

**Massachusetts Department of Conservation and Recreation  
Bureau of Forest Fire Control and Forestry  
Forest Management Proposal  
Name: Berkshire Road and Trail Ash Removal**

**Date Posted:** February 16, 2017  
**End of Comment Period:** April 2, 2017

**Region:** West

**Forest Management Districts** Northern Berkshires  
Central Berkshires  
Southern Berkshires  
Western CT Valley

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**Overview:**

As the infestation of the emerald ash borer (EAB) spreads throughout the region significant amounts of ash trees (genus *Fraxinus*) will die. Mortality of ash in the wake of EAB across the United States has been observed to be near 100%. EAB may have as much impact as the collapse of the American chestnut and American elm. This will bring both a financial drain to state and local governments and an increased risk to public safety. Proactively pre-salvaging ash at first sign of infestation and prior to complete collapse of the species could save considerable amounts of tax dollars, provide a safer recreation experience, and utilize the lumber, firewood and pulp which would otherwise be lost.

It is estimated that there is approximately 6533 acres of DCR forest adjoining public roads within the four western DCR Forestry Districts that contain high risk ash. This includes the Northern Berkshire, Central Berkshire, Southern Berkshire and Western Connecticut Valley forestry districts. This focus area of the project will be two hundred feet perpendicular to approximately 176 miles of public (MA DOT, town, and DCR) roads and DCR forest roads/ORV trails where ash can be cut and removed. Multiple timber sales of varying sizes will be done as significant areas of ash are identified. Only ash trees that have died or are in imminent danger of mortality will be removed. Sapling and pole size ash, generally less than 10" in diameter will be retained with the hope that they will survive the initial infestation and populate future forest stands. It is estimated that only a small portion of the area described above will be presalvaged or salvaged as the EAB will probably bring about the mortality of most ash in rapid fashion. Major concentrations of ash as described above that are located in Reserves designated areas will be vetted through the Forest Reserve Advisory Committee before any commercial timber sale activity.

**The conditions that led to selecting this project for forest management are:**

- Areas in the Berkshires have been affected the EAB and overstory trees are beginning to decline. It is anticipated that EAB will spread throughout the region in coming years.
- Declining/dead ash trees along roads and trails will create a public safety issue as trees begin decline and fall.
- This project will provide a cost savings to DCR and towns by removing current and future hazards while there is still a salvage value to the ash trees. Once dead, these trees will become a financial liability.
- This project may provide an opportunity to curb current erosion issues, maintain and/or repair damage to roads and trails throughout the region with proceeds from the salvage of the ash trees.

**The Road and Trail Ash Removal Forest Management Project proposes to:**

- In confirmed EAB sites, remove ash within road and trail buffers to protect public health and safety, public interests and public assets.
- Restore or maintain recreation sites following significant natural disturbances or destructive insects or diseases.
- Capture the mortality and value of ash trees that will help offset the eventual cost to DCR and municipalities from having to remove dead and dying trees along public roads and trails.
- Demonstrate harvesting techniques and best management practices that protect forest productivity, soil and water resources.
- Demonstrate techniques and best management practices of road and trail maintenance and repair.
- When and where time will allow, some areas which are too small for commercial operations may provide opportunity for "Home Fuel Wood" lots to achieve the goals of this proposal.

**Emerald Ash Borer:**

Emerald Ash Borer (EAB) was first found in Michigan and Ontario in 2002. It was introduced from Asia and has few natural predators here to control populations. EAB has spread from Michigan and is now located throughout the northeastern part of the United States and Canada. This insect breeds exclusively in all native species of ash (white, green and black) found in Massachusetts. This insect has already destroyed hundreds of millions of trees across the Midwest and Northeast. EAB is generally attracted to trees which were previously weakened or stressed.

The EAB has a one year life cycle in which each female lays 30-60 eggs on average with maximum of 200 in some cases. After the eggs are deposited in bark the larvae chew into the tree and begin feeding on the phloem of the tree. The following year the adult will exit the tree through a D-shaped hole and begin feeding on foliage to continue the cycle. Once infested by EAB the tree will generally die within 3-5 years.

