

**Rare and Endangered Species Habitat Management Plan
Neponset River Wetland and Fowl Meadow Management Unit
Blue Hills Reservation
(Cumberland Farms to I-95; I-95 to Paul's Bridge)**

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In coordination with the Department of Conservation and Recreation, ACEC Program,
Massachusetts' Water Resource Authority,
Neponset River Watershed Association,
The New England Wild Flower Society and
Natural Heritage Endangered Species Program
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Preface

The mission of the Department of Conservation and Recreation, hereinafter “DCR,” is to “protect, promote and enhance our common wealth of natal, cultural and recreational resources.” The protection of state-listed species on DCR properties is integral to achieving our mission. In order to document and ensure continuity of protection, monitoring and management in the future, DCR has developed a management plan for the rare and endangered species inhabiting the Fowl Meadow area. The Rare and Endangered Species Habitat Management Plan, Neponset River Wetland and Fowl Meadow Management Unit, Blue Hills Reservation, hereinafter “The Plan” was developed with the technical assistance of the New England Wild Flower Society and the Massachusetts Division of Fisheries and Wildlife’s Natural Heritage and Endangered Species Program. Presently, the DCR contact is Alexandra Echandi, Forestry Assistant for the South Region.

I. Introduction

Purpose

This habitat management plan is the result of a State mandate allowing management activity in priority habitat provided that such management is carried out in accordance with a management plan approved in writing by Natural Heritage and Endangered Species prior to its commencement. Please see 321 CMR 10.14(12) for additional information regarding this mandate. Management activities will occur within the Fowl Meadow portion of the Blue Hills Reservation, along the Neponset River, within the towns of Canton and Milton. The area of focus involves a sewer access easement maintained by the Massachusetts Water Resources Authority, hereinafter MWRA, from route 128 to Brush Hill Road as well as from Route 128 to Cumberland Farms/University Avenue. This sewer easement, also known as Burma Road on the Blue Hills trail map, serves as a hiking trail, emergency access road and maintenance egress for authorized municipal entities and DCR staff.

Fowl Meadow

The Fowl Meadow area includes the largest wetland and floodplain areas in the Neponset River basin meandering 7.2 miles through Norwood, Canton, Westwood, Dedham, Milton, Sharon and Hyde Park. There are several municipal public wells that provide water to the communities of Canton, Dedham, and Westwood. In 1992, the Secretary of Environmental Affairs designated the Fowl Meadow as an Area of Critical Environmental Concern, hereinafter “ACEC,” for its unique wetlands and floodplains, the associated aquifers and public water supplies, and the diverse habitats along this stretch of the Neponset River and its tributaries. The Natural Heritage and Endangered Species program designates the Fowl Meadow area as priority habitat of rare species and estimated habitat of rare wildlife. Unfortunately, some of these species habitat is deteriorating due to the presence of invasive plant species such as Mile a Minute, (*Persicaria perfoliata*), Purple Loosestrife (*Lythrum salicaria*), Common Reed (*Phragmites australis*) and Common Buckthorn (*Rhamnus cathartica* L.).

Sometime in the 1980’s DCR, then the Metropolitan District Commission, went through some organizational changes including the creation of the Massachusetts Water Resources Authority, hereinafter MWRA, who assumed responsibility and maintenance of the pipeline easement through Fowl Meadow. Currently, MWRA is an independent authority that provides wholesale water and sewer services to its customer communities, and funds its operations primarily through user assessments and charges. This easement is presently referred to as “Burma Road” and runs approximately 6 miles along

Fowl Meadow. In addition to being an access road for MWRA, Burma Road is utilized by DCR for emergency access and is open to the public for multiple recreational trail uses; including but not limited to bikers, hikers and cross country skiers.

II. Current Practices:

Based on the past recommendations from experts with the New England Wild Flower Society, management for the existing rare and/or endangered species consisted of a mechanical removal of roadside vegetation, primarily grasses, on Burma Road. This cutting, which was done with a tractor trailer and grass mowing deck was completed throughout the entire Burma Road stretch at the path's width of 10-12 feet.

Since 2006, DCR has contracted with Northern Tree for herbicide spraying purposes in efforts to minimize the spread and eradicate the Mile a Minute, *Persicaria perfoliata*, currently located on Burma Road. The spraying is conducted under a vegetation management plan developed in compliance with Right of Way Management regulations. (333 CMR 11.00) Upon information and belief, this vegetation management plan was approved by local conservation commissions. For further information, please contact Matthew Thurlow, DCR Landscape Architect, via phone at 617-626-4944 or email at matthew.thurlow@state.ma.us.

