

## Appendix A. Plan Contributors

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation</i>		
Allen, Kevin	Office of Cultural Resources	Historic resources
Ashton, William T.	F. Gilbert Hills State Forest	Park operations
Backman, Andy	RMP Program	Park planning
Barletta, Antonio	Government Affairs	Legislative relations
Bassett, Scott	Fire Control District 4 (Norfolk County)	Fire control
Bender, Tom	Bureau of Ranger Services	Blue Hills Reservation
Berkland, Ellen	Office of Cultural Resources	Archaeological resources
Botelho, Paul	Assistant Chief Engineer	Capital projects
Brown, Maggi	Visitor Services Supervisor	Blue Hills Reservation
Cavanagh, Paul	RMP Program	Natural resources planning
Celino, Dave	Bureau of Fire Control and Forestry	Fire management
Clifford, Paul	Visitor Services Supervisor	Borderland State Park
Comeau, Jim	Land Protection	Land acquisition history
Connors, Nicholas	Director of External Affairs and Partnerships	
Cooksey, William	District Manager, Blue Hills District	Park operations
Farina, Barbara	Architecture Project Manager	Blue Hills restoration projects
Fiesinger, Anne	Office of External Affairs	Public meetings
Fisher, Sean	Office of Cultural Resources	DCR archives, agency history
Galvao, Eve	GIS Program	
Gooch, Ken	Forest Health Forester	Hemlock treatments at Blue Hills
Greene, Judy	Office of Cultural Resources	DCR archives, plans
Gregory, Paul	Bureau of Forestry	Forest resources and infrastructure
Hart, Tony	Legal	Deeds, agency history
Hollenbeck, Kevin	District Manager, Metrowest	Park operations, Wilson Mountain
Jacoppo, John	Forest and Park Supervisor	Park operations
Jahnige, Paul	Greenways and Trails Program	Recreation
Kimball, David	GIS Program	GIS, trails
Lahiri, Chandreyee	GIS Program	GIS, metrics
Lloyd, Nathanael	GIS Program	
Marquardt, Mike	Fire Control District 2 (Plymouth County)	Fire Control facilities
Milano, Susan	Legal	
Moran, Barbara	Website Information Officer	Web page content
Nadeau, Don	GIS Program	GIS, maps
Orfant, Joe	Director, Bureau of Planning, Design, & Resource Protection (formerly)	Park planning
Orral, Norman	Director, Bureau of Planning, Design, & Resource Protection	
Ouelette, Steve	Bureau of Ranger Services	Park regulations and safety
Pastore, Karl	Regional Director, South Region	Park operations
Plocinski, Loni	GIS Program (formerly)	Park planning, GIS
Provencher, Shaun	Land Protection Program	South region properties

Appendix A. Plan Contributors. (Continued)

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation</i>		
Quinoñes, Rebecca	Ecologist (formerly)	Wetlands and vernal pools
Scapicchio, Stephen	Revenue Director	Revenues for parks in Complex
Simmons, Ellenor	Borderland State Park	Park operations
Skalski, Jack	Administration & Finance	RMP printing and distribution
Skoczylas, Joseph	Office of Long Term Permits & Leases	Rink leases
Straub, Jim	Lakes and Ponds Program	Pond health
Strother, Eve	Deputy General Counsel	Long-term permits and leases
Survillo, Susan	Bureau of Ranger Services	Blue Hills Reservation
Tipton, Nat	RMP Program	Park planning
Whiddon, Aaron	Fire Control District 3 (Bristol County)	Fire control
Wilmot, Amy	Regional Interpretive Coordinator	Interpretation
Yetman, Joe	South Region Engineer	Capital projects
<i>Other Affiliations</i>		
Buchsbaum, Robert	Massachusetts Audubon Society	Sanctuary ecology
Cook, Terry	The Trustees of Reservations	Wilson Mountain
Francis, Mike	The Trustees of Reservations	Wilson Mountain
Harper, Lynn	Natural Heritage and Endangered Species Program	State-listed species conservation
Kemp, Marcis	Metropolitan Waterworks Museum, Inc.	Brookline and Newton Water Works
Smith, Norman	Massachusetts Audubon Society	Trailside Museum
Stainbrook, David	MassWildlife	Deer browse survey data
Williams, Doug	Massachusetts Audubon Society	Stony Brook Sanctuary

## Appendix B. Public Participation.

In accordance with M.G.L. Chapter 21: Section 2F, this Resource Management Plan for the Blue Hills Complex was developed in conjunction with a public participation process to ensure that interested parties had an opportunity to review the draft RMP and offer input in its development. This appendix identifies the public participation process used to inform and review this RMP.

### B.1. THE PUBLIC PARTICIPATION PROCESS

#### Input into Development of the RMP

Public input into the development of the Blue Hills Complex RMP began in the fall of 2015. A notice of a public meeting and of the DCR's intent to prepare an RMP for the Blue Hills Complex was published in the October 19, 2015 Environmental Monitor (Volume 84, Issue 12). Notices were also posted at the Complex's parks and e-mailed to approximately 950 stakeholders.

An initial public meeting was convened at the Blue Hills' Trailside Museum on October 28, 2015. Approximately 28 people attended this meeting, which ran from 7:00 to 8:30 P.M.

The initial public comment period ran from October 29, 2015 through November 27, 2015; 14 sets of written comments were received.

#### Public Comment on Draft RMP

Notice of a public meeting on the draft RMP for the Blue Hills Complex, and of the availability of the plan, was published in the October 24, 2016 Environmental Monitor (Volume 86, Issue 12). Meeting notices were also posted at the Complex's parks and mailed to stakeholders. The meeting was held on November 10, 2016 at the Sharon Public Library; approximately # people attended.

The public comment period on the draft RMP ran from November 11 through December 12, 2016; # sets of written comments were received.

### B.2. CHANGES TO THE FINAL DRAFT OF THE BLUE HILLS COMPLEX RESOURCE MANAGEMENT PLAN

Editing of this RMP took place during and after the public comment period; formatting and typographic errors were corrected. Substantive changes to the plan's content were made in response to public comments received, and also to incorporate new and updated information.

Some public comments included specific suggestions for additional recommendations. These suggestions were evaluated to determine if they were consistent with the following three criteria:

1. The directive that RMPs "shall provide for the protection and stewardship of natural and cultural resources, and shall ensure consistency between recreation, resource protection, and sustainable forest management" as identified in M.G.L. Chapter 21: Section 2F).
2. A park's Landscape Designation.
3. Whether the proposed recommendation was a priority. To be considered a priority, it must address one or more of the following: regulatory compliance or compliance with legal agreements; the health and safety of park visitors and employees; or the imminent loss of resources.

Suggested recommendations that met all three of these criteria were considered for inclusion in the RMP.

A description of substantive changes, including new or modified recommendations, follows.

#### Executive Summary

*To be added following public comment.*

#### Section 1. The Blue Hills Complex

*To be added following public comment.*

#### Section 2. Blue Hills Reservation

*To be added following public comment.*

**Section 3. Cutler Park Reservation**

*To be added following public comment.*

**Section 4. Wilson Mountain Reservation**

*To be added following public comment.*

**Section 5. Neponset River Reservation**

*To be added following public comment.*

**Section 6. F. Gilbert Hills State Forest**

*To be added following public comment.*

**Section 7. Bristol Blake Reservation**

*To be added following public comment.*

**Section 8. Franklin State Forest**

*To be added following public comment.*

**Section 9. Wrentham State Forest**

*To be added following public comment.*

**Section 10. Rehoboth State Forest**

*To be added following public comment.*

**Section 11. West Bridgewater State Forest**

*To be added following public comment.*

**Section 12. Bridgewater State Forest**

*To be added following public comment.*

**Section 13. Borderland State Park**

*To be added following public comment.*

**Appendices**

*To be added following public comment.*

PUBLIC REVIEW DRAFT

## **Appendix C. Overview of Coordination Process with the Massachusetts Natural Heritage and Endangered Species Program (NHESP).**

### **C.1. BACKGROUND**

Since its inception, DCR’s Resource Management Planning Program has actively sought and applied the expertise of the NHESP. In 2006, the NHESP and DCR established the Biodiversity Stewardship Project. The main purposes of this project were to:

- Develop a process by which the two agencies would work together to facilitate NHESP delivery of biodiversity information and provision of management recommendations for RMPs; and
- Guide DCR land managers in the on-site management of rare species habitat.

Between 2006 and 2008 the NHESP prepared 10 biodiversity assessments covering 17 DCR properties (Table C.1). Information from available biodiversity assessments has informed the Existing Conditions and Recommendations sections of RMPs already adopted by the DCR Stewardship Council and has resulted in appropriate management recommendations for rare species. Information from the remaining biodiversity assessments will be used to inform future RMPs. The NHESP continues to provide guidance to the RMP Program, and in 2009 and 2012 DCR and NHESP worked together to identify the actual and potential impacts of DCR’s trails and trail maintenance activities on rare species and their habitats. In addition, the NHESP informs and reviews RMPs on an ongoing basis.