The first infestation found in Massachusetts is located in Dalton with additional positive sighting found throughout Berkshire County. There have also been positive finds of EAB in Hampden, Worcester, Essex and Suffolk County in the central and eastern part of Massachusetts as well as the neighboring states of New York, Connecticut and New Hampshire. It is generally

accepted that at this time there is no way to stop or control EAB, however there are ways to reduce and slow the spread to areas not yet infested.

### **Stand Description:**

There are no traditional forest “stands” in the project area. An analysis was conducted of DCR forests to determine where the highest incidence of white ash occurs along roadways in the Berkshires. Public roads and DCR roads / trails were buffered 200 feet either side using Geographic Information System (GIS) analysis. Within the proposed road and trail buffer strips of the project area there are approximately 6533 acres of northern hardwood forest of which white ash (*Fraxinus americana*) is a common component. There are 698 miles of public roads and road/ trails on DCR forests and 176 miles of those roads pass through or next to northern hardwood stands in which white ash is commonly found. Based on DCR Continuous Forest Inventory there is an average of 8 ash trees per acre in this forest type throughout the Berkshire districts equating to an approximate 52,000 ash trees in the buffered roads and trails. It is also estimated that there is approximately 5.1 MMBF (million board feet) of ash timber in the buffered roads in the project area. The acres, number of trees and timber volumes described are in terms of the maximum extent of the project area in consideration and are only provided for information. Only subset areas of the project area as they are identified as being infested with EAB will be considered for salvage and presalvage.

The map attached to this document provides an example of the project area where ash incidence is probable along roads and trails in DCR Woodlands, Parklands and Reserves.

The identified areas and roads will be examined for ash incidence, potential mortality, safety issues and harvesting potential. Black ash (*Fraxinus nigra*) and green ash (*Fraxinus pennsylvanica*) make up a very small percentage of ash in the region and are also affected by EAB. Throughout this document all ash will be grouped together.

There are currently four state forests that have confirmed infestation with EAB within the project area; these include October Mountain State Forest, Pittsfield State Forest, Wahconah Falls State Park, and South Mountain Regional Headquarters. Although not confirmed, the DCR Forest Health Program Director is quite certain that EAB is present at Mount Greylock Reservation. The known EAB infestations range from early detection stage to stands with high mortality.

Throughout the project area the age, size and species composition vary along the roads and trails. The majority of ash trees are in the 5 – 10” diameter size class but the majority of the ash volume is in the 15 – 20” diameter size class. The current health of these stands varies depending on current composition, in areas currently infested with EAB the ash is in rapid decline while the remaining species may be benefiting by the increased light and nutrient availability. White ash in particular has generally been in decline across the region for many years from what is believed to be condition known as “ash-yellows”. Much of the region is still recovering from the 2008 ice storm which damaged forests above approximately 1500’ in elevation.

Topography and soil type changes vary greatly across the project area, ranging from deep wet soils in flat bottom land to shallow well drained soil to extreme slopes with outcroppings along some roads. There are numerous streams, wetlands, beaver ponds, vernal pools and other wetland features along the roads and trails of this project area.

There are records of forest products being harvested along many of the road and trails over the past 70 years. This harvesting ranged from traditional commercial timber/cordwood sales to “Cut a Cord” and “Home Fuel Wood” lots. Approximately 1073 acres of the proposed project have had previous treatments.

**Aesthetic, Recreation, Wetlands, Cultural, Rare Species and Wildlife Considerations:**

- **Aesthetic:** All of the harvesting conducted through this project will be located within 200 feet of roads and trails. These include Mass DOT, DCR and town owned and maintained roads for public vehicles, DCR owned roads for administration use and DCR owned roads for forestry and OHV use. DCR will coordinate and cooperate with other state and municipal officials on management of roads and the ownership of timber within road right-of-ways. As directed in the “Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines” (SCMG) there will be no slash left within 25 of the road edge. Slash will be light and natural in appearance in the remaining project area.