In efforts to control the spread and population of Purple Loosestrife in the Fowl Meadow area, the Department of Conservation has partnered with Neponset River Watershed Association, "NepRWA," under the guidance of the Wetlands Restoration Program of the Massachusetts Office of Coastal Management, and funding from NRCS-WHIP, CWRP and the DCR Partnership Matching Funds Program to implement a purple loosestrife bio-control project at Fowl Meadow. The project consists of Purple loosestrife management via the application of biological control beetles, and takes place in two different clusters on the northern portion of Fowl Meadow. The project treatment area consists of 26.5 acres of Purple loosestrife infestation in wet meadow and palustrine emergent wetlands. The project spans five consecutive years and began in June of 2008. Each summer *Garucella* beetles are released at the treatment sites. Each site is monitored before and after the beetles are released to determine the fate of the beetles and the effects of the bio-control on the Purple loosestrife and on the vegetative make up of the wetland.

There have not been any previous management practices in regards to controlling and eradicating the Common Reed population and/or monitoring and securing healthy habitats for other rare and endangered species in the Fowl Meadow area. Also, DCR has made an effort to certify a few vernal pools in the Fowl Meadow area. Finally, there are no restrictions with respect to permissible DCR/MWRA vehicle access through Burma Road.

III. Management Objectives and Actions:

Because the exact management needs for the rare and endangered species listed above are unknown, this habitat management plan is based upon the best available biological and management information provided by the New England Wild Flower Society and the Natural Heritage of Endangered Species Program. This BMP will be dynamic and adaptive, so that the DCR may improve its approach and obtain a better understanding of species response to each management action. The plan shall be reviewed on a yearly basis during the fall season. DCR shall seek input from the New England Wild Flower Society, the ACEC program as well as the Natural Heritage and Endangered Species Program in efforts to improve its habitat management efforts in this location.

IV. Best Management Practices

DCR proposes the following best active habitat management practice actions:

1. Planning Landscaping, Forestry, Roads, Mowing and Construction:
 - a. DCR will coordinate with MRWA to conduct a minimum of one cutting per year. This cut shall occur in the month of April and shall be completed by DCR after the year 2009. Any other cuts will occur after the month of September of the same year. MRWA shall contact DCR at least two weeks prior to any cutting activity in order for DCR to provide the most current cutting recommendations. Advance notice is not necessary in the event of an emergency such as break in the sewer line. However, MWRA shall contact DCR to describe their actions within 24 hours of such an event. If brushing, tree cutting, mowing or other mechanized clearing is required during the months of April-October, MWRA shall contact DCR prior to such work so that the Assistant Forester can search for species immediately prior to such activity. *See Attached NHESP Letter dated 5/29/09 with supplemental conditions.* The cuttings shall be completed according to the following guidelines:
 - i. The April cutting shall trim ground vegetation to a minimum height of approximately 9-12 inches throughout the 15-18 feet width and height of Burma Road. The width of the cut post 2009 will be wider than previous years. This width is based on recommendations from Natural Heritage as well as the New England Wild Flower Society in efforts to promote open habitats for rare and endangered plant species.
 1. Throughout their mowing activities, MWRA/DCR shall avoid cutting any trees over 3 inches in caliper unless these pose a threat to the stability of the existing pipeline. MWRA shall contact the Assistant Forester if any trees are cut for these purposes.
 2. MWRA/DCR shall also avoid mowing over the three sections DCR monitors and manages in efforts to eradicate Mile and Minute. These areas are designated by blue trail markers positioned prior to the yearly cut. These are all located on the right side of Burma Road heading South West. DCR staff will physically show MWRA the location of these areas if requested.
 3. See additional NHESP recommendations pertaining to cuts outside of the April 15th to September 15th timeframe.
 - ii. All overhanging branches throughout the length of Burma Road shall also be cut to support the multiple uses of the road (horse back riders, emergency vehicles, etc) as well as to promote suitable habitat for rare and endangered species. The MWRA/DCR shall trim vegetation using a tractor mower capable of lifting a cutter deck or extending a sickle bar to at least 10 feet in height. This cutting shall occur on a yearly basis during the first week of April unless the New England Wild Flower Society and/or the Natural Heritage and Endangered Species Program indicate otherwise. All cut vegetation will be left on site.

