres. For areas greater than 20 acres one additional plot will be taken for each 10 acres over 20 acres. Example a 44 acre stand/property would have 12 plots.

The plots will be spaced evenly throughout the area in a grid pattern. The distances between plots and line will depend on area to be sampled and the number of plots needed. All plots will be numbered and the center point flagged to allow re-measurement if necessary.

At each plot the following shall be measured using a 10 BAF prism or angle gauge: The species, DBH (in 2 inch classes), classification (acceptable/unacceptable), and status (cut/leave) of each “IN” tree over 4.9” diameter.

The total of all measured trees from all plots will be used to determine the present growing stock ratios. The trees to remain after the harvest (determined by marking or prescription) will determine the resulting growing stock ratio. These ratios will be compared and the appropriate designation will be determined. In cases where the outcome is within 10% of the “line” between long-term and short-term, the sale will be given a long-term designation to allow for measurement error or bias.

If the plan preparer does not agree with this measured determination, he or she may re-measure the plots or ask for a second determination by the Regional 132 Coordinator. The Coordinator will visit the site, examine any collected data, and take additional measurements as needed to come to a determination. If the plan preparer is still in disagreement with this second determination they may appeal to the Director of the Division of State Parks and Recreation.

The director or the director agents may give a harvest a long-term management designation even if the ratio is degraded in cases where the conditions and objectives justify the designation such as conversion of non-native stands.

Appendix C: Classification of Individual Trees

The system outlined on this page will be used to determine the management potential of individual trees. This system will determine if a live tree is classified as Acceptable Growing Stock (AGS) or Unacceptable Growing Stock (UGS). The system is based on a biological description of the tree and not on any particular product specifications that change over time. The characteristics that are evaluated in the system are used to predict the potential of a tree to develop into one that will be structurally sound, vigorous, and yield products of high value. In general a tree will be considered acceptable if it has the potential to eventually yield a 12' sawlog product and will survive for at least the next 10 years. These characteristics are evaluated using three variables: crown class; sweep, crook, other defects; and limb count in the best 12' of the butt 16' log (See Table 1). Values are assigned to each of these variables. The sum of the tree values is then used to assign a Management Potential (AGS, or UGS) to each tree. For use in Ch132 free to grow is defined as a individual tree or group of up to two trees that are open on at least two sides or the top and one side. A tree is considered to be acceptable growing stock if it scores 8 or higher, is free to grow, and does not have any serious defects that would make it unmerchantable.

Examples: The Criteria in Table 1 were used to evaluate three trees

Tree 1 – 12” Diameter Red Oak

Qualifier 1, Tree free to grow after harvest – Yes = continue

Qualifier 2, Tree likely survive for next 10 years given present condition – Yes = continue

Crown class – Codominant, Value = 3

Sweep or Crook - 3” , Value = 3

Limb count - 0, Value = 4

Total value - $3 + 3 + 4 = 10$ **Classification = Acceptable Growing Stock (AGS)**

Tree 2 – 7” Diameter Red Maple

Qualifier 1, Tree free to grow after harvest – Yes = continue

Qualifier 2, Tree likely survive for next 10 years given present condition – Yes = continue

Crown class – Intermediate, Value = 2

Sweep or Crook - 3” , Value = 3

Limb count - 2, Value = 4

Total value - $2 + 3 + 4 = 9$ **Classification = Acceptable Growing Stock (AGS)**

Tree 3 – 10” White Pine

Qualifier 1, Tree free to grow after harvest – Yes = continue

Qualifier 2, Tree likely survive for next 10 years given present condition – Yes = continue

Crown class – Intermediate, Value = 2

Sweep or Crook – Weevil Injury, Value = 0

Limbs - Sound red knots 2” no clear faces, Value = 3

Total value - $2 + 0 + 3 = 5$ **Classification = Unacceptable Growing Stock (UGS)**

Table 1, Criteria Used in Determining Classification

Hardwoods		Softwoods	
All Criteria apply to the best 12' in the butt 16' log		All Criteria apply to the butt 16' log	
<u>Characteristic</u>	<u>Value</u>	<u>Characteristic</u>	<u>Value</u>
Crown Class		Crown Class	
Dominant	4	Dominant	4
Codominant	3	Codominant	3
Intermediate	2	Intermediate	2
Suppressed, Open grown, or serious crown damage	0	Suppressed, Open grown, or serious crown damage	1
Sweep or Crook (Deviation in Inches)		Sweep or Crook (Deviation in Inches)	
1" or less	4	1" or less	4
2 – 4"	3	2 - 4"	3
5 – 6"	2	5 – 6"	2
7 – 8"	1	7 – 8"	1
9+” or any rot, forks,	0	9+” or rot, forks, seams or significant weevil injuries	0
Limb Count (No. of live an dead limbs >1/3 inch)		Limbs	
2 or less limbs	4	Two full length or four 8' clear faces	4
3 – 4 limbs	3	Sound red knots do not exceed 3” diam., dead/black knots do not exceed 1 ½” diam. on 3 best faces	3
5 – 8 limbs	2	Sound red knots do not exceed 5” diam., dead/black knots do not exceed 2 ½” diam. on 3 best faces	2
9 – 16 limbs	1	No limit	1
17+ limbs	0		
The sum or the three values is used to assign a management potential to the tree			
Sum of the 3 values		Classification	
8 – 12		Acceptable Growing Stock (AGS)	
1 – 7		Unacceptable Growing Stock (UGS)	