**Table C.1. NHESP biodiversity assessments and reports prepared for the Resource Management Planning Program.**

<b>Report Title</b>	<b>Date</b>
Biodiversity Stewardship Initiative: biodiversity data products and technical assistance for managing Massachusetts’ forests, parks & reservations. Final report of the FY06 pilot project. [Includes Horseneck Beach State Reservation and Mohawk Trail State Forest]	2006
Biodiversity of Blue Hills Reservation	2007
Biodiversity of J. A. Skinner and Holyoke Range state parks	2007
Biodiversity of Mt. Tom State Reservation and adjacent conservation lands	2007
Biodiversity of Mt. Sugarloaf State Reservation	2007
Biodiversity of Myles Standish State Forest	2007
Biodiversity of Lower Spectacle Pond, Sandisfield	2008
Biodiversity of Nickerson State Park and Hawksnest State Park	2008
Biodiversity of Bash Bish Falls State Park, Jug End State Reservation, Mt. Everett State Reservation, and Mt. Washington State Forest	2008
Biodiversity of Gilbert A. Bliss State Forest	2008
Recreational trail maintenance and biodiversity conservation. June 30, 2009	2009
Middlesex Fells Reservation: field surveys 2011. Prepared by the NHESP for Massachusetts Department of Conservation and Recreation. June 30, 2011	2011
Recreational trail maintenance and biodiversity conservation: select DCR urban parks. July 30, 2012	2012

## C.2. ONGOING COORDINATION AND REVIEW

The DCR follows a standard approach to coordinate the preparation and review of RMPs with the NHESP. This approach may be modified in response to the particular circumstances associated with each RMP. This approach includes:

- **Staff Coordination.** The NHESP has designated an official point of contact for RMPs and it is through this contact that all subsequent interaction with NHESP is coordinated.
- **Advance Notice.** DCR provides NHESP with a list of current and upcoming RMPs.
- **Data Request.** Up to date information is formally requested by DCR at the start of the planning process.
- **Consultation.** Informal consultation regarding interpretation of data provided by the NHESP may occur following NHESP's response to data request.
- **Application of Other NHESP Data.** Information and recommendations contained in biodiversity assessments, if applicable, are incorporated into the draft RMP early in the writing process.
- **Submission of Internal Draft RMP to NHESP.** The internal version of the draft RMP is submitted to the NHESP for formal review. This takes place before the draft plan is released to the public, so that the public review draft includes revisions made in response to NHESP comments and recommendations.
- **Response to Comments.** NHESP provides comment letters on the draft RMP that distinguish between what must be done (i.e., actions required for compliance under the Massachusetts Endangered Species Act (MESA)) and additional actions that may be taken to enhance rare species populations and habitats. As a rule, both types of recommendations are added to the revised draft. [*Note:* because the NHESP's recommendations are incorporated into RMPs, each RMP contains a *de facto* management strategy and guidance for all state-listed species within a planning unit.]
- **Submission of Public Draft RMP to NHESP.** The public draft RMP is submitted to the NHESP for formal review and comment. Under MESA, all "State agencies shall submit to NHESP any draft management plans they prepare for State owned lands on which State listed species are known to occur" (321 CMR 10.05(2)C.2).
- **Response to Comments.** NHESP comments are addressed with all others received during the public comment period.
- **Additional Coordination.** The NHESP is frequently consulted, in their roles as both regulator and subject matter expert, to discuss other (i.e., non-NHESP) rare species-related comments.

## C.3. COORDINATION AND REVIEW FOR THIS RMP.

Coordination with the NHESP began prior to the official start of work on the RMP and continued through review of the internal draft RMP.

- **May 8, 2015.** NHESP provides rare species, vernal pool, and natural community data for properties in the Blue Hills Complex.
- **May 18, 2015.** NHESP provides DCR with information on threats invasive plants pose to state-listed plants at Cutler Park Reservation.
- **July 23, 2015.** NHESP provides rare species, vernal pool, and natural community data for additional properties in the Blue Hills Complex.

- **July 27, 2015.** NHESP provides information on potential risks that current recreation activities at Borderland State Park pose to the data-sensitive Endangered animal.
- **July 29, 2015.** NHESP provides information on changes in the occurrence of State-listed species at the Blue Hills between the previous RMP (DCR 2011) and current RMP.
- **September 30, 2015.** At DCR's request, NHESP reviews DCR activities at the North Attleborough fire tower for potential impacts on rare species.
- **November 11, 2015.** NHESP provides rare species, vernal pool, and natural community data for Rehoboth State Forest.
- **December 17, 2015.** Consultation with NHESP regarding appropriate Land Stewardship Zoning for West Meadow Pond at West Bridgewater State Forest.
- **January 6, 2016.** NHESP provides information on habitat used by the data-sensitive Endangered animal at Borderland State Park.
- **January 22, 2016.** DCR requests that NHESP allow the sharing of the Blue Hills' biodiversity assessment (NHESP 2007) with contractors preparing the fire management plan for the Blue Hills Reservation.
- **August 9, 2016.** DCR submits the internal review draft of the Blue Hills Complex RMP to the NHESP for review as required under MESA.
- **August 23, 2016.** Comments received from NHESP. During NHESP's review, other MassWildlife personnel reviewed the draft RMP and commented on aspects of the plan related to the ecology and management of game species. One set of comments, representing MassWildlife's full range of interests, was submitted (French and Conlee 2016). These comments are presented in their entirety on the following pages.



DIVISION OF  
**FISHERIES & WILDLIFE**

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Jack Buckley, Director

August 23, 2016

Paul M. Cavanagh  
Resource Management Planner  
Bureau of Planning, Design, & Resource Protection  
Department of Conservation and Recreation  
South Region Headquarters  
194 Cranberry Road  
South Carver, MA 02366

RE: Internal draft of the *Blue Hills Complex Resource Management Plan*

Dear Mr. Cavanagh:

The Massachusetts Division of Fisheries and Wildlife is pleased to offer comments on the August, 2016, internal draft of the *Blue Hills Complex Resource Management Plan*. We appreciate DCR's attention to the conservation of biodiversity on these important properties and we look forward to working with our sister agency on implementing the relevant recommendations of this plan.

In general, we support the Resource Management Plan as written, excepting a few concerns. Our concerns are noted below, by page number of draft. Note that our agency prefers to be called the Massachusetts Division of Fisheries and Wildlife or MassWildlife, not DFW.

P. v, Table ES-1, Summary of Management Recommendations for the Blue Hills Complex: Please revise the recommendation for control of deer populations to read as follows: "Promote the regeneration of native forests by decreasing deer populations to the recommended density of 6 to 18 deer/mi<sup>2</sup> of forest, through regulated hunting, in order to reduce deer browse." Note that our recommendation applies to all DCR properties in this Complex, not just to the Blue Hills Reservation. The same language should be used on p. 2-50, in Table 2.9.1, Priority Recommendations for Blue Hills Reservation, and for all subsequent tables listing the priority recommendations for each property.

P. 1-11, Rare Species: An additional MESA-listed species, Gypsywort (*Lycopus rubellus*, Endangered), has recently been documented from the Blue Hills Reservation. Please add it to your discussion of rare species, as it is not otherwise known from the Complex. Note that pages 2-1 and 2-7 also discuss the MESA-listed species at the Blue Hills Reservation; please revise text and Table 2.2.3 as needed.

P. 1-13, Priority Natural Communities: The Natural Heritage and Endangered Species Program (NHESP) database has no documented record of Alluvial Red Maple Swamps or Woodland Vernal Pools (as a natural community) from the Complex. There are, of course, 79 Certified Vernal Pools documented from the Complex properties, as well as 157 Potential Vernal Pools, but NHESP has not formally documented Woodland Vernal Pool as a natural community from the properties.

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P. 2-9, Natural Communities of Blue Hills Reservation: The NHESP database includes documented information on only the following natural communities at the Blue Hills Reservation: Atlantic White Cedar Bog, Inland Atlantic White Cedar Swamp, Level Bog, Open Talus/Coarse Boulder Community, and Ridgetop Pitch Pine-Scrub Oak Community. If DCR has data on the 15 other types of natural communities on the Reservation, please send it to NHESP, so our records can be updated.

P. 2-10, Wildlife of the Blue Hills Reservation: To keep this paragraph consistent with the technical report of November, 2013 (MassWildlife and DCR, 2013), please revise the second sentence to read: "In 2013, personnel from the DCR and MassWildlife conducted surveys to estimate the density of deer in the Reservation; the resulting estimate of about 85 deer/mi<sup>2</sup> of forest was "well-above MassWildlife's statewide deer management range of 6–18 deer/mi<sup>2</sup> of forest" (MassWildlife and DCR 2013)." This will clarify that the estimate refers to forested areas, not to the Reservation as a whole. Page 2-40 should also be revised to reflect this clarification.

P. 2-23, Recreation Resources of Blue Hills Reservation: Please add information on the special deer hunt by permit only conducted in designated areas on the Reservation. While this hunt is designed to reduce deer densities in the Reservation to acceptable levels, it also provides a recreational opportunity for hunters.

P. 2-49, Table 2.9.1, Priority Recommendations for Blue Hills Reservation: We strongly agree with DCR's recommendations to:

- Evaluate locations of trails relative to the dens of state-listed snakes and reroute or close trail segments, as necessary, in accordance with *Trails Guidelines and Best Practices Manual* (DCR 2010a);
- Reinstitute seasonal nighttime closings of Chickatawbut Road, east of Route 28, and Wampatuck Road, as recommended by the NHESP (2007);
- Exclude all non-emergency vehicles, except in exigent situations, and non-utility company motor vehicles from trails in rare snake habitat east of Route 28;
- Plan landscaping, maintenance, and construction to avoid impacts to rare snakes, as recommended by NHESP (2007); and
- Promote the regeneration of native forests by decreasing deer populations to the recommended density of 6 to 18 deer/mi<sup>2</sup> of forest, through regulated hunting, in order to reduce deer browse. (our recommended revised language)

We would note that the recommended seasonal nighttime closings of Chickatawbut Road would be during the months of July and August.