The trails within the project area range in status from the nationally significant Appalachian Trail to short local connection trails. Within the proposed 50 foot buffer of DCR recognized single track hiking trails ash may be cut and left in place where a concern of public safety exists, the actual harvesting of these trees is not anticipated through this proposal. This activity will likely only occur where the density of ash is determined to be a high risk to trail users.

As directed in the SCMG the District Forester will coordinate with park supervisors, trail managers and user groups such as the AMC when any vegetation management is planned. All work will strive to leave downed hazard tree slash in a light and natural in appearance.

- **Recreation:** Whether this project occurs or not there will be effects to all forms of recreation on state lands. By removing current and future hazard trees this project will benefit the users experience by providing for safer travel by motorized and non-motorized use. By proactively removing ash where it occurs in high density DCR may be able to prevent closure to roads, trails and recreation activities due to hazardous conditions.
- **Wetlands:** All types of water/wetland features are anticipated to be found throughout the proposed project area including ponds, streams, vernal pools and wetlands. As each individual prescription is planned these features will be located, mapped and treated at or above the minimum standards set forth in “Massachusetts Forestry Best Management Practices Manual”. Equipment limitations and exclusions will occur where appropriate. Due to the nature of this project stream or wetland crossing may not be necessary.
- **Cultural Resources:** It is expected to find extensive amounts of stone walls, foundations and boundary monuments. These features as well as others found within the project area will be located, mapped and protected from disturbance during any operation and will be treated according to guidelines set forth in the “Bureau of Forestry – Cultural Resource Management Protection Standards & Guidelines”.
- **Rare and Endangered Species:** According to the NHESP “Massachusetts Natural Heritage Atlas 13<sup>th</sup> Edition” there is approximately 1388 acres of the project area within priority or estimated habitat. Prior to writing the prescription for each portion of this project NHESP will be consulted for recommendations to incorporate protections of each species of concern.

Care will be taken during the planning and implementation of each individual prescription to identify and protect any state listed rare or endangered plant, insect or animal species, and advice will be sought from NHESP for management suggestions.

- **Wildlife:** This project will not have an effect on general wildlife populations. Where not limited by public safety there can be retention of wildlife habitat trees with feature such as cavities, snags, rot and dead branches.

#### **Sale Layout and Harvesting Limitations:**

Due to the highly visible nature of this proposed project considerable amounts of time should be given to the design, layout and marking of each individual prescription. The salvaging of ash along the roads and trails leave a lasting up close view of forestry and logging to the public. Each prescription and contract should contain provisions to prevent soil disturbance, damage to residual trees, excessive slash and other visually poor practices.

- **Equipment Limitations:** Due to the narrow linear nature of this harvest a forwarder will be the preferred equipment used to move felled trees from stump to landing along roads. To protect road surfaces only rubber tired or rubber tracked equipment will be permitted. Tire chains and steel tracks will not be permitted for these harvests unless otherwise approved for specific weather or terrain related issues.

While cutting hazard trees in the buffer of single track hiking trails cutting will be limited hand felling of hazard trees. The use of compact utility loader such as a Toro Dingo may be utilized to move material away from the trail foot print if the conditions permit or necessitate its use.

- **Landings:** When possible existing clearings or landings with access for log trucks should be utilized. When existing landing sites are not available small compact roadside landings should be utilized where accessible by log truck. All landing types should be maintained in a clean neat appearance. This is easily attained with a forwarder.
- **Wetland and Stream Crossing:** A priority in layout of each prescription though this proposal will be to avoid creating wetland and stream crossings outside of the existing road layout. Each harvest area between water features will be considered a segment. If harvested materials need to move from segment to segment for landing purposes they will cross the water/wetland feature on the existing road.
- **Forwarder Roads:** A single forwarder road through the middle of each proposed road segment should be sufficient to access those trees to be harvested. Where possible it will be preferred to have only one entry point into each segment of harvest.
- **Road and Trail Buffers:** As per the SCMG there will be a 50 foot buffer along all roads where no more than 50% of live basal area will be harvested and no slash within 25' of the road will remain. In some cases where ash consists of more than 50% of the live basal area an exemption may be sought to remove all ash. The Massachusetts Slash Law will also be observed beyond the 25' no slash zone. Each individual prescription will include additional restrictions for special situations such as a designated "Scenic Roads". Stumps should be required to be cut below one foot in height to enhance the aesthetics of the harvest.