- iii. If additional cutting is required for maintenance and/or access purposes, it shall be allowed between September 15th and April 15th. This cut shall be consistent with the April cut in that the vegetation shall be trimmed using a tractor mower deck at a height of 9-12 inches. This seasonal restriction will ensure protection of rare and endangered species as well as their habitat.
- iv. Cutting within a 5 feet radius around the MWRA manholes will be allowed during early April as well as during the months between September 15th and the end of March. Such cutting will allow proper access for manhole maintenance purposes. This seasonal restriction will ensure protection of rare and endangered species as well as their habitat.
 1. See additional NHESP recommendations pertaining to cuts outside of the April 15th to September 15th timeframe.
- b. MWRA shall maintain and restore the structural stability of Burma Road as it relates to any damage resulting from MWRA easement maintenance. Maintenance shall include, but shall not be limited to filling of ruts with ¾ inch crushed stone. Neither crusher run nor geo textile materials shall be used in repairing Burma Road. This maintenance is necessary in order to minimize road/trail erosion and hazards for trail users as well as to sustain emergency access and promote a healthy habitat for native species. As recommended by Natural Heritage, geotextile materials shall not be used in this area. In efforts to minimize the impact on the local rare and endangered species, such maintenance shall occur after September 15th and before April 1st.
- c. In efforts to minimize the impact of potential off trail hiking, DCR shall regularly maintain those trails leading to Burma Road, those adjacent to the Neponset River as well as any other trail currently in existence in the Fowl Meadow section of the Blue Hills Reservation with the exception of Burma Road itself. Trail maintenance shall include vegetation management as well as the clearing of existing water control structures such as culverts, water bars, ditches, bridges and rock steps and in kind replacement of any existing structure such as bog bridges and water bars if necessary. Trail maintenance will be completed by DCR staff as well as volunteers under the direction and supervision of DCR staff utilizing hand tools such as loppers, bow saws, shovels, etc. DCR will utilize brush cutters, chainsaws and pole saws when necessary to complete vegetation clearing.
 - i. Limited vegetation clearing shall occur on those trails located within 50 feet of certified and potential vernal pools. DCR shall not use any power equipment in these trails except for the removal of hazardous and/or fallen trees. Trails within 50 feet of certified and potential vernal pools will be limited to natural substrate foot paths no wider than 3 feet.
 - ii. For existing trails within the wetland, replacement of drainage structures and bridges, and use of any power equipment shall be completed only during September 15- April 15. *See Attached NHESP Letter dated 5/29/09 with supplemental conditions.*
- d. DCR and MWRA shall limit their use of vehicles on Burma Road between April 15th and September 15th. Vehicles should only be utilized for emergency access as well as removal of hazardous or fallen trees on the road. Such restriction shall be noted by way of an

informational sticker on the Burma Road access fire gate as well as a reminder email to the Blue Hills Park Manager and MWRA's maintenance representative.

2. Exotic Invasive Plant Monitoring and Control:

- a. With the support of DCR and the New England Wild Flower Society, DCR and trained volunteers shall monitor and GPS the location of invasive species throughout the Fowl Meadow area. During the spring, DCR shall locate and GPS those populations of Mile a Minute, Common Reed and Glossy Buckthorn. Increased invasive monitoring shall occur during upcoming years. DCR shall report invasive species to NHESP using official field forms or to the Invasive Plant Atlas of New England at least once a year during the summer months.
- b. In addition to MWRA's cutting, DCR shall mechanically remove woody vegetation as well as invasive species such as Common Buckthorn around any rare/endangered plant species population during the winter. DCR shall thin the woody vegetation in the rare and endangered plant area. DCR shall cut some of the invasive Common Buckthorn during February and March of every year. All stems and other plant parts will be removed from the area.
- c. Upon approval by Natural Heritage and DCR's ACEC division, DCR shall continue to implement the five year vegetation management plan for the purposes of controlling and eradicating Mile a Minute from the Fowl Meadow area. However, due to the sensitivity of the area, and as recommended by New England Wild Flower Society, DCR shall complete its spraying with a calibrated low pressure hydraulic pump utilizing hand gun filled with RODEO during the late summer.¹ This shall reduce the plant's potential of seeding as well as reduce the risk of poisoning any rare or endangered species that may be active during the spring and early summer seasons.
 - i. Prior to applying the chemical, the proposed treatment area shall be searched for rare plants. Applications within 1.25 m of the rare plant shall be completed using the cut stem or any other specific method. *See Attached NHESP Letter dated 5/29/09 with supplemental conditions.*
 - ii. Prior to spraying, DCR and volunteers shall remove sections of the Mile a Minute during the months of June or July;
 - iii. DCR shall apply RODEO in early August;
 - iv. DCR shall return to the Mile a Minute location 3 weeks after the spraying is completed to ensure that all plants were targeted;
 - v. In the event that a Mile a Minute plant was not targeted, DCR shall reapply the chemical on those plants that were missed during early August.