Qualifier 1 – Any tree that is not free to grow (open on at least 2 sides or the top and 1 side) after harvest will automatically be classified as unacceptable growing stock

Qualifier 2 – Any tree that does not have a 16' merchantable butt log or is not likely to survive at least 10 years will be classified as unacceptable growing stock.

Appendix D: Forest Types

- WP White Pine - Eastern white pine is pure or predominant. Grows well on moist sandy loam soils.
- WK Eastern White Pine and Eastern Hemlock - A large assortment of hardwood is found with these conifers. Pine usually predominates. Although found in all counties, more usually found in Plymouth, Worcester and counties west.
- WH White Pine - Hardwoods - Eastern white pine, northern red oak and other hardwoods predominate with red maple as the chief associates. Rarely a permanent type, but tends to develop into WK.
- WO White Pine - Oak - Eastern white pine and northern red oak or black oak predominate. Type has some chestnut oak but usually black, red or scarlet. An assortment of hardwoods are associated.
- RP Red Pine - Red pine, although able to reproduce naturally, is mostly found in plantations.
- PP Pitch Pine - Pitch pine is pure or predominant. Chief associates are chestnut, scarlet and red oak. Found on dry soils predominantly near the coast, Cape Cod and Plymouth County, and scattered dry sites in Worcester, Franklin and Hampden Counties.
- HK Hemlock - Eastern hemlock is pure or predominant over many associates. Found throughout Massachusetts but more prevalent in Plymouth and west of Connecticut River. Often is the result of cutting of pine in a WK stand. Uncommon as a natural pure stand.
- HH Hemlock - Hardwoods - Hemlock and yellow birch dominates the mixture with sugar maple, beech and red oak as associates. Found on moist sites.
- SR Spruce - Red - Stand dominated by red spruce and associated hardwoods such as yellow birch, sugar maple, red maple and beech. Natural stands found only in Berkshire and northern Franklin Counties predominantly on upland sites.
- SF Spruce - Fir - Stand consists predominantly of red or black spruce and balsam fir. Common associates are red maple and paper birch. Found only as a natural stand in Berkshire and northern Franklin Counties predominantly on wetter sites.
- OR Northern Red Oak - Northern red oak is predominant with other oaks being the chief associates.
- OH Oak - Hardwoods - Stands contain mixtures of red, white, black and scarlet oak, hickories and associated other hardwoods. Oaks and hickories predominate.

- OM Mixed Oak - Stands predominantly black, white and red oak with associates of maple and birch. If treated, these stands usually become red oak only.
- BB Beech - Birch Maple - The true northern hardwood type - sugar maple, yellow birch and beech are the component species; many associated species. This is a climax type throughout Massachusetts predominantly in western Massachusetts.
- BE Beech - Stands predominantly beech and sugar maple. Due to past cuttings, stands may be predominantly beech.
- BC Black Cherry - Northern hardwoods predominate, with black cherry the most common species.
- RM Red Maple - Swamp Hardwoods - Stands are pure or contain mixtures of red maple, silver maple, black and green ash, American elm, river birch and sycamore. A large number of associated species are found in these forested wetlands.
- SM Sugar Maple - Sugar maple is either pure or predominant. Small proportions of other northern hardwoods are found. Often the results of sugarbush management.
- OT Other - Describe on forest cutting plan.