When working along the single track hiking trails a 50 foot buffer where slash will be light and natural in appearance will be in place.

- **Excluded Areas:** Equipment will be excluded from filter strips of all wetland features encountered. During the planning and implementation of each individual prescription these areas will be identified.

- **Erosion and Sedimentation:** Unwanted movement of soil will be controlled by following recommendations in the "Massachusetts Forestry Best Management Practices Manual". All work will be limited to dry or frozen soil conditions.
- **Site Restoration:** Upon completion of harvest activity in the Project area all roads, skid roads and skid trails will be left in a stable state by grading and installing water bars as needed. All landing will be clear of debris, graded and seeded with "Berkshire Conservation Mix" and straw.
- **In-kind Services:** A financial evaluation of each individual prescription's income potential can be used to determine what if any In-kind services may be attached. Several examples of potential projects are; road and trail maintenance, recreational parking improvements or invasive species control.
- **Proximity to Parks and Forest Reserves:** Within the scope of this project 769 acres of the proposal area is in the Parkland designation, and 2355 acres are in the Forest Reserve designation. The SCMG states that commercial harvesting is not a permitted activity in Parklands and Reserves with some exceptions including:
  - Spread of invasive epidemic forest pathogens, insects and diseases or other biological risks to the forest (such as Asian Longhorned Beetle or Emerald Ash Borer) may be controlled as part of a coordinated effort, if there is a major threat to forest health or risk to private or public natural resources.
  - Vegetation management necessary to protect public health and safety, public interests, public assets and/or restore or maintain recreation sites following significant natural disturbances or destructive insects or diseases (Parkland Section).
  - Removal of hazardous trees directly adjacent to official DCR trails and abutting properties that pose significant risk to public safety (Reserves Section).

Any potential project within the Reserve designated areas will be vetted through the Forest Reserves Advisory Committee and any project within the Parklands designated area will be fully vetted with DCR staff.
- **Sensitive Public Issues:** Timber harvesting along roadways within some highly used DCR facilities such as the Mount Greylock Reservation would be very visible. Prior to any work on the ground, extensive public outreach through DCR Interpretive Services and cooperating non-profits should be attempted. Extensive coordination with local public officials will be needed to ensure understanding of the desired results and consequences if a plan such as this is not implemented.

**Silviculture:** The primary goal of this pre-salvage and salvage treatment in these stands is to remove dead or soon to be dead ash for public safety while retaining and protecting other living trees. Taking a proactive role now can alleviate unnecessary risk to the public and state and municipal assets. The secondary goal of management in these stands is to capture the potential product and value of the ash prior to large scale mortality. This action will curb the potential financial cost associated with individual hazard tree removal by arborists.

During the Prescription phase of each project sampling will determine the density of each segment and the percentage of ash in relation to other tree species. Segments with a low percentage of ash will generally appear as light thinning while those with high percentage will have the look of a heavy thinning or shelterwood harvest or even a small group selection. Only ash species will be cut under this project. Small diameter, sapling and small pole sized ash trees will be retained in the harvests as they are at the lowest risk level for infestation and may survive the first wave of EAB.

Planning for each individual prescription will address regeneration concerns and expectations for each segment as needed. Advanced desirable regeneration currently in place will be protected during harvest. Sunlight to aid in future regeneration from seed or sprout will vary in species composition depending on harvest levels.

For several years after each prescribed area is harvested the view from the traveled road or trail will be more open allowing for greater views into the cut area. Segments that are heavily dominated by ash will fill in quickly with growth from advanced regeneration, herbaceous species and newly established seedlings. In areas of light cutting the general appearance of the area may not change.