P. 3-6, Table 3.2.5, Known Natural Communities of Cutler Park Reservation: The NHESP database includes documented information on only one Level Bog at Cutler Park. If DCR has data on the four other types of natural communities on the Reservation, please send it to NHESP, so our records can be updated.

P. 5-4, Table 5.2.3, State-listed Species of Neponset River Reservation: The last documented report of Least Bittern nesting on the Neponset River Reservation was in 1990, more than 25 years ago. Therefore, NHESP considers this species to be Historic at this site; we recommend DCR remove Least Bittern from this table.

P. 5-5, Vegetation of the Neponset River Reservation: As for the nearby Blue Hills Reservation, the vegetation of the Neponset River Reservation has been highly modified by deer browse, which has reduced the abundance of ground cover and shrub layer vegetation. Please note this impact to vegetation in this section of the Plan.

Pp. 5-5, 6-5, 7-5, 8-4, 9-5, 10-4, 11-5, 12-4, 13-5, Known Natural Communities of Neponset River Reservation, F. Gilbert Hills State Forest, Bristol Blake State Reservation and Stony Brook Sanctuary, Franklin State Forest, Wrentham State Forest, Rehoboth State Forest, West Bridgewater State Forest, Bridgewater State Forest, Borderland State Park: The NHESP database includes no documented information on natural communities on these properties. If DCR has data on the types of natural communities at these sites, please send it to NHESP, so our records can be updated.

P. 11-7, Recreation Resources of West Bridgewater State Forest: Please add hunting to the list of recreational activities known to take place on the property.

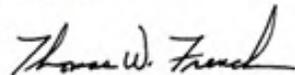
P. 13-5, Vegetation of the Borderland State Park: As demonstrated by MassWildlife surveys, the vegetation of the Borderland State Park has been highly modified by deer browse, which has reduced the abundance of ground cover and shrub layer vegetation. Please note this impact to vegetation in this section of the Plan.

P. 13-25, Table 13.9.1, Priority Recommendations for Borderland State Park: While we recommend that deer densities on all DCR properties in this Complex are controlled, through regulated hunting, to the recommended density of 6 to 18 deer/mi<sup>2</sup> of forest, this is particularly important for Borderland State Forest, where there are demonstrated impacts to vegetation because of high deer density. Please add this recommendation to this table.

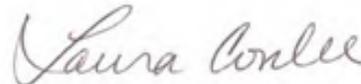
Appendix C, Overview of Coordination with NHESP: While we certainly appreciate DCR's close coordination with NHESP in the development of this Plan, we would suggest that this appendix be re-titled Overview of Coordination with MassWildlife. The emergence of the necessity to control deer populations at the Blue Hills, Fowl Meadow, and indeed other properties, such as Borderland, has brought other sections of MassWildlife into this coordinated process. Going forward, we expect that our Wildlife and Fisheries sections will likely have vital contributions to DCR's Resource Management Plans, and we think this is the appropriate place to acknowledge those contributions.

Thank you for allowing MassWildlife the opportunity to comment on the draft Resource Management Plan. If you have any questions regarding our comments, please contact David Stainbrook, Deer/Moose Biologist, or Lynn Harper, Habitat Protection Specialist, in our Westborough office at 508-389-6300.

Sincerely,



Thomas W. French  
Assistant Director  
Natural Heritage and  
Endangered Species Program



Laura Conlee  
Assistant Director  
for Wildlife

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**Appendix D. Overview of Coordination Process with the  
Massachusetts Historical Commission (MHC).**

*To be inserted following receipt of MHC comments on public review draft.*

PUBLIC REVIEW DRAFT

## Appendix E. Select Massachusetts Regulations Applicable to the Blue Hills Complex.<sup>a</sup>

CMR <sup>b</sup>	Title	Comments
105 CMR 410.00	Minimum Standards of Fitness for Human Habitation (State Sanitary Code, Chapter II)	Addresses many aspects of human habitation; section 410.152 prohibits the continued use of privies unless approved in writing by the local Board of Health
105 CMR 430.00	Minimum Standards for Recreational Camps for Children (State Sanitary Code, Chapter IV)	Regulates both residential and day camps, such as the Massachusetts Audubon Society and YMCA day camps at the Blue Hills.
105 CMR 435.00	Minimum Standards for Swimming Pools (State Sanitary Code, Chapter V)	Includes regulations for Semi-Public Pools, such as the one at the YMCA Ponkapoag Outdoor Center.
105 CMR 440.00	Minimum Standards for Developed Family Type Campgrounds (State Sanitary Code, Chapter VI)	Regulates campgrounds where three or more families or groups stay overnight or for longer periods.
105 CMR 445.00	Minimum Standards for Bathing Beaches (State Sanitary Code, Chapter VII)	Specifies water quality monitoring and closure posting requirements at bathing beaches.
105 CMR 590.00	State Sanitary Code Chapter X – Minimum Sanitation Standards for Food Establishments	Regulates establishments that store, prepare, package, serve, vend, or otherwise prepare food for human consumption.
301 CMR 11.00	Massachusetts Environmental Policy Act (MEPA)	Requires the systematic review of any work or activity undertaken by an agency (e.g., the DCR); involving state permitting or financial assistance; or a transfer of state land.
301 CMR 12.00	Areas of Critical Environmental Concern	Establishes procedures to designate ACECs and directs EOEEA agencies to “take action, administer programs, and revise regulations” in order to acquire useful scientific data; preserve, restore, or enhance resources; and ensure activities are carried out to minimize adverse effects.
302 CMR 10.00	Dam Safety	Includes information on the size and hazard classification of dams, as well as dam inspection, repair, alteration, and removal.
302 CMR 11.00	Parkways, Traffic, and Pedestrian Rules	Requires construction and access permits for the digging up or physically modifying any DCR parkway or other property, or the dumping of material or planting of trees on the same.
302 CMR 12.00	Parks and Recreation Rules	Governs the conduct of activities on DCR properties, including activities in: parks, the Appalachian Trail, campsites, golf courses, skating rinks, and pools. Includes provisions for boating; fires; hunting, fishing and trapping; pets and other domesticated animals; recreational vehicles; and permits.
304 CMR 7.00	Management Plans and Massachusetts Wildlands	Requires a management plan for each state reservation, park, and forest under the control of the Department of Environmental Management. This regulation was superseded by MGL Chapter 21: Section 2F, which requires management plans for all DCR “reservations, parks, and forests.”
304 CMR 11.00	Forest Cutting Practices Act	Regulates cutting on “all land devoted to forest growth owned or administrated by private persons, corporations or organizations” or governmental agency. A forest cutting plan is required for the cutting of more than 50 cords or 25,000 board-feet of wood.

Appendix E. Select Massachusetts Regulations. (Continued)

CMR <sup>b</sup>	Title	Comments
310 CMR 9.00	Waterways	These regulations protect and promote the public's interest in tidelands, Great Ponds, and non-tidal rivers; preserve and protect the public's rights in tidelands; protect the public health, safety, and general welfare as it may be affected by any project in tidelands, Great Ponds, or non-tidal rivers; support efforts to revitalize unproductive property along urban waterfronts; and foster the rights of the people to values identified in Article XCVII of the Massachusetts Constitution. These regulations define Great Ponds, and assign their control to the DEP. Chapter 91 permits or licenses are required for the construction, alteration, or removal of both temporary and permanent structures, and the placement of fill. Licenses are also required for beach nourishment, dredging, disposal of unconsolidated material below the low water mark, burning rubbish upon the water, and lowering the water level.
310 CMR 10.00	Wetlands Protection Act	Regulates many activities within 100 feet of wetlands and certified vernal pools, and within 200 feet of perennial streams and rivers.
310 CMR 15.00	Title 5: State Environmental Code	Standard requirements for the siting, construction, inspection, upgrade and expansion of on-site sewage treatment and disposal systems for the transport and disposal of septage.
310 CMR 19.00	Solid Waste Management	Regulates the storage, transfer, processing, treatment, disposal, use and reuse of solid waste; including stumps and other organic materials.
310 CMR 22.00	Drinking Water	Includes regulations for Transient Non-community Water Systems, which provide water to 25 or more persons at least 60 days/year.
312 CMR 2.00	Massachusetts Underwater Archaeological Resources	Standardizes procedures for the investigation, exploration, recovery, reporting, and preservation of shipwrecks and other underwater archaeological finds within inland or coastal waters.
314 CMR 4.00	Massachusetts Surface Water Quality Standards	These standards "secure to the Commonwealth the benefits of the Clean Water Act." They designate the most sensitive uses for which the waters of the Commonwealth shall be enhanced, maintained and protected; prescribe minimum water quality criteria; and contain regulations necessary to achieve designated uses and maintain water quality. These standards include the identification and regulation of Outstanding Resource Waters (ORWs).
314 CMR 9.00	401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth	These regulations establish procedures and criteria for the discharge of dredged or fill material, dredging, and dredged materials in waters of the United States within the Commonwealth.
320 CMR 2.00	Public Access Facilities	Regulates use of Office of Fish and Boating Access (formerly Public Access Board (PAB)) boat ramps. These facilities may only be used for "the launching and retrieval of any trailered or cartop watercraft and parking of the vehicle used to launch and retrieve watercraft in a properly marked parking area."
321 CMR 2.00	Miscellaneous Regulations Relating to Division of Fisheries and Wildlife	Addresses a variety of fish and wildlife issues, including scientific collecting permits and the importation, liberation, and transportation of fish, amphibians, reptiles, birds, and mammals.
321 CMR 3.00	Hunting	Regulates hunting and trapping in Massachusetts.
321 CMR 4.00	Fishing	Regulates the taking of freshwater fish in Massachusetts. Additional fishing regulations, specific to DCR parks, are identified in 302 CMR 12.00.

