

# Cattle Barn Forest Management Project FAQ

## What is the purpose of the Cattle Barn forestry project?

- The goal of the Cattle Barn project at Mt. Washington State Forest is to improve overall forest health by focusing on selectively removing specific trees to address immediate threats to the forest's health, including emerald ash borer, spongy moth, invasive plants, and failing softwood plantations, which can threaten forest carbon sequestration and stocks. This approach is guided by the Forests as Climate Solutions Initiative, which established strict forest management guidelines on Massachusetts state lands based on the latest climate science. The Department of Conservation and Recreation adjusted the forestry project to align with these guidelines to restore and enhance this natural forested watershed and its habitats. The project does not involve a clear-cut of the entire acreage. The 2021 Forest Restoration Prescription can be viewed [here](#) and project update summary [here](#).

## What is the Forests as Climate Solutions initiative?

- In June 2023, the Executive Office of Energy and Environmental Affairs (EEA) – which oversees the Department of Fish and Game and the Department of Conservation and Recreation – [launched](#) the “Forests as Climate Solutions” Initiative, a package of programs, financing, and actions designed to ensure that the state’s forestry work reflects the latest science in our stewardship of public and private forests and accelerating land conservation efforts across the Commonwealth. This includes optimizing both carbon sequestration and storage, as well as resilience to climate impacts.
- A branch of the Forests as Climate Solutions Initiative included developing climate-oriented management guidelines for state forest lands. EEA convened a Climate Forestry Committee, made up of twelve scientific experts, to provide [recommendations](#) to the administration for these guidelines. In its report, the Committee recommended harvesting trees on a case-by-case basis when they are infested by a forest pest, as part of an overall approach to forest management. Of note, all new projects were paused while the Climate Forestry Committee undertook its review. As to projects that were in development when forest management was paused, like this one, EEA and its agencies reviewed them to evaluate how the Committee’s recommended guidelines aligned and to make appropriate adjustments, such as those found in the project update summary found [here](#). In June 2024, EEA [released](#) its work plan outlining strategies to protect and manage forest lands, which incorporated the Committee’s recommendations.

## How was the Cattle Barn project revised to align with the Forest as Climate Solutions recommendations?

- The 275-acre forestry project at Mt. Washington State Forest was revised to align with the new guidelines. Individual tree and group selection silvicultural techniques will remove specific trees with particular attention focused on removal of dead or dying trees that are part of a failing tree canopy affected by Emerald Ash Borer (EAB) and spongy moth as well as environmental conditions exacerbated by climate change. These invasive pests and environmental factors increase tree mortality which reduces forest carbon storage. These removed trees will increase light to the forest floor and encourage regeneration of native seed trees retained. These seed trees are better suited to projected future climate conditions, including oak, maple, birch and hickory. The area in which trees will be removed was reduced to 178 acres, and even within that smaller land area trees will be retained as per the prescription for the project. Without first removing invasive plant species, this increase in light would encourage the invasive growth over the native plant species that cannot regenerate and compete with the non-native invasives. Extensive roadside hazard trees will be removed as part of this project along with a failed softwood plantation that is currently a fire hazard.

## In what area will the Cattle Barn forestry project take place?

- The Cattle Barn forest management project is located on the Intemann Lot, which is the northern parcel of Mt. Washington State Forest along East Street; the largest maintained field along East Street is known as the “Cattle Shed Field” inspiring the name for this project; a smaller field to the south is known as the “Potato Shed Field.” This total project area comprises approximately 175 acres within the original 362-acre project proposal. The forest stands are separated into northern hardwood, oak-hardwood, softwood plantations, maintained fields and Hemlock-Hardwood riparian/wetland complex. The transition between the northern hardwood and oak hardwood stands is gradual. Sugar maple dominates the overstory on lower slopes with richer soils and is typed as Northern Hardwoods; while oak dominates the upper slopes with thinner less fertile soils and is typed as Oak Hardwoods.

**Why is it necessary to use herbicides for this project?**

- Invasive non-native plants (barberry) were found throughout the site, which will hinder the growth of healthy new native trees and vegetation in the forest. A high concentration of barberry can also lead to high tick populations in forests due to increases in rodent populations. Herbicides are a safe and efficient way of managing barberry. Without first removing invasive plant species, an increase in light resulting from the forest management project will encourage invasive growth over that of the native plant species that cannot regenerate and compete with the non-native invasives.

**Do you have a map of the areas sprayed that you can provide?**

- The district forester has a prepared management map of the forest management project and has created a map of the invasive treatment for follow up monitoring efforts. DCR will make these available online.

**Who is carrying out this project?**

- The Mt. Washington State Forest is managed by the Department of Conservation and Recreation (DCR). For the pre-treatment invasive species management portion of the project, DCR's partner, (The Ruffed Grouse Society), and principal of the Landscape Scale Restoration Grant funded by the US Forest Service, has contracted with Native Habitat Restoration. The Forestry portion of this project has not yet gone to bid.