District Forester: [Signature]

Date: 02/10/17

Field Operations Team Leader  
Or Park Supervisor: \_\_\_\_\_

Date: \_\_\_\_\_

Regional Director: Don E. Sauer

Date: 2/10/17

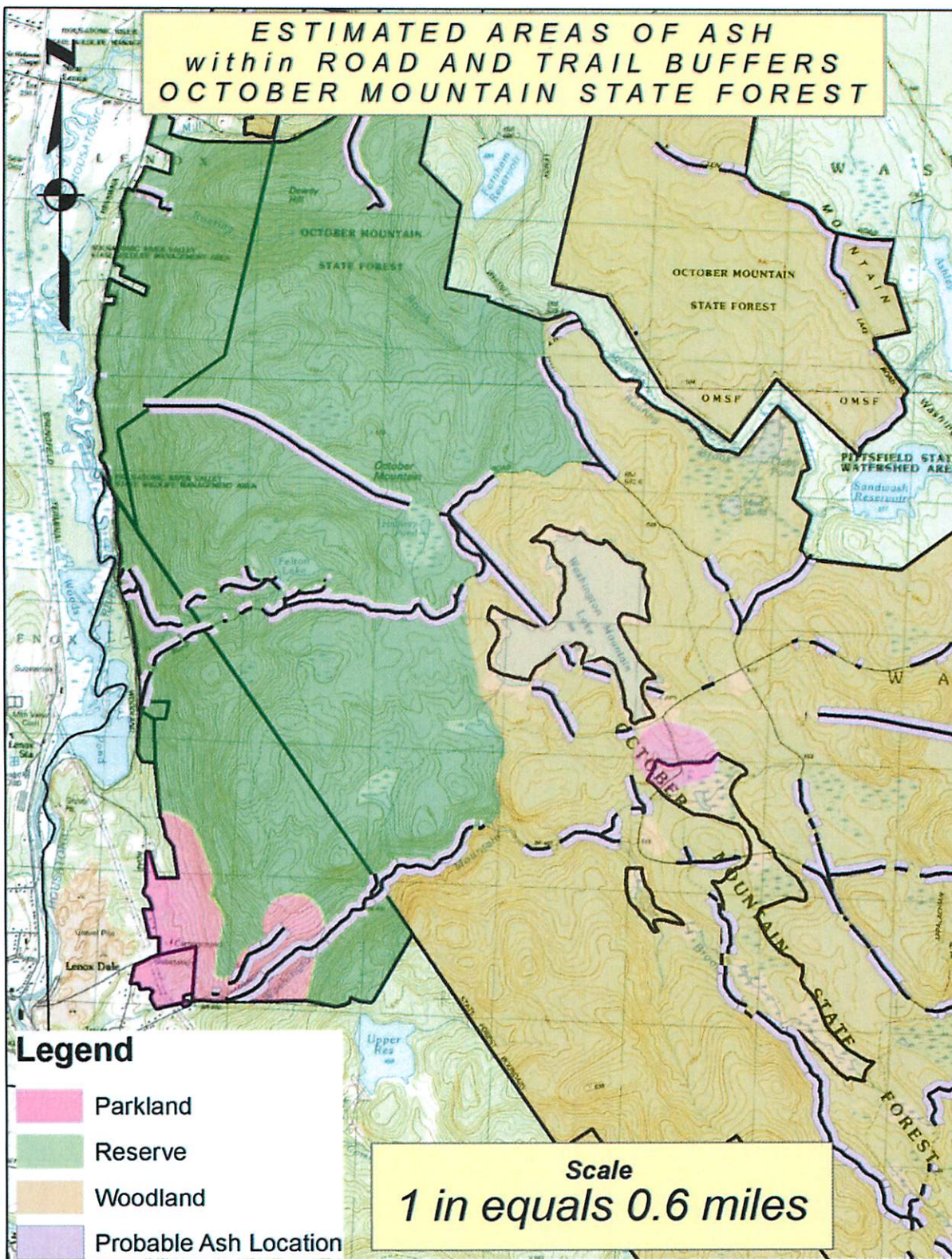
Management Forestry  
Program Supervisor: [Signature]

Date: 2/15/17

Attached: Topographic map showing project details. Locus map showing p project location within regional context.