Appendix E: Forest Cutting Plan Codes

Page 3 Codes

<u>Type of Preparer</u>		<u>Type of Crossing</u>		<u>Type of Bottom</u>	
LF	Mass Lic Forester	CU	Culvert	LE	Ledge
TH	Mass Lic Timber Harvester	BR	Bridge	ST	Stony
TB	Timber Buyer	PO	Poled	MU	Mud
LO	Landowner	FO	Ford	GR	Gravel
OT	Other	OT	Other	OT	Other

Stabilization

SE	Seed
MU	Mulch
CO	Corduroy
ST	Stone
HB	Hay Bales
OT	Other

Mitigation

FR	Frozen
DR	Dry
OT	Other

Page 4 Codes

Forest Types

WP	White Pine
WK	White Pine/Hemlock
WH	White Pine/Hardwood
WO	White Pine/Oak
RP	Red Pine
SR	Red Spruce
HK	Hemlock
HH	Hemlock/Harwood
BC	Black Cherry
BB	Beech/Birch/Maple
OH	Oak/Hardwood
OR	Northern Red Oak
OM	Mixed Oak
RM	Red Maple
BE	Beech
	SF Spruce Fir
SM	Sugar Maple
PP	Pitch Pine
OT	Other

Designation of Trees

CT	Cut Trees
LT	Leave Trees
SB	Stand Boundary
OT	Other

Type of Cut

SH	Shelterwood
ST	Seed Tree
CC	Clear Cut
SE	Selection
SA	Salvage
	Intermediate Harvests
CT	Commercial Thin
NT	Non Commercial Thin
	Non-Standard Systems
HG	Highgrade
DL	Diameter Limit
OT	Other

Source of Regeneration

AD	Advanced
SE	Natural Seed
PL	Plant
CO	Coppice
DS	Direct Seed
OT	Other

Landowner Objectives

LT	Long-term Forest Mgt
ST	Short-term Harvest

Appendix F: Silvicultural References

The following reference materials provide further information on silvicultural methods suited to common tree species in Massachusetts;

1. Burns, Russell M., *Silvicultural Systems for the Major Forest Types of the U.S.*, U.S.D.A. Forest Service Ag. Handbook No. 445.
2. Burns, Russell M., and Barbara Honkala. *Silvics of North America.*, U.S.D.A. Forest Service. Ag. Handbook 654.
3. Frank, Robert M. and John Bjorkbom. 'A Silvicultural Guide for Spruce-Fir in the Northeast.' U.S. Dept. of Ag., Forest Service General Technical Report NE-6, 1973.
4. Hibbs, David and William Bentley, "A Management Guide for Oak in New England". University of Connecticut, Cooperative Extension Service.
5. Lancaster, Kenneth. "Managing Eastern Hemlock, A Preliminary Guide. U.S.D.A. Forest Service, NA-FR-30, 1985.
6. Lancaster, Kenneth, "White Pine Management, A Quick Review" U.S. Dept. of Ag., Forest Service, NA fr-27, 1984.
7. Lancaster, Kenneth and William D. Leak, "A Silvicultural Guide for White Pine in the Northeast, U.S. Forest Service General Technical Report NE-4 1, 1978
8. Lancaster, Kenneth, et. al., "A Silvicultural Guide for Developing a Sugarbush". USDA Forest Service. Research Paper, NE-286, 1974.
9. Leak, William and Staley Filip, "Uneven-Aged Management of Northern Hardwoods in New England. U.S. Dept. of Ag., Forest Service Research Paper NE-332, 1975.
10. Leak, William, Dale Solomon and Stanley Filip, "A Silvicultural Guide for Northern Hardwoods in the Northeast". U.S. Dept. Ag., Forest Service, Research Paper NE-143, 1969.
11. Nyland, Ralph D., 1996, "Silviculture Concepts and Applications", McGraw-Hill, Boston
12. Roach, Benjamin and Samuel Gingrick, "Even-Aged Silviculture for Upland Central Hardwoods". US Dept. Ag., Forest Service, Agriculture Handbook 355, 1968.
13. Sampson, T.L., J. P. Barrett, and W.B. Leak, "A Stocking Chart for Northern Red Oak in New England". New Hampshire Agricultural Experiment Station, University of New Hampshire.
14. Smith, David M., B.C. Larson, M.J. Kelty, P.M.S Ashton, atthew J1986, *The Practice of Silviculture Applied Forest Ecology*, Ninth, John Wiley and Sons, Inc., N.Y.

Appendix G: DCR Contact Information

Massachusetts Department of Conservation and Recreation Bureau of Forestry.

<http://www.mass.gov/dcr/stewardship/forestry/>

Statewide Office: (617) 626-1250

DCR administrative headquarters for the processing of Ch. 132 Forest Cutting Plans and information on timber harvesting licenses, including applications:

East: Clinton

355 West Boylston Street

Clinton, MA 01510

Phone: (978) 368-0126

Fax: (978) 368-0217

Central: Amherst

P.O. Box 484

40 Cold Storage Drive

Amherst, MA 01004

Phone: (413) 545-5744

Fax: (413) 545-5995

West: Pittsfield

P.O. Box 1433

740 South Street

Pittsfield, MA 01202

Phone: (413) 442-8928

Fax: (413) 442-5860

UMass Amherst Extension: Forest Conservation Program: www.MassWoods.net

- Find the service forester or a licensed forester working in your town