



Commonwealth of Massachusetts

Division of Fisheries & Wildlife

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Vegetation Management of Existing Right-of-Ways (ROW) in State-listed Plant, Lepidoptera, Snake, Bird, and Aquatic Species Priority Habitats

The routine vegetation management of Rights-of-Way (ROW) associated with existing hydroelectric, steam, gas, and electric operations is exempt from review pursuant to the MA Endangered Species Act Regulations (MESA) (321 CMR 10.00) which are administered by the Natural Heritage and Endangered Species Program (NHESP) of the MA Division of Fisheries and Wildlife (Division). The exemption is conditional based on the NHESP's annual review and approval of a Vegetation Management Plan (VMP) (321 CMR 10.14 (12)). If ROW vegetation management activities occur in *Priority Habitat* (PH), measures must be taken to minimize the mortality of state-listed species, including plants, moths, butterflies, snakes, birds, and aquatic species. This document is meant to accompany shapefiles, also provided by NHESP, of known state-listed plant, Lepidoptera (moth and butterfly), snake, bird, and aquatic species habitat and is meant to provide guidance to ROW managers preparing VMPs for these areas. It includes an outline of procedures that shall be implemented to safeguard these species.

STATE-LISTED PLANTS

There are 259 species of native plants that are officially listed as "Endangered", "Threatened" or of "Special Concern" in Massachusetts and tracked by the NHESP. State-listed plants occur in a variety of habitats across the Commonwealth of Massachusetts, including along utility ROW. They can occur in wetlands, dry forests, on banks of streams or ponds, grasslands and shrublands, seasonally flooded depressions, and wet meadows. Many of the state-listed plants found along ROW thrive in the early successional habitats that are maintained through the removal of overstory trees and shrubs and the removal of competing plant species. However, state-listed plants in utility ROW can also be negatively impacted by herbicides, vehicles and heavy machinery, and the introduction of invasive plant species. Below and in the accompanying shapefile, the NHESP provides management recommendations for the areas identified to contain state-listed plant species found along the ROW scheduled for Vegetation Management activities.

Management Recommendations

Many state-listed plant species will thrive in low-shrub and herbaceous communities that are compatible with ROW vegetation management goals. Efforts to promote and maintain low-growing stable plant communities as a method of biological control of trees, which would otherwise interfere with electrical transmission, are strongly encouraged.

1. Vegetation Management Conducted between 2 November and 14 May: In general, maintenance activities associated with VMPs, **excluding the broadcast application of herbicides**, which are conducted between 1 November and 15 May will pose minimal or no risk to state-listed plants and can proceed as described in the submitted Yearly Operational Plan (YOP) or VMP.
2. Vegetation Management Conducted between 15 May and 1 November: Vegetation management activities occurring between 16 May and 31 October may cause harm to state-listed plants, and

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certain steps must be taken to avoid such harm. Included with this document is a shapefile of ROW areas documented to support state-listed plants. Below are the management recommendations for state-listed plants found in the "Mgmt_rec1" and "Mgmt_rec2" columns of the shapefile table. Exact recommendations are clarified below, and **must be followed** where state-listed plant species are identified. **If management recommendations for state-listed plant species can be followed as described below in the locations identified in the accompanying shapefile, no further restrictions are placed on vegetation management activities described in the associated YOP/VMP document (provided any other guidelines for other state-listed species in the same area are also followed). However, if these recommendations cannot be followed, or if the management recommendation is to identify and avoid the extent of the population, botanical surveys will be required.**

Detailed descriptions of "Mgmt_rec1" and "Mgmt_rec2" guidelines

"Data sensitive": These species are classified as Data Sensitive by the NHESP, meaning that site-specific information about populations of the species is disseminated only under special circumstances, because public knowledge of the locations of such populations might substantially increase the risk of population declines or extinctions (e.g., as a result of collection or persecution). Therefore, information on these species should only be disseminated to the botanists responsible for delineating these plants.

"Mow, preferably in the dormant season": Certain state-listed plants actually require some disturbance to survive and propagate and/or are easily outcompeted by other species. However, mowing during the growing season can harm the plant itself. Mowing during the dormant season will maintain populations of these species by providing the disturbance they need and by removing competing plant species. The state-listed species itself will not be harmed when the plant is dormant. If mowing in the dormant season is not possible within these areas of ROW, alternative vegetation control may be necessary. The NHESP should be contacted and alternative methods of maintaining these populations shall be developed.