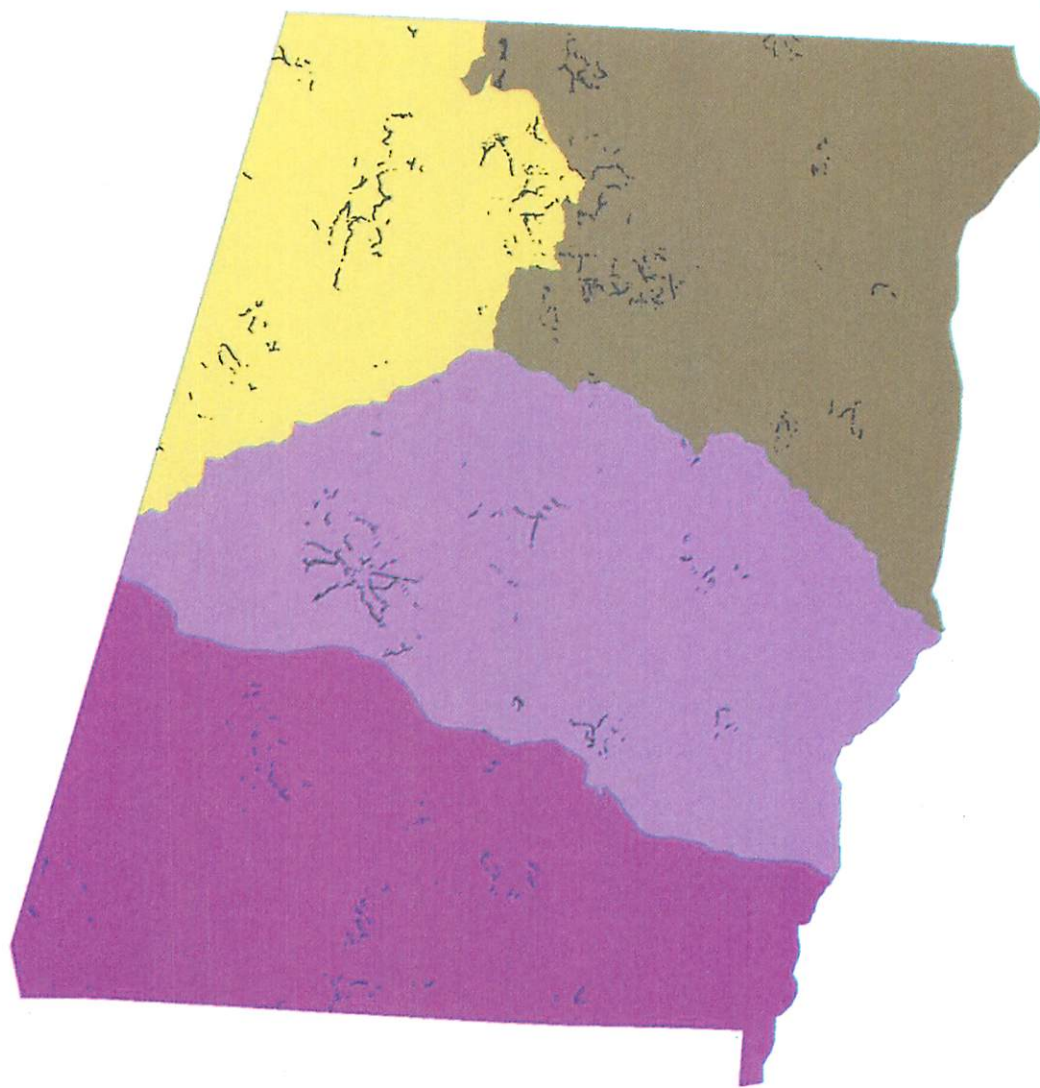


**ESTIMATED AREAS OF ASH  
within ROAD AND TRAIL BUFFERS  
OCTOBER MOUNTAIN STATE FOREST**






**Locus Map**  
**Berkshire Forestry Districts with**  
**Estimated Ash Locations on Roads and Trails**



**Legend**

-  Ash On Road and Trail Buffers
-  Central Berkshire
-  Northern Berkshire
-  Southern Berkshire
-  Western Connecticut Valley