**What entities were consulted for this project?**

- The Department of Conservation and Recreation (DCR) forest cutting plan for this project was submitted to the Town of Mt. Washington during the 2021 proposal process as well as during the Chapter 132 (Forest Cutting Practice Act) process via the Conservation Commission for review and comment, consistent with the Forest Cutting Practices Act and an agreement between DCR and the Massachusetts Department of Environmental Protection (MassDEP). DCR also provided a copy of the forest cutting plan to the ACEC program and MassWildlife’s Natural Heritage and Endangered Species Program (NHESP) for its review and comment, consistent with the special approval procedures of the Forest Cutting Practices Act (302 CMR 16.04(6)) and the Massachusetts Endangered Species Act (MESA, 321 CMR 10.14(1)). NHESP provided recommendations to DCR, which were included in the forest cutting plan. No federal entities were consulted directly for this project, but it is being carried out in compliance with federal regulations. Prior to the “pause” the district forest manager conducted a woods walk for the general public which included local officials.

**This area is designated as a priority habitat by the Massachusetts Natural Heritage and Endangered Species Program (NHESP). What steps are being taken to mitigate any impacts?**

- Forest management is a tool that is used for this species, and timing of work is coordinated with NHESP to produce a better product. This project is subject to a timing restriction for equipment operation to occur only between November 1 and April 30 of any given year. NHESP has advised

that a site-specific avoidance plan may be developed by a qualified biologist to investigate a reduction in timing restrictions. Additional communication was made with NHESP and the state herpetologist regarding the state listed species. Discussions on improving habitat conditions for the species are ongoing.

**The NHESP permit letter (updated February 9, 2023) attached to the Forest Cutting Plan does not identify the use of chemicals either in its project description or in its conditions. Please explain how the use of chemicals conforms to the NHESP permit letter.**

- Chemical control of invasives was discussed with NHESP as part of the review. After consultation with their state biologist it was determined that chemicals would not affect the species of concern, therefore their review focused on aspects of the project that could affect species of concern and resulted in a timing restriction, with an exception for invasive control work to be allowed if conducted on foot with hand tools at any time of year.

**Has the Town or DCR had any additional contact with NHESP regarding any modifications or additions to its February 9, 2023 letter? If so, please provide relevant documents.**

- The district forester is in contact with NHESP regarding the state listed species and follows their recommendations to avoid any negative impacts to the species.

**Which agency or organization provided the grant covering the use of chemicals on the Cattle Barn project?**

- Grant monies came from the U.S Forest Service, via a Landscape Scale Restoration Grant, with partners from the Ruffed Grouse Society as principal.

**What herbicide is being used on this project and how is it being applied?**

- DCR's contractor is applying limited amounts of herbicide to treat invasive plants in the project area and the use is restricted only to upland areas slated for tree harvesting. The application of herbicides is being conducted by professional licensed pesticide applicators, per Massachusetts regulations, using the least amount of product possible. Native plant species are protected by careful, targeted application of the herbicides. The specific herbicide that was used on invasive plant species contains the active ingredient glyphosate and is used in other projects in Massachusetts. This product is specifically approved for use in areas adjacent to water bodies by the EPA. This product was applied to invasive non-native plants in specified locations over a period of nine days in mid-July by a licensed applicator, who does not treat on windy or rainy days and monitors the weather throughout treatment days. Once glyphosate has dried on the plant foliage it is stable, meaning that it will not wash off with rainfall, and the glyphosate will bind tightly to specific enzymes in the plant. Drying can occur within minutes to a couple of hours depending on the weather. Death of the plant usually occurs within one to three weeks. Very little spray reaches the soil because of the density of the invasives, and glyphosate binds tightly to soil and is unlikely to move during rainfall or move into other plants. Glyphosate in soil is mostly broken down by microbial activity so the half-life of glyphosate is faster in soils with higher organic matter such as in the forest. The National Pesticide Information Center reports the typical half-life to be 47 days which is considered a moderate rate of degradation. Its half-life in leaf litter is eight to nine days. This active ingredient is considered safe to use in wetlands and other resource areas with proper permitting, although it was not used in any wetland area in this instance. The nearest public water supply intake is roughly 1.5 miles from the closest herbicide application and applications were restricted to upland areas. DCR's contractor worked to minimize the amount of material used to only amounts necessary to effectively kill the targeted plant. Additionally, the contractor adds dye to the mix to ensure that areas are not treated multiple times.

**What studies inform the use of the herbicide in this manner?**

- The Massachusetts Department of Agricultural Resources (MDAR) reviews and registers herbicide products, and licenses commercial applicators of herbicides. Glyphosate, specifically, was recently reviewed by the [Glyphosate Commission](#), which was established by the Massachusetts Legislature to conduct a scientific review of the potential impacts of glyphosate and its most common alternative herbicides on the environment and public health, including a review, undertaken in collaboration with the natural heritage and endangered species program, of the potential impacts of glyphosate and most common alternative herbicides. The final [Glyphosate Scientific Review](#) is available for public comment at the link below. The document reflects changes made from suggestions by Glyphosate Commission members at the last Commission meeting. This Scientific Review includes citations to numerous studies related to the use and impact of glyphosate.