"No herbicide on grasses": Certain state-listed plants are grasses which could be inadvertently harmed by even selective herbicide use. No herbicide shall be used to target grasses in these areas, nor shall herbicides be allowed to reach grasses when targeting other species. **Extra caution should be used with herbicides in these areas.** Activities which necessitate use of herbicide on grasses within state-listed plant areas of ROW may require botanical surveys as described below.

"No herbicide on grasses or sedges": Certain state-listed plants are grasses or sedges which could be inadvertently harmed by even selective herbicide use. No herbicide shall be used to target grasses or sedges in these areas, nor shall herbicides be allowed to reach grasses and sedges when targeting other species. **Extra caution should be used with herbicides in these areas.** Activities which necessitate use of herbicide on grasses and forbs within state-listed plant areas of ROW may require botanical surveys as described below.

"Delineate population and avoid": Certain state-listed plants are particularly sensitive to vegetation management practices and/or are at very high risk of extinction or extirpation from the state. In areas known to harbor these species (identified in the accompanying shapefile), surveys must be conducted by a qualified botanist. The NHESP-approved botanist will be required to identify the extent and condition of populations of state-listed plants, flag populations for work crews, and file a report with the NHESP *prior* to commencement of vegetation management in these areas. **Work crews are required to avoid these areas.**

Additionally, areas identified in the accompanying shapefile as harboring state-listed plants for which the other management guidelines described above (i.e. avoidance of wetlands, no herbicide

use, etc.) cannot be followed must also be surveyed for state-listed plants. **These areas must also be avoided by work crews.**

All observed state-listed plants shall be identified, reported, and mapped. Observations of state-listed species will require the submittal of an NHESP Rare Species Observation Form, including photographs, characters used for identification, observer contact information, locus map and signature. Rare Species Observation Forms must be received by NHESP by December 31. A copy of the NHESP Botanical Survey Protocols and the Rare Plant Observation Form are included with this document.

Based on these efforts and information currently found in the NHESP database, subsequent annual management recommendations may be revised.

STATE-LISTED LEPIDOPTERA (MOTHS AND BUTTERFLIES)

State-listed moths and butterflies occur in a variety of habitats across the Commonwealth of Massachusetts, including along utility ROW. These species spend a portion of their lives as larvae (caterpillars) feeding on very specific host plants which may benefit from the maintenance of early successional habitats within ROW. Additionally, some Lepidoptera species feed on the nectar of flowers as adults, and often utility ROW provide prime growing conditions for such nectar sources. State-listed moths and butterflies and their host plants can be negatively impacted by broadcast herbicides, pesticides, heavy machinery, mowing during the larval stage, loss of nectar sources, and the introduction of invasive plant species. In order to protect and maintain state-listed moth and butterfly species found within utility ROW, the NHESP will require specific management for the host plants found along ROW scheduled for Vegetation Management.

Management Recommendations

The host plants of many state-listed moth and butterfly species will thrive in low-shrub and herbaceous communities that are compatible with ROW vegetation management goals. Efforts to promote and maintain low-growing stable plant communities as a method of biological control of trees, which would otherwise interfere with electrical transmission, are strongly encouraged.

1. Vegetation Management Conducted between 2 November and 31 March: In general, maintenance activities associated with VMPs, **excluding the broadcast application of herbicides or pesticides**, which are conducted between 2 November and 31 March will pose minimal or no risk to state-listed moths and butterflies and can proceed as described in the submitted YOP or VMP.
2. Vegetation Management Conducted between 1 April and 1 November: Vegetation management activities occurring between 1 April and 31 October may cause harm to state-listed moths and butterflies or their host plants, and certain steps must be taken to avoid such harm. Included with this document is a shapefile of ROW areas documented to support state-listed moth and butterfly species. Below are the management recommendations for state-listed moth and butterfly species found in the "Mgmt_rec1" and "Mgmt_rec2" columns of the shapefile table. Exact recommendations are clarified below, and **must be followed** where state-listed moth and butterfly species are identified. **If management recommendations for state-listed moth and butterfly species can be followed as described below in the locations identified in the accompanying shapefile, no further restrictions are placed on vegetation management activities described in the associated YOP/VMP document (provided any other guidelines for other state-listed species in the same area are also followed).** However, if these recommendations cannot be followed, or if the management recommendation is to identify and avoid the host plant, botanical surveys or alternative management will be required.

Detailed description of "Mgmt_rec1" guideline

"No herbicide on host plant": The caterpillars of certain state-listed moths and butterflies feed on specific plants that should not be targeted with herbicides. In these areas, no herbicide shall be used to target the host plants identified in the accompanying shapefile, nor shall herbicides be allowed to reach the host plant when targeting other species. **Extra caution should be used with herbicides in these areas.** If the host plants of state-listed moth and butterfly species are the targets for herbicides used in these areas, the NHESP shall be contacted and alternative solutions shall be developed.