Appendix E. Select Massachusetts Regulations. (Continued)

CMR <sup>b</sup>	Title	Comments
321 CMR 10.00	Massachusetts Endangered Species Act (MESA)	MESA protects rare species and their habitats by prohibiting the “Take” of any plant or animal species listed as Endangered, Threatened, or Special Concern.  Activities that may alter rare species habitat (e.g., trail maintenance, vista pruning, digging archaeological test pits) are subject to regulatory review.  On state-owned land, “all practicable means and measures shall be taken to resolve conflicts between the protection, conservation, and restoration of state-listed species...and other uses of such lands in favor of the listed species.”
323 CMR 2.00	The Use of Vessels	Regulates the operation of motorboats, canoes, and kayaks. Includes special regulations for select rivers, lakes, and Great Ponds. Also regulates water skiing.
323 CMR 3.00	The Use of Recreation Vehicles and Snow Vehicles	These regulations specify that no person shall operate a snow or recreation vehicle on publicly-owned property except on trails marked and designated for such use; or in a manner that causes damage to...lands owned or managed by the Department of Conservation and Recreation.
333 CMR 10.00	Certification and Licensing of Pesticide Applicators	Requires that anyone applying herbicides, insecticides, or other pesticides on non-residential property (i.e., all DCR properties) must be certified and licensed.
350 CMR 4.00	Traffic Rules	Regulations for former MDC properties related to vehicle operator’s compliance with traffic signals, traffic control devices, traffic pavement markings, police, and rangers. Provides rangers the authority to have cars towed. An updated version of these regulations is in development.
350 CMR 5.00	Parking and Penalties Thereof	Regulations for former MDC properties related to parking. Specifies the amount of fines. An updated version of these regulations is in development.
521 CMR 19.00	Architectural Access Board; Recreational Facilities	Accessibility standards for rinks, pools, beaches, playgrounds, picnic areas, campsites, and other indoor and outdoor facilities.  Requires that 5% of picnic facilities be accessible.
521 CMR 23.00	Architectural Access Board; Parking and Passenger Loading Zones	Specifies dimensional, pavement marking, and sign requirements for accessible parking spaces and passenger loading zones.
527 CMR 14.00	Flammable and combustible liquids, flammable solids of flammable gasses.	Regulates the storage and handling of flammable liquids, combustible liquids, flammable solids, and flammable gases. Limits the storage of gasoline without a permit to: buildings not used for habitation nor frequented by the public, provided that the total quantity shall not exceed seven gallons and provided that it is stored in one or more approved containers.
801 CMR 4.02	Fees for Licenses, Permits, and Services to be Charged by State Agencies	Specifies fees for camping; parking; use of picnic pavilions, athletic fields, ice rinks, golf courses; special use permits; timber harvests, forester licensing, well digging, dam safety permits, and other miscellaneous activities.
950 CMR 70.00	Massachusetts Historical Commission	Standardizes procedures for conducting archaeological investigations in Massachusetts by controlling activities that will disturb archaeological properties.  Requires a permit from the State Archaeologist for conducting “field investigation activities on any land owned or controlled by the Commonwealth.”

Appendix E. Select Massachusetts Regulations. (Continued)

<b>CMR<sup>b</sup></b>	<b>Title</b>	<b>Comments</b>
950 CMR 71.00	Protection of Properties Included in the State Register of Historic Places	Requires Massachusetts Historical Commission notification of projects undertaken, funded, or licensed by a state body.

a. A variety of state regulations apply to both the operation of state parks and the behavior of visitors to these parks. This table includes only those regulations directly related to topics addressed in the main body of this RMP.

b. The Code of Massachusetts Regulations, or CMR, “contains regulations promulgated by state agencies” (Massachusetts Trial Court Law Libraries 2012). These regulations “have the force and effect of law like statutes.”

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## **Appendix F. Overview of the Cultural Development of the Blue Hills Complex.**

This overview provides a synthesis of existing knowledge and places DCR properties within a geographical and temporal complex. Further it suggests the range and types of archaeological sites that may exist on DCR properties within the Complex, thereby providing a framework for their protection.

### **Pre-Contact Archaeology**

For most of the pre-Contact period, 12,000–450 years ago, the river drainages defined the physical space within which the First People lived and operated. The many habitats associated with these drainages included wetlands, estuaries, and tributaries and the primary attraction of these locations was the seasonal availability of an endless supply of fresh fish. The drainages also provided transportation routes on these water courses, and offered places for specialized and sacred space, and settlement.

In New England, the pre-Contact period is classified into three chronological stages of cultural development. The Paleo-Indian (12,000–9,000 Before Present or BP), the Archaic Period (9,000–3,000 BP), and the Woodland Period (3,000–450 BP).

### **Paleo Indian Period**

The peopling of New England began shortly after the glaciers receded from this region. The first colonists, Paleo-Indian hunters and gatherers entered a tundra-like landscape and settled near major rivers and lakes. One of southern New England's best known Paleo sites occurs at Lake Assawompsett in Middleboro, located within the Upper Taunton River watershed where six of the Blue Hills Complex properties are located. The northern most properties of the Blue Hills Complex also contain Paleo-Indian sites along both the Charles and Neponset rivers.

As the climate changed over the next several thousand years, continuously milder climatic conditions encouraged a succession of forest types, and the barren landscape was replaced by a spruce parkland/woodland, then by a pine/oak forest, and slowly by the mixed deciduous forest of today. Local wildlife also changed and adjusted to new

habitats by moving elsewhere, adapting, or becoming extinct. At the same time, sea levels were continuously rising, and much of the former coastal plain was submerged and estuaries were created along the newly defined coast.

### **Archaic Period**

The First People adapted to the new resource base by developing new tool types and technologies. The abundant natural resources of rivers with their many tributaries and estuaries, and the close proximity of well-watered coastal plains, provided year-round natural resources for procurement. Particularly important sites were situated next to the first set of falls on a river, just above the head of the estuary. So important were these sites for the seasonal availability of fish, archaeological evidence suggest that Indigenous Americans returned to these riverside locations from the Middle Archaic (8,000 BP) through the Late Woodland Period (450 BP). In the winter, tribes moved into sheltered interior uplands. During these months the focus of subsistence activities shifted to the gathering of nuts, berries and seeds; and hunting and trapping mammals, reptiles, and birds in the upland forests.

The exploitation of anadromous fish would continue to be the basis of the indigenous economy throughout history. Middle Archaic site types include semi-permanent base camps along rivers, streams, and wetlands; special purpose camps in uplands or near wetlands; stone tool workshops; and quarries. Late Archaic sites (6,000–3,000 BP) are most represented in this region's prehistory. With an increase in population, and settlement into well-defined territories within the drainages, Late Archaic sites were located along river banks, and fresh water sources, meadowlands, rock shelters, and quarries. Emphasis was also placed on procuring raw material from quarries within these river drainages.

### **Woodland Period**

Stabilization of the coastline, changing artifacts types, production of pottery and a shift to horticulture define this time period. With increased sedentism, Woodland Period sites are often large and along waterways. In the Late Woodland Period, food production increases at the coast and in riverine

zones. During the Contact Period (1500–1620) Indigenous communities settled within river drainages on terraces and knolls, at confluence points, and the coast. These people flourished until the first Europeans entered the region.

The existing archaeological record for the Metropolitan Boston area reveals that this portion of Massachusetts was continuously occupied for at least 12,000 years. Early historic accounts only document the presence of those Indigenous Americans who were living primarily in coastal areas at the time of that contact, and they are not indicative of the rich cultural heritage that was actually coming to an end as a result of that contact. These First People, descendants of the Massachuset, are still here and active in identifying, interpreting, and protecting their own cultural heritage.

In 1657, Dorchester granted the Neponset Indians a tract of land that was to be used by Reverend John Eliot to establish his second praying Indian town (in the land that today comprises the Ponkapoag Golf Course). The 6,000 acre Punkapoag Plantation eventually achieved church status and remained one of the principal praying towns (out of eleven in Massachusetts) until King Phillips War (1675). The plantation persisted until at least 1692. Ponkapoag Plantation has yet to be archaeologically discovered. The potential for pre-Contact archaeological resources to exist in the Blue Hills Complex forests is based upon several criteria. These include types and conditions of soil, proximity to recorded prehistoric sites, degree of slope and slope orientation, and proximity to freshwater sources and raw materials. Potential cultural resources could be stone tools, burials, campsites, hearths, storage features, quarries, fish weirs, caches, workshops, or even a village. All 12 parks within the Blue Hills Complex meet multiple criteria for having a high sensitivity for pre-Contact sites.

### Post-Contact Archaeological Resources

Post-Contact (i.e., historical) Archaeology focuses on the physical remains of activities from the times when Europeans first made contact with the local Indigenous Americans, about 500 years ago, and runs almost to the present. It deals with societies whose documentary sources can provide a database for identification of artifacts and features, as well as the interpretation of the behavior patterns that created them. Thorough archival research (probate

records, deeds, documents, historic maps and Atlases) can often be as important as the actual process of excavation at historic sites. Post-Contact archaeological sites are not easily generalized and their form, size and manner in which they were created differs greatly; they may have resulted from domestic personal or household activities, or from commercial, industrial, agricultural, ecclesiastical, or military activities and they may be in, or were in, urban or rural settings.