**When was the glyphosate applied?**

- This product was applied to invasive non-native plants in specified locations from July 9 to 22 by a licensed applicator. The applicator does not treat on windy or rainy days and monitors the weather throughout treatment days.

**When were the warning signs first installed at the project site? When were the warning signs removed?**

- The warning signs were placed at the beginning of the herbicide application and removed at project completion. Signs were posted in conspicuous places as recommended by MDAR. Since it is unlawful to park vehicles along Town of Mt. Washington roads, signs were placed where vehicles could drive from field to forest edge.

**Is there a possibility that DCR might use herbicides again on the Cattle Barn Lot? If so, when and for what reasons?**

- DCR may use chemicals again if a follow up treatment is warranted by invasive plants regenerating from seeds currently in soil. DCR is still evaluating treatment of ash trees to help retain mature ash on landscape to produce seed.

**How did DCR measure the distance from the northern edge of the project site to the Egremont Water Department plant?**

- ArcGIS was used to estimate distance from the Egremont Water Department to the closest point of the forestry project.

**What considerations were in place given the drinking water supply is located 1.5 miles away?**

- DCR contacted the Town of Egremont's Water Commission. After questioning the District Forester about the project, the Water Commission and other Town officials stated that the Town's water supply would not be impacted by this project. This area is within the Karner Brook Watershed and is designated as an Area of Critical Environmental Concern (ACEC). Given the particular herbicide used, which is approved for use within watersheds, its property of being immobile in soils, and the distance from the water supply intake, there is little chance that residues of the chemical would reach the water supply source, let alone reach the water supply source at levels that would be of concern, thus no water quality tests, erosion hazard analysis, sediment or turbidity analysis, or hydrology analysis are necessary.

**How will you ensure that chemicals and materials from road construction vehicles will not enter the public water supply?**

- There is no greater risk of impact from vehicles related to this project than other daily impacts of nearby vehicles. DCR will be conducting restoration of the existing forest access road to remediate erosion areas of concern and remove failed culverts. No new roads shall be constructed with the exception of skid trails used to move forest products harvested to a landing on a forest access road. Within the treatment area, existing skid trails will be re-used from past operations as much as possible, old and new skid trails will be allowed to revegetate with native species. Standard Best Management Practices (BMPs) will apply to prevent leakage from machinery as well as enhanced required BMPs that are commonly used for state and municipal forest management operations.

**Did you consult with the ACEC staff prior to designing the Forest Cutting Plan? (Nancy Putnam is the director of the state's Area of Critical Environmental Concern division.)**

- Yes, during the project development process the Forest Management Program has an internal review process. All proposals are sent to internal DCR offices – Natural Resources, Cultural Resources, and Park Operations, as well as the Division of Fisheries and Wildlife's Natural Heritage and Endangered Species Program and Habitat Management Program. After the [public process](#), the district forester prepares a specific prescription for the project. During the delineation of the project area, a Chapter 132 Forest Cutting Plan is developed and the proposed cutting plan is sent to DCR's Service Forestry program and the local Conservation Commission. If the project falls within an Area of Critical Environmental Concern, the cutting plan is sent to the ACEC reviewer. If the project area falls within a NHESP bubble, it is sent to NHESP reviewer by the Service Forester for comment.

**What else is planned for this project and when will the remainder of the project be carried out?**

- The next phase of the project will be the active forest management portion; the cutting and removal of designated trees. This will be followed up with monitoring for invasives and follow up treatment if needed. If deemed effective by DCR's Forest Health Program, retained ash trees will be inoculated for several years to assist with ash regeneration efforts. Five years from the completion of the project, DCR foresters will conduct an inventory of vegetation to determine effectiveness of treatment.

**What techniques for spraying are used in the Cattle Shed area?**

- Contractors use a technique that is known as a low volume foliar application to target invasive species. Another technique used in areas to reduce the amount of herbicide used and still have a high degree of effectiveness is referred to as "ThinVert" application. DCR contractors do not "blanket spray" chemicals.

**Were any wildlife or other studies done in consultation with in-house or external biologists?**

- This project was used as working study with the Northern Institute of Applied Climate Science (NIACS). The district forester working with NIACS helped refine some of the strategies developed. No wildlife studies were conducted, however DFW was consulted as noted above. The following link is to a publication by the U.S. Forest Service guide regarding the Emerald Ash Borer (EAB) and forest management recommendations. Many of the recommendations for forest management of white ash threatened by the EAB in this document are being employed by the Cattle Barn Project. [Managing-NE-Forests-Threatened-by-EAB-web.pdf \(masswoods.org\)](#)