Based on these efforts and information currently found in the NHESP database, subsequent annual management recommendations may be revised.

STATE-LISTED SNAKES

A subset of ROW areas proposed for vegetation management activities are mapped, in part, for the presence of state-listed snake species. **Crew members should be aware that any snakes observed during vegetation management activities may be state-listed and protected species. Direct harm to or capture of these species without a permit from the Division of Fisheries and Wildlife is considered an unauthorized "taking" of a state-listed species and may be punishable by fines or imprisonment (321 CMR 10.06).**

Management Recommendations

1. Vegetation Management Conducted between 2 November and 31 March: In general, maintenance activities associated with VMPs that are conducted between 1 November and 31 March will pose minimal or no risk to state-listed snakes and can proceed as described in the submitted YOP or VMP.
2. Vegetation Management Conducted between 1 April and 1 November: Vegetation management activities occurring between 1 April and 1 November may cause harm to state-listed snakes and certain steps must be taken to avoid such harm. Included with this document is a shapefile of ROW areas documented to support state-listed snakes. Below are the management recommendations for state-listed snakes found in the "Mgmt_rec1" and "Mgmt_rec2" columns of the shapefile table. Exact recommendations are clarified below, and must be followed where state-listed snake species are identified.

Detailed descriptions of "Mgmt_rec1" and "Mgmt_rec2" guidelines

"Raise mower blades": Raising the height of mower blades to greater than 8 inches above the ground will reduce the likelihood of snake mortality, if the mower does not have a weighted stability bar mounted behind the blades.

"Avoid all snakes": Any snakes encountered should be avoided by vehicles or heavy equipment.

Based on these efforts and information currently found in the NHESP database, subsequent annual management recommendations may be revised.

STATE-LISTED AQUATIC SPECIES

A subset of ROW areas proposed for vegetation management activities in the 2009 VMP are mapped, in part, for the presence of state-listed aquatic species (i.e. fish, mussels, dragonflies, damselflies, etc.). These species are particularly sensitive to alterations to the water quality of their aquatic habitats. Such alterations can include changes to the amount, temperature, sedimentation, and pollution in the water body. Additionally, dragonflies and damselflies, which are aquatic as larvae, need vegetation foraging habitat in

close proximity of their aquatic larval homes. Within these ROW areas, extra care should be taken to avoid direct impacts to wetland breeding sites and upland habitats by following the recommendations provided in the "Mgmt_rec1" and "Mgmt_rec2" columns of the shapefile table. These recommendations include:

Detailed descriptions of "Mgmt_rec1" and "Mgmt_rec2" guidelines

"Utilize appropriate erosion control measures": Haybales, silt fencing, etc. should be utilized when excavations or other ground-breaking activities will occur near wetland habitats.

"Minimize loss of native vegetation": This will allow dragonflies and damselflies to forage as adults in close proximity to their breeding sites. Additionally, retaining native vegetation near wetland habitats provides better erosion control and helps protect water quality.

STATE-LISTED BIRD SPECIES

A subset of ROW areas proposed for vegetation management activities in the 2009 VMP are mapped, in part, for the presence of the Bald Eagle (*Haliaeetus leucocephalus*). The NHESP requires adherence to the following conditions to maintain compliance with the MESA for any work between 1 January and 1 August:

- All trees over 18" DBH shall be visually inspected by a candidate biologist for the presence of Bald Eagle nests (occupied or unoccupied), young, or adults within the 7 days prior initiation of any tree removal, thinning, pruning, etc.
 - The NHESP MUST pre-approve the candidate biologist before work begins. The ability to locate and identify Bald Eagles their nests requires significant experience. The resume/curriculum vitae of the candidate biologist shall be sent to the NHESP for written pre-approval.
- If any use is observed by a Bald Eagle or any Bald Eagle nest (occupied or unoccupied) is observed by a qualified biologist, the NHESP must be contacted for consultation and no tree removal, topping or substantially thinning may occur within 500 feet of the potential nest until alternate NHESP guidance is provided.
- Further, no use of heavy machinery shall occur with 500 feet of the potential nest until alternate NHESP guidance is provided.
- Within 10 days of the completion of searches by the biologist, a report must be submitted to the NHESP indicating: the dates of each pre-work search clearly stating the name of the individual(s) conducting work at each search period; the number of hours searched per date; information on any Bald Eagles found; and the condition of the barrier and any repairs.