Industrial Archaeology is a specialized sub-field of historical archaeology that focuses on the remains of American industry. Industrial archaeologists study the remains of buildings that housed commercial and manufacturing activities, or related structures and features such as canals, bridges, roadways, and dams. Machinery, which represent both the mechanisms by which products were made, and the by-product of the technological process itself, as well as the lives of the workers who used them, are among the artifacts and topics studied by Industrial Archaeologists.

As with the early peopling and exploitation of the major river drainages in the Blue Hills Complex area, the European settlers began harnessing and controlling water to power mills. Thousands of mill and dam sites are located in the six major river drainages located within the Blue Hills Complex RMP, and few are thoroughly documented. Rivers provided early transportation networks, and settlements soon developed around milling complexes located along these rivers. Almost every 17<sup>th</sup> century New England village had small water-powered grist, saw and/or fulling mills. By the 18<sup>th</sup> century waterpower was still dependent on rainfall, runoff, and drainage, with power capacity reliant on volume and fluctuation of the water source. Most New England mill sites contained the following components: waterwheel; dam (masonry or earthen) upstream to divert water; headrace to carry water to the mill; flume to receive water from a canal, headrace, or dam; and a tailrace to carry water from the wheel back to the stream below the mill (Hunter 1979). In addition to the industrial components of a mill, entire communities developed around these sites. With the expansion and re-use of existing industrial sites, and the advent of the steam engine which became more reliable and mobile, mill towns were left to reinvent themselves and into the broader landscape. During the historic period, the major

rivers within the Complex provided harnessed waterpower for early mills well into the mid-20<sup>th</sup> century, and the archaeological record ensures they are still a part of the landscape today.

### **Historic Resources**

European explorers had been visiting the Atlantic Coast of North America since at least the early sixteenth century. Repeated contacts with Native Americans likely occurred during these voyages.

Settlement along the coast began in the early 1500s, and continued for over a century. The Blue Hills Complex is located in eastern Massachusetts, an area settled by the British in the early 1600s. This influence remains evident in the names of many of its towns, counties, and rivers. To a lesser degree, it is reflected in the Complex's historic resources. There are no extant historic resources associated with Native Americans.

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## Appendix G. DCR Cultural Resources Policy.

**POLICY:** The Department of Conservation and Recreation shall provide for the stewardship of all known and potential cultural resources on DCR property through sensitive resource management and planning and compliance with local, state, and federal historic preservation regulations. DCR actions and activities shall promote and foster the preservation, protection, and appreciation of these resources.

**APPLICABILITY:** All Divisions, Departments, Bureaus, and Staff

### PROCEDURES:

#### I. Definitions

The following definitions explain terms used throughout this policy directive:

**Cultural Resource**—A district, site, building, structure, landscape, object or ethnographic resource that is at least fifty years old and has important historical, cultural, scientific, or technological associations. Cultural resources also include pre-historic or historic archaeological sites containing physical remains or indications of past human activity and/or any artifacts that have been constructed or manipulated by human influence and holding potential significance for understanding past, present, or future human behavior.

**Cultural Resources Inventory (CRI)**—A baseline inventory of cultural resources in the DCR system, consisting of location maps, related reports, and individual site inventory forms with background historical information.

**National Register**—The National Register of Historic Places is the official federal list of districts, sites, buildings, structures and objects significant in American history, architecture, archaeology, engineering and culture.

**Project**—Any action, activity, program, construction or land modification that is directly undertaken by DCR, receives any financial assistance from DCR, or requires the issuance of a license or permit by DCR.

**Project Notification Form**—The form that is completed by DCR or a private project proponent in order to notify the Massachusetts Historical Commission of a project requiring review under state or federal historic preservation regulations.

**Secretary of the Interior's Standards for the Treatment of Historic Properties**—General guidelines for the preservation, rehabilitation, restoration, and reconstruction of historic buildings, established by the National Park Service to encourage consistent preservation practices at the national, state, and local levels.

**Site**—The location of a significant event, a prehistoric or historic occupation or activity, or a building or structure, whether standing, ruined, or vanished, where the location itself possesses historic, cultural, or archaeological value regardless of the value of any existing structure.

**State Register**—The State Register of Historic Places includes the following properties:

- All districts, sites, buildings, or objects listed in the National Register of Historic Places or formally determined eligible for listing in the National Register of Historic Places by the Keeper of the Register, United States Department of the Interior;
- All local historic districts or landmarks designated under local ordinances or by-laws;
- All structures and sites subject to preservation restrictions approved or held by the MHC;
- All historical or archaeological landmarks certified or listed pursuant to MGL Ch. 9, Sec. 26D and 27.

## **II. Mission Statement—Office of Cultural Resources**

The Office of Cultural Resources (OCR) preserves the cultural heritage of Massachusetts through stewardship of DCR's historic buildings, structures, landscapes, archaeological sites, and archival resources; through training, public education, and advocacy; and through the development of innovative tools for protecting historic landscapes.

The OCR staff provides expertise, technical assistance, and project management skills in landscape preservation, historic preservation planning, archaeology, archival records management, and compliance with local, state and federal historic preservation laws. In addition to leading OCR initiatives and programs, OCR staff directly support activities undertaken by other bureaus and divisions within DCR.

## **III. Implementation**

The Commissioner shall designate a staff person to coordinate agency implementation of this policy.

The Commissioner shall ensure that an archaeologist is on staff who meets the professional qualifications and standards for investigation and reporting as outlined in 950 CMR 70.00 and retains DCR's state permit for archaeological investigations on public lands or lands in which the Commonwealth has an interest.

The agency shall provide training on all aspects of this policy to DCR planning, engineering, project management and operations staff.

## **IV. Regulatory Compliance—Project Planning**

During the project planning process DCR shall comply with historic preservation laws at the local, state, and federal levels, listed below. OCR serves as the Department's liaison with local historic district commissions and the Massachusetts Historical Commission (MHC) pertaining to project notifications and requests requiring assistance from and consultation with these commissions. All inquiries from MHC shall be directed to OCR.

### **A. Local Landmarks and Historic Districts**

Many municipalities within the Commonwealth have designated local historic landmarks and historic districts to protect the distinctive characteristics of important sites and districts and to encourage new structural designs that are compatible with their historic setting. Local Historic District Commissions review all applications for exterior changes to landmarks or properties within local districts to ensure that changes to properties will not detract from their historic character. Review criteria are determined by each municipality.

MGL Ch. 40C      <http://www.mass.gov/legis/laws/mgl/gl-40c-toc.htm>

## B. State Register Review

DCR must notify MHC, through filing of a Project Notification Form (PNF) or Environmental Notification Form (ENF), of any projects undertaken, funded, permitted, or licensed in whole or in part by the agency in order that MHC can make a Determination of Effect of the project on historic and archaeological resources listed in the State Register. DCR shall send copies of PNFs or ENFs to the local historical commissions in those communities that have received Certified Local Government status from MHC. It is the responsibility of the MHC to determine whether State Register properties exist within the project's area of potential impact. When MHC determines a proposed project will have an adverse effect on historic properties, DCR must consult with MHC and any interested parties to explore feasible and prudent alternatives that would eliminate, minimize, or mitigate the adverse effects and, following consultation, adopt such alternatives.

DCR may enter into a Programmatic Memorandum of Agreement (PMOA) with the MHC to streamline the state review process, including identifying possible activities that qualify as categorical exemptions. OCR is responsible for the coordination of any PMOA with the MHC and directly oversees implementation.

MGL Ch. 9, Sec. 26-27C <http://www.mass.gov/legis/laws/mgl/9-27c.htm>  
950 CMR 71

## C. Massachusetts Environmental Policy Act (MEPA)

Some DCR projects may require filing an ENF with MEPA in addition to the State Register Review. MHC reviews all ENFs and comments on those in which there are concerns that the project has the potential to affect significant historic or archaeological properties. MEPA regulations state that an ENF must be filed if a project involves: 1) demolition of all or any exterior part of any Historic Structure listed in or located in any Historic District listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth; or 2) destruction of all or any part of any Archaeological Site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth unless the project is subject to a Determination of No Adverse Effect by MHC or is consistent with a Memorandum of Agreement with MHC that has been the subject of public notice and comment.

301 CMR 11.00 <http://www.mass.gov/envir/mepa/thirdlevelpages/meparegulations/meparegulations.htm>

## D. Section 106 Review

DCR is required to comply with Section 106 of the National Historic Preservation Act when undertaking projects that require a permit, funding, license, or approval from a federal agency. The federal agency (or, in many cases, the recipient of federal assistance or permits) is required to notify MHC of such projects and take into account the effects of the project on historic properties that are listed or eligible for listing in the National Register of Historic Places. When the federal agency, in consultation with the MHC as the Office of the State Historic Preservation Officer, determines that a project will result in an adverse effect to those properties, the federal agency must take prudent and feasible measures to avoid, minimize, or mitigate those effects. Other interested parties such as local historical commissions or Indian Tribes are also consulted as part of the process.

16 USC 470 et seq <http://www.cr.nps.gov/local-law/nhpa1966.htm>  
36 CFR 800 <http://www.achp.gov/regs-rev04.pdf>

**V. Regulatory Compliance—Other (See also Emergency Scenarios/Procedures below)**

Other DCR activities require compliance with additional state historic preservation laws:

A. Massachusetts Unmarked Burial Law

When human skeletal remains are discovered or if human remains are disturbed through construction or agricultural activity, DCR staff must immediately notify the Office of the Chief Medical Examiner (617-267-6767, ext. 176). The Medical Examiner shall conduct an inquiry to determine whether the remains are suspected of being 100 years old or more, and, if so determined, shall immediately notify the State Archaeologist at MHC. The State Archaeologist conducts an investigation to determine if the skeletal remains are Native American. If the remains are deemed likely to be Native American, the State Archaeologist shall immediately notify the Massachusetts Commission on Indian Affairs, which shall cause a site evaluation to be made to determine if the place where the remains were found is a Native American burial site. Consultation occurs to develop a written agreement to preserve the burials in situ or, if no other feasible alternative exists, to excavate the burials.