¹ The use of trade names does not constitute an endorsement of either product, but reflects the actual use of these products in the past or projected use of these products in the future.

- d. With the permission of Natural Heritage and the local Conservation Commissions, DCR shall control the population of Common Reed in the Fowl Meadow region using the cut stem/pesticide application technique. DCR and supervised volunteers shall cut the plant's stems to a height of 3 feet. After cutting, a DCR licensed staff will apply RODEO to the stump. This shall occur during the months of August and September.
 - i. DCR shall begin to identify the location of 10' x 10' plots of Common Reed in the Fowl Meadow area during the summer;
 - ii. The identified 10' x 10' plots shall be the first to be eradicated using chemical methods;
 - iii. DCR shall expand their efforts to other locations throughout the upcoming years.
 - e. DCR shall continue to work with NepRWA to successfully complete the 5 year Purple Loosestrife Bio control project in Fowl Meadow. The project began during the summer of 2008 and shall continue until the summer of 2013. DCR and NepRWA shall provide copies of annual updates and reports to Natural Heritage, New England Wild Flower Society and DCR's ACEC program. For more information on this project, please visit the Neponset River Watershed Association's website at www.neponset.org.
3. Habitat Restoration:
- a. With the support and guidance of the Wildflower Society, DCR shall plant only native wetland plant species or non-native wetland species that have been researched and proven to be non-aggressive in terms of naturalizing into wetland areas or minimally managed habitats in Massachusetts or New England.
4. Rare Species Survey and Monitoring:
- a. Each year, preferably in May/early June representatives from DCR shall visit the site and assess the impact of the previous year's cut as well as the health of the rare and endangered plant species found in the area. DCR shall invite a representative from the New England Wild Flower Society and Natural Heritage Program so that he/she can make recommendations regarding modifications of future cuttings and/or management practices. These recommendations shall be provided to the Natural Heritage and Endangered Species Program for review prior to any adjustment in the cutting schedule. Rare and endangered species sighting forms will also be completed at that time.

V. Coordination and Monitoring

Coordination and monitoring of the invasive and rare and endangered species will be conducted by the DCR South Region and ACEC Program, MWRA, the New England Wild Flower Society, the Neponset River Watershed Association and Natural Heritage and Endangered Species Program as outlined below:

Department of Conservation and Recreation

ACEC Program

ACEC Program staff shall provide information and technical assistance to the South Region staff as well as MWRA and review resource management plans on behalf of the Secretary of Energy and Environmental Affairs. ACEC program staff shall collaborate with the South Region staff

and MWRA to ensure that the management activities set forth on this plan promote the purposes and goals of Fowl Meadow's ACEC designation. Mrs. Beth Suedmeyer is the current ACEC Program Inland Coordinator. She may be reached at 617-626-1352 and Beth.Suedmeyer@state.ma.us

Division of Urban Parks, South Region, Blue Hills District

DCR, Blue Hills, shall monitor the site year round and serve as primary contact for the MWRA. When properly notified by the MWRA, DCR will ensure compliance of the best management practices for grounds maintenance work performed in the Fowl Meadow area. Any request by an external entity other than MWRA to conduct work or research in Fowl Meadow will be referred to the Blue Hills District Manager as well as to Natural Heritage and Endangered Species Program for review and approval.

DCR shall consult with the New England Flower Society about the BMP's effectiveness in preserving the health of the rare and endangered flora. A representative from DCR will meet with the representatives of the New England Wild Flower Society during each yearly site visit in order to share information regarding the endangered flora, including, but not limited to, maintenance, natural events and fires. Any modifications to the BMP as defined in this document will require approval by the Natural Heritage and Endangered Species Program.