MGL Ch. 38, Sec. 6 <http://www.mass.gov/legis/laws/mgl/38-6.htm>  
MGL Ch. 9, Sec. 26A and 27C <http://www.mass.gov/legis/laws/mgl/9-26a.htm>  
<http://www.mass.gov/legis/laws/mgl/9-27a.htm>  
MGL Ch. 7, Sec. 38A <http://www.mass.gov/legis/laws/mgl/7-38a.htm>

B. Preservation Restrictions

When DCR seeks to acquire a preservation restriction on a property, MHC must review and approve the language of the restriction before it is finalized. A preservation restriction means a right, whether or not stated in the form of a restriction, easement, covenant or condition, in any deed, will or other instrument executed by or on behalf of the owner of the land or in any order of taking, appropriate to preservation of a structure or site historically significant for its architecture, archaeology or associations, to forbid or limit any or all (a) alterations in exterior or interior features of the structure, (b) changes in appearance or condition of the site, (c) uses not historically appropriate, (d) archaeological field investigation without a permit, or (e) other acts or uses detrimental to appropriate preservation of the structure or site. Certain projects on properties with a preservation restriction require MHC approval.

MGL Ch. 184, Sec. 31-33 <http://www.mass.gov/legis/laws/mgl/184-31.htm>  
<http://www.mass.gov/legis/laws/mgl/184-32.htm>  
<http://www.mass.gov/legis/laws/mgl/184-33.htm>

C. Consultation with Massachusetts Native Americans

DCR must consult directly with Wampanoag (Gay Head and Mashpee) Tribal Councils and the Massachusetts Commission on Indian Affairs (MCIA) for management of the reservation in the Fall River-Freetown State Forest. DCR must consult with the Wampanoag and Nipmuc Tribal Councils on matters affecting each of those tribes. DCR must consult with the MCIA and with other tribal and intertribal councils on matters that affect all other tribes.

Executive Order 126 <http://www.lawlib.state.ma.us/ExecOrders/eo126.txt>

## **VI. Resource Management and Planning**

### **A. OCR Program of Inventory and Evaluation**

One of the primary objectives of OCR is to provide an ongoing program of inventory and evaluation of cultural resources on DCR property. This first and most critical step in cultural resource management entails identifying potentially significant cultural resources and discovering the significance or meaning of each resource within a local, statewide, and national context. To this end, OCR shall develop, maintain and oversee the use of its own statewide baseline inventory of cultural resources, known as the Cultural Resources Inventory (CRI). Information from the CRI shall be available for use by DCR staff, but it shall not be made available to the public without approval from the OCR Director, and particularly, the written approval of the State Archaeologist for requests of disclosure of archaeological site locations.

In order to recognize highly significant cultural resources, OCR shall identify those that appear to meet the criteria for the National Register of Historic Places and, in consultation with MHC, nominate them for listing on the National Register. OCR shall initiate and manage the nomination process in consultation with other DCR staff and the MHC.

OCR shall expand and update the CRI as necessary to supplement historical background and geographical information on currently inventoried cultural resources, add newly discovered cultural resources, and update baseline information on cultural resources on properties acquired or disposed by DCR, and provide information on newly inventoried cultural resources to the MHC to coordinate with MHC's Inventory of Historic and Archaeological Assets of the Commonwealth.

The CRI shall also be supplemented with other cultural resource-oriented data and publications, such as MHC inventory forms, historic structure reports, condition assessments, interpretive materials, maintenance/repair records, and archaeological impact studies.

OCR shall provide CRI information to district, regional and facility supervisors with the understanding that archaeological site locational information is confidential, not a "public record," and must be secured from inadvertent or unauthorized disclosure or from subsequent disclosure without written permission of the State Archaeologist (MGL Ch. 9, Sec 26A and 27C (950 CMR 70.13(7))). The CRI shall be used by DCR to enable informed preservation decisions as part of DCR's resource planning and management activities, including the prioritization of capital projects for stabilization, repair and adaptive reuse.

### **B. Procedures for Protecting Cultural Resources**

#### ***1. Acquisition of Land and Conservation/Preservation Restrictions***

OCR staff shall sit on the DCR Lands Committee and provide assistance and input into the protection of properties of significance to the state's cultural heritage through acquisition in fee, conservation restrictions, or preservation restrictions. Once an acquisition is complete, the OCR shall determine whether a baseline inventory should be undertaken on the property to identify cultural resources. Preservation restrictions must be reviewed and approved by MHC prior to DCR acquisition.

## 2. Resource Management Plan Development

OCR staff shall provide technical support toward the Resource Management Planning Program to insure that the protection of cultural resources is a core component of Resource Management Plans. Depending on the type of DCR facility and the scope of the RMP, this support may range from data collection and documentation to property analysis and treatment recommendations.

## 3. Project Planning

DCR shall make every effort to protect cultural resources on DCR property. For projects planned at any Department level, appropriate Department staff shall consult with OCR to consider potential project impacts on cultural resources. Consultation with OCR shall occur as early as possible in the planning process, but no later than the 25% design development phase. When a conflict between a project location and its impact on cultural resources is identified, cultural resource management strategies shall be brought into consideration to determine if the impact to the resource can be avoided, adverse impacts mitigated, or whether additional site investigation is necessary. OCR shall initiate and manage those activities that will minimize or mitigate adverse impacts to cultural resources.

When necessary, OCR shall conduct a coordinated program of basic and applied research to support planning for and management of cultural resources on DCR property. Repairs, rehabilitation, and other preservation activities shall follow the guidelines in the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. Adequate research to support planning and compliance with MHC Review will precede any final decisions about the treatment of cultural resources or operational activities which may impact cultural resources.

For each DCR project, a Project Notification Form (PNF), including a project description, a site plan, and photographs, shall be provided to OCR. OCR shall forward the PNF to MHC and, where required, local historic district commissions. If outside consultants are preparing the PNF, then OCR staff shall be given an opportunity to review the draft PNF before it is submitted. The submission of an Environmental Notification Form (ENF) under the Massachusetts Environmental Policy Act (MEPA) satisfies MHC notification, and no PNF is needed for project undergoing MEPA review. Copies of ENFs shall be provided to OCR.

MHC has a maximum of 30 days to make a Determination of Effect on historic resources or request supplemental information in order to make a Determination of Effect. In the event that the MHC makes a determination of "no effect" or "no adverse effect" on historic resources, the project may proceed. If MHC determines that the proposed project will have an "adverse effect" on historic resources, DCR shall consult with MHC to explore options to avoid, minimize, or mitigate the adverse effect. If, after consultation, no feasible or prudent alternative exists that would avoid the adverse effect, a Memorandum of Agreement between DCR, MHC and any other interested parties is required to resolve the adverse effect and complete the consultation process.

Local historic district commission review will vary by municipality.

No physical work for projects shall occur until the review process has been completed with MHC and (if applicable) the local historic district commission.

#### 4. *Emergency Scenarios/Procedures*

In the event an unanticipated site of archaeological or cultural significance is encountered during the project implementation stage, project work shall be halted and OCR shall be notified. OCR shall initiate the review process with MHC and make a recommendation to the Deputy Commissioner of Planning & Engineering whether or not to suspend all aspects of project implementation during consultation with MHC.

If human remains are discovered during project implementation, project work shall be halted, the area must be secured, the State Police must be notified, and the Medical Examiner (617-267-6767 ext, 176) and the DCR staff archaeologist must be contacted to determine if the remains are over 100 years old. No one should touch or remove the remains. If the remains are over 100 years old, the State Archaeologist at MHC must be notified and will consult with DCR (and the Massachusetts Commission on Indian Affairs if the remains are Native American) to avoid or mitigate impacts to the graves. In any such situation, DCR staff shall work with OCR to comply with the state's Unmarked Burial Law.

If DCR must take immediate action to avoid or eliminate an imminent threat to public health or safety or a serious and immediate threat to the environment, OCR shall be notified as soon as possible. OCR shall attempt to seek prior oral approval of the MHC for the project via telephone if written notice is not practicable, provide written notification of the emergency work within ten days, and commence full compliance with MHC review requirements within thirty days, under the terms of 950 CMR 71.10.

#### 5. *Day-to-Day Operations*

Management of DCR's property shall be carried out with cultural resource protection in mind. Adverse impacts to cultural resources should be avoided and mitigated, where possible, with appropriate protection strategies. Cultural resources shall be adequately maintained, following recommended techniques where formal guidelines are in place. Cultural resource management decisions should be made with input from OCR.

Discovery of artifacts should be reported immediately to OCR, noting the exact location of the find. Be aware of sites that may be exposed or threatened by erosion or visitor impacts. Any vandalism, unauthorized digging, or removal of artifacts should be reported to the appropriate law enforcement personnel and OCR. Archaeological investigations on public lands require a permit from the State Archaeologist at MHC (MGL Ch. 9, Sec 26A and 27C (950 CMR 70)).

#### 6. *Lease/Permit Programs*

The issuance of leases and permits by DCR for activities involving the physical alteration of a property must undergo MHC review with OCR and MHC, as outlined above.

The proposed issuance of DCR permits to investigate archaeological sites shall be reviewed by OCR. OCR shall coordinate the issuance of a special use permit with the State Archaeologist at MHC, who must also issue a concurrent State Archaeologist permit for any field investigations on DCR property (MGL Ch. 9, Sec 26A and 27C (950 CMR 70)).

*7. Disposition of Real Property*

The protection of cultural resources, including the preservation and continued use of significant historic buildings and structures, shall be accommodated as part of any disposition of DCR property. Under the State Register review regulations (950 CMR 71.05(e)), the transfer or sale of a State Register property without adequate conditions or restrictions regarding preservation, maintenance, or use will result in an “adverse effect” determination from MHC. DCR must consult with MHC and any interested parties to resolve the effect of the proposed transfer or sale of the State Register property.

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## Appendix H. GIS Supplemental Information.

### H.1. METHODOLOGY

The following is a summary of the GIS methodologies used by the Department of Conservation and Recreation (DCR) GIS Program to generate and present data within the Blue Hills Complex Resource Management Plan (RMP).

#### Property Boundaries

The digital boundaries for each property within the Blue Hills Complex can be described, based on source data, one of three ways: highly accurate, reasonably accurate (for planning purposes), and accuracy undetermined. Approximately 28%, by length, of the digital boundaries are based on highly accurate data, such as survey plans or physical features like hydrography. About 29%, by length, are based on reasonably accurate data, such as digital assessor parcel data and half-meter-resolution orthoimagery. The remaining 43%, by length, are based on more historical data of undetermined accuracy, such as US Geological Survey (USGS) topographic quadrangles, sketches, sources without quality data, or undocumented sources.

As part of the planning process, DCR GIS specialists edited the digital boundaries of several properties in this RMP. This included:

- Blue Hills Reservation. Ponkapoag Golf Course, which is no longer operationally in the Blue Hills District, was removed from within the Blue Hills Reservation's boundaries.
- Cutler Park Reservation. Adding of a portion of the Charles River Reservation in Needham, between Great Plain Avenue and the Charles River by heads-up digitizing from a MassDOT highway layout plan.
- Wilson Mountain Reservation. Adjusting the eastern boundary, adjacent to the Solomon Track, orthoimage interpretation based on a new land survey.
- Neponset River Reservation. The portion of Fowl Meadow within the City of Boston, and the parking/boat launch area at the intersection of the Neponset Valley Parkway and Brush Hill Road, were added to the Blue Hills Complex using existing open space data.

- Franklin State Forest. During the preparation of this RMP, operational responsibility for the Southern New England Trunkline Trail (SNETT) was placed entirely within the Blackstone Complex. Boundaries of the SNETT as it passes through Franklin State Forest were corrected, resulting in minor changes to the Forest's boundaries.
- Wrentham State Forest. The Route 495 corridor, as identified based on the highway layout survey, was removed from the Forest.
- Bridgewater State Forest. The boundaries were redrawn, based on assessor's information, so that the mapped parcel fronted Water Street.

In addition, new roads or roads involved in management zoning that had not been digitized were digitized.

#### Land Stewardship Zoning

A DCR GIS Specialist digitized the Zone 1, Zone 2, Zone 3 and Significant Feature Overlay areas in ArcGIS. Every attempt was made to use "on the ground features," such as trails or streams, and dimensional offsets (i.e., buffers) or straight line connections as the boundary for each zone and/or Significant Feature Overlay in an effort to make the areas easily identifiable for DCR field staff.

**Blue Hills Reservation** - Zoning in this RMP is largely based on that presented in the previous Blue Hills RMP (DCR 2011). Changes in zoning were made to reflect recent changes in operations or on the ground conditions; they are described below.

- Little Blue Hill. The Zone 3 on Royall Street is set back 200 feet from the Skyline Trail.
- Unquity. The Zone 3 for Ulin Rink follows the MassGIS wetland line on the north, west, and part of the south side.
- Chickatawbut. The Chickatawbut Overlook, towers, and education center zones follow trails and fences where they exist, to encompass developed areas. The boundary runs north from the west side trailhead, through three trail intersections, thence east 145 feet, thence south 370 feet (level distances) by a large pine tree to the northeast corner of the parking lot, which is

the northeast corner of the "Tower Zone 3", thence back to the starting point, all to enclose an area maintained as field to preserve the view toward Boston. The tower zone includes the parking lot, and the boundary runs from the southwest corner of the vista zone along the south edge of the vista zone to the southeast corner of the vista zone, thence south crossing the road and through three trail intersections, turning west-northwest and through a trail stream crossing, a forest road culvert, and turning generally more north and through two trail intersections to the gate by the road, thence across the road to the trailhead at the starting point.

- **St. Moritz.** The Zone 3 west of Shea Rink extends west-southwest from the west corner of the rink lot fence to the south end of a clearing to include a wooded area between the rink, the Sergeant Robert Allen Curry Ball Field, and a dam/dike associated with the St. Moritz Ponds. The Zone 3 for the playground on the south side of Bunker Hill Lane is the MassGIS assessor lot.
- **Quincy Quarries.** The Quincy Quarries Zone 3 encompasses the developed area and enclosed wooded areas.
- **Ponkapoag.** The Zone 1 boundary follows trails/forest roads where they exist and is intended to exclude the developed golf course areas and the dam/dike at the outlet of Ponkapoag Pond. All zones that include dams/dikes intend to approximate the dam/dike construction and spillway areas including overgrown areas and underwater construction. The Homan Conservation Restriction boundary was digitized from best fit of tree lines/Ponkapoag Golf Course fairways and stone walls depicted on the Town of Canton topographic survey superimposed on orthoimagery. The Zone 3 for Fisherman's Beach includes the parking area; it does not include the beach area or road frontage. It is set back approximately twenty feet from the road, to the parking lot guardrail. It then follows the guardrail on the east edge of the lot, and extends in a straight line to Acton Path. The north end of this zone extends from this point, passes north of the north gate, almost due west to the corner of the Reservation where the property line begins an arc, which encloses a rectangular trapezoid

shape. The AMC Ponkapoag Camp's Zone 3 encompasses the developed area including shoreline and tent sites, with the south edge a line from the northern prominent rock of three on the shore almost due east to a point on the AMC access road 315 feet north of a culvert and 275 feet southeast of an intersection at the camp, to bound the tent area. The YMCA's Ponkapoag Outdoor Center's Zone 3 approximates the upland "island" in the bog. Its northwest edge is three straight lines from the north point of the zone to an eastern point of the golf course planning area, which excludes some upland to the northwest.

- **Ponkapoag East.** The Zone 3 for the Nike Battery BO-55 Launcher Area encompasses the fenced areas, and the existing zoned area south of the access road where fence may no longer exist.

Additional information on the Blue Hills Reservation's zoning is presented in Section 2.9.

**Cutler Park Reservation** - The Zone 3 south of Great Plain Avenue includes the gated access road and an approximately 20-foot offset on the north side for potential head-in parking up to the west entrance of a loop driveway to the south, and all land to the river, including the loop driveway, for the potential future development of river access.

Additional information on Cutler Park Reservation's zoning is presented in Section 3.9.

**Wilson Mountain Reservation** - The eastern boundary of the Zone 3 extends to the actual boundary of the property as determined by a survey conducted for DCR. A DCR-planted line of trees is offset approximately five feet from the surveyed property line. Because of this, the eastern boundary of the Zone 3 was also set to five feet from the row of trees.

Additional information on Wilson Mountain Reservation's zoning is presented in Section 4.9.

**Neponset River Reservation** - The Zone 3 by Paul's Bridge includes all developed areas, including those that may at times be overgrown. The Zone 3 at Farnham & Connolly does not include the surrounding ecological restoration areas.

Additional information on the Neponset River Reservation's zoning is presented in Section 5.9.

**F. Gilbert Hills State Forest** - The Zone 3 along Granite Street was created from coordinate geometry, where it exists, and from best fit using orthoimagery and oblique imagery, based on the survey describing the lease for that area. The best-fit is along the dam area including estimated underwater structures, and along the waterfront near the Barton House. The zone includes that portion of the road/layout on forest property. The northwest end of the Zone 3 at the forest headquarters is intended to encompass the forested picnic area. The High Rock Zone 3 encompasses the former radar site. The nearby Warner Trail access parking area and appurtenances on forest property are also Zone 3. The Off-Highway Vehicle (OHV) Significant Feature Overlay in the forest is buffered from approximate GPS trail centerline data; it has been exaggerated to show at map scale and is not intended to include offsite trails and areas not zoned for OHV access. It is intended to only illustrate approved trail loops.

Additional information on F. Gilbert Hills State Forest's zoning is presented in Section 6.9.

**Bristol Blake State Reservation** - The Zone 3 includes all cleared and built areas, and approximates the dam/dike construction and spillway areas including overgrown areas and underwater construction.

Additional information on Bristol Blake State Reservation's zoning is presented in Section 7.9.

**Franklin State Forest** - The Zone 3 on the south side of Forge Hill Road is a schematic for a potential head-in parking lot. The OHV Significant Feature Overlay in the forest is buffered from approximate GPS trail centerline data; it has been exaggerated to show at map scale and is not intended to include offsite trails and areas not zoned for OHV access. It is intended to only illustrate approved trail loops.

Additional information on Bristol Blake State Reservation's zoning is presented in Section 8.9.

**Wrentham State Forest** - The Zone 3 on the west side of Madison Street at a trailhead is a schematic for a potential head-in parking lot. The OHV Significant Feature Overlay in the forest is buffered from approximate GPS trail centerline data; it has been exaggerated to show at map scale and is not intended to include offsite trails and areas not zoned

for OHV access. It is intended to only illustrate approved trail loops.