The present DCR contact is Alexandra Echandi, Forestry Assistant for the South Region. She may be reached by phone at 617-727-4573 ext. 219 or by e-mail Alexandra.Echandi@state.ma.us. If this contact person is unavailable, please contact Robert Mackenzie, Blue Hills District Manager at 617-272-5252 ext. 501 or by e-mail at Robert.Mackenzie@state.ma.us.

Massachusetts Water Resources Authority

With the exception of public safety emergencies, the MWRA agrees to notify the DCR contact of any work to be performed along the Burma Road sewer easement. This notification should be triggered by work orders issued within the MWRA. The MWRA agrees to abide by the cutting procedure, road maintenance and schedules outlined in this BMP as approved by the Natural Heritage and Endangered Species Program.

The present MWRA contacts are Denise Breiteneicher, (617) 242-6000 or via email at Denise.Breiteneicher@mwra.state.ma.us and Alison Sheppard, 617-305-5995 or via email at Alison.sheppard@mwra.state.ma.us.

New England Wild Flower Society

The New England Wild Flower Society representative shall continue to verify the health of the rare and endangered flora on a yearly basis, preferably in June or as time and conditions permit. Regular monitoring of the plant habitat will allow for more effective management and preservation, as new threats would be detected early and mitigation actions would be executed in a timely matter. The DCR Blue Hills Reservation shall be contacted prior to each visit in order to participate in the site visit.

Upon completion of a site visit, the New England Wild Flower Society shall report on the health of the rare and endangered flora and recommend any necessary changes to the current best management practice.

The present NWFS Contact is William E. Brumback, Conservation Director who may be reached via phone at 508-877-7630 x 3201 and email at bbrumback@newfs.org.

Neponset River Watershed Association

Under the guidance of the ACEC program as well as South Region Staff, the Neponset River Watershed Association will continue to monitor the populations of Purple loosestrife in the Fowl Meadow area. In addition, NepRWA will implement its bio-control project for the next 4 years with yearly reports on its success in eradicating the Purple loosestrife population in the region. Finally, NepRWA will inform Alexandra Echandi of their plant monitoring and beetle release schedule throughout the project's lifespan.

The present NepRWA contact is Carly Rocklen, Outreach Director & Restoration Manager. She may be reached at 781-575-0354, x303 or via email at rocklen@neponset.org.

Natural Heritage and Endangered Species Program

The Natural Heritage and Endangered Species Program will continue to monitor, approve and review the best management practices described in this document. In addition, the NHESP will review all external requests for research or work performed in the vicinity of the Fowl Meadow area. Lastly, NHESP will inform the New England Wild Flower Society and DCR of any emerging best management practices that should be considered for managing Fowl Meadow.

V. Public Education

DCR shall provide trainings to staff and volunteers required to implement this management plan in the Fowl Meadow area of the Blue Hills at least once a year. In addition, DCR and its volunteers will brainstorm on plans to educate Fowl Meadow's abutting neighbors and other park users in regards to the importance of maintaining and protecting the environmental integrity of the Fowl Meadow Area of Critical Environmental Concern. This public education will include flyers, letters and park alerts regarding the importance of protecting endangered species, eradicating and/or controlling invasive species of plants, sustainable trail use and maintenance, NHESP regulations and the general content and purpose of this management plan.

VII. Need for Further Information

The Department of Conservation and Recreation, Urban Parks and Recreation, South Region, the Natural Heritage and Endangered Species Program, the Neponset River Watershed Association and the New England Wild Flower Society shall continue to monitor threats to endangered and rare flora and fauna throughout the Fowl Meadow area of the Blue Hills Reservation. As requested by Natural Heritage for Endangered Species Program, such monitoring will include, but not be limited to, existing species population, threats due to exotic plant invasions, aggressive native and invasive plant encroachment or over-shading, mammal or insect herbivory, trampling or erosion due to foot traffic or other recreational activities as well as other habitat destruction. All updates and/or new records of rare species shall be submitted for review to Natural Heritage for Endangered Species Program.

This document has been redacted by the Department of Conservation and Recreation in compliance with the Mass General Law's confidentiality provisions pertaining to Massachusetts Natural Heritage and Endangered Species Program Records as well as confidentiality agreements executed between the DCR and NHESP.