Additional information on Bristol Blake State Reservation's zoning is presented in Section 9.9.

**Rehoboth State Forest** - Zoning was set to the Forest boundaries.

Additional information on Rehoboth State Forest's zoning is presented in Section 10.9.

**West Bridgewater State Forest** - The Zone 3 includes all cleared and all built areas at the site that are on Forest land, and approximates the dam/dike construction and spillway areas including overgrown areas and underwater construction.

Additional information on Bridgewater State Forest State Reservation's zoning is presented in Section 11.9.

**Bridgewater State Forest** - Zoning was set to the Forest boundaries.

Additional information on Bridgewater State Forest State Reservation's zoning is presented in Section 12.9.

**Borderland State Park** - The Zone 3 at the main entrance and the mansion includes all cleared and all developed areas except south of the line of the fieldstone wall south of the built trout pond wetland, and the area of revegetation east of the south end of the zone. It included the wooded picnic area south of the visitor center bordered by the two trails to the former hunting lodge on Leach Pond. All Zone 3 areas that include dams/dikes are intended to include the approximate construction area for their maintenance, including areas that may at times be overgrown or are under water. The Significant Feature Overlay is based on based on information in the Ames Mansion landscape rehabilitation plan (DCR 2011c).

Additional information on Borderland State Park's zoning is presented in Section 13.9.

## H.2. MASSGIS DATALAYERS

A summary of the MassGIS datalayers used by the DCR GIS Program to generate and display data within the Blue Hills Complex RMP is presented in Table H.1.

**Table H.1. Summary of MassGIS datalayers used to create the Blue Hills Complex RMP.<sup>a</sup>**

<b>Datalayer Name</b>	<b>Additional Information</b>
1:5,000 Black and White Digital Orthophoto Images (1990s)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/oqdesc.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/oqdesc.html</a>
1:5,000 Color Ortho Imagery (2001, 2003)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2001.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2001.html</a>
1:5,000 Color Ortho Imagery (2005)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2005.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2005.html</a>
Areas of Critical Environmental Concern	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/acecs.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/acecs.html</a>
Community Boundaries from Survey Points	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/townsurvey.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/townsurvey.html</a>
DCR Roads and Trails	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/dcrtrails.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/dcrtrails.html</a>
EPA Designated Sole Source Aquifers	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/epa-designated-sole-source-aquifers.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/epa-designated-sole-source-aquifers.html</a>
FEMA National Flood Hazard Layer	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/nfhl.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/nfhl.html</a>
Land Use (2005)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html</a>
Major Watersheds	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/watshds.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/watshds.html</a>
Massachusetts House Legislative Districts (2012)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/house2012.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/house2012.html</a>
Massachusetts Senate Legislative Districts (2012)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/senate2012.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/senate2012.html</a>
MassDEP Hydrography (1:25,000)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/hd.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/hd.html</a>
MassDEP Wetlands (1:12,000)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/depwetlands112000.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/depwetlands112000.html</a>
MassDOT Roads	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/eotroads.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/eotroads.html</a>
NHESP Certified Vernal Pools	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/cvp.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/cvp.html</a>
NHESP Potential Vernal Pools	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/pvp.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/pvp.html</a>
NHESP Priority Habitats of Rare Species	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/prihab.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/prihab.html</a>
Outstanding Resource Waters	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/orw.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/orw.html</a>
Protected and Recreational OpenSpace	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/osp.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/osp.html</a>
USGS Color Ortho Imagery (2008/2009)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2008.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2008.html</a>
USGS Color Ortho Imagery (2013/2014)	<a href="http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2013.html">http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2013.html</a>

a. Additional datalayers from the Massachusetts Historical Commission (MHC; via <http://maps.mhc-macris.net> and DCR GIS Program were referenced as part of the creation of this RMP.

## Appendix I. Management Recommendations for the Blue Hills Planning Unit, as Identified in the 2011 Resource Management Plan (DCR 2011).

A Resource Management Plan for the Blue Hills Planning Unit was approved by the DCR Stewardship Council in 2011. This RMP included 207 management recommendations organized by section of the Reservation (e.g., Great Blue Hill) and management goal. Table H.1 identifies these recommendations and indicates the status of their implementation. Recommendations not implemented, but meeting current prioritization criteria, are included in Table 2.9.1.

**Table I.1. Management Recommendations for the Blue Hills Planning Unit, as identified in DCR (2011).**

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Decrease the seasonal mountain bike exclusion to the month of March.	RW	Y
Develop and implement an educational program to discourage all trail users during mud season.	RW	N
Reduce trail user conflicts by: developing and distributing trail etiquette literature; posting trail etiquette “Yield” signs at kiosks, bulletin boards, and key locations along trails; revising future trail maps to include information on trail etiquette; and working with the DCR Mounted Unit and partners to offer training in trail etiquette.	RW	N
Prepare a Trail System Plan to include those issues not specifically addressed in this RMP, such as trail creation or closure, management of closed trails, and the potential relocation of trails near vernal pools, and ongoing mapping needs.	RW	N
Gather additional demographic information on visitors to the Blue Hills in order to identify the diversity of park users, and to ensure that programming, facilities, and infrastructure are fully available to all.	RW	N
Develop a Habitat Management Plan for trail work so that trail maintenance and repair may be performed on a reservation-wide basis, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a).	RW	Y
Promote responsible pet ownership by increasing awareness of requirements to keep pets leashed and to pick up and properly dispose of pet waste.	RW	N
Create a Recreation Facility Repairer position.	RW	N
Partner with non-profit organizations to identify opportunities to obtain grants to improve and expand resource management, recreational, and educational opportunities on the reservation.	RW	N
Work with MassDOT to install Supplemental Guide signs on I-93 to direct vehicle traffic to enter the park via Exit 2 (Route 138).	RW	N
Continue to encourage all lessees to pursue environmentally sustainable practices consistent with their programming and activities.	RW	N
Increase awareness among winter trail users of the need to stay off ski tracks in order to allow for ongoing use by cross-country skiers.	RW	N
Fill Forest and Park Supervisor II position to provide for natural resources management.	RW	N
Work with the Massachusetts Division of Fisheries and Wildlife to conduct a study of white-tailed deer populations within the Blue Hills Reservation and to ascertain the extent of their impacts on the reservation’s natural resources; if warranted, discuss deer management options.	RW	Y
Prepare a comprehensive Vegetation Management Plan (VMP) to address vegetation management in Priority Habitat, the maintenance of allées and historic landscapes, monitoring and control of invasive species, mowing cultural grasslands, and the maintenance of turf and ornamental plants.	RW	N
Keep species and natural community information up to date.	RW	N
Increase staff awareness of regulations affecting park operations, such as the Wetlands Protection Act and Massachusetts Endangered Species Act, and enhance the protection of natural resources through participation in training offered by the DCR’s Bureau of Planning and Resource Protection.	RW	IP
Prohibit the importation of firewood from off the reservation.	RW	Y
Survey the reservation’s remaining uncertified vernal pools, and submit paperwork for those pools with the potential to be certified.	RW	IP

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Prepare a comprehensive fire management and response plan that addresses operational responsibilities, public safety, habitat management, impacts to rare species, and the creation and maintenance of associated infrastructure (e.g., fire roads).	RW	IP
Fill the Forestry Assistant position.	RW	N
Survey appropriate habitat for remnant populations of the New England cottontail.	RW	N
Increase staff awareness and protection of cultural resources through participation in workshops and training on topics, such as the monitoring and protection of significant archaeological resources, offered by the DCR's Office of Cultural Resources.	RW	Y
Prepare and submit MHC Archaeological Site Forms for sites identified in this plan, but not already included in MHC's inventory.	RW	N
With the exception of public safety needs, limit new development along the reservation's ridgelines to below tree canopy level.	RW	Y
Accurately map parkway culverts, using GPS, to record their locations and existing conditions.	RW	N
Monitor parkway culverts on a bi-annual basis, clearing debris as necessary to maintain functionality and assess necessary repairs.	RW	N
Conduct a reconnaissance archaeological survey, as resources become available.	RW	N
Establish a volunteer project to GPS and photo-document all stone walls within the reservation.	RW	N
Conduct annual summits of the reservation's stakeholders in order to promote an ongoing dialogue among the Regional Director, District Manager, and stakeholders.	RW	N
Promote the Blue Hills as a study site for academic, governmental, non-profit, and other research (e.g., water quality, forest health) in order to meet specific information needs and enhance resource management.	RW	N
Modify Special Use Permit procedures to increase awareness of the need for these permits and to ensure that associated research reports are provided to appropriate park staff and the DCR Archives.	RW	N
Educate the public and local officials with regard to snake biology and protection; as recommended by the NHESP (2007a).	RW	N
Fill the Visitor Services Specialist (sic) position.	RW	Y
Establish quarterly, informal meetings to provide park visitors increased opportunities to meet with park administrators to discuss their concerns.	RW	N
Prepare a comprehensive interpretive plan for the reservation that: increases awareness and appreciation of its Native American history, role in the Quincy granite industry, military heritage, and the contributions of the CCC; and establishes ongoing coordination among interpretive program providers.	RW	N
Increase ranger presence on trails to promote enhanced compliance with trail regulations.	RW	N
Consolidate the three volunteer programs into a single program under the control of the Visitor Services Specialist and employ best management practices (e.g., Brudney 1994, 2005, Hager and Brudney 2004) for recruiting, managing, and tracking hours worked by volunteers.	RW	N
Work with MassDOT, and other transportation planning entities, to reduce through and commuter traffic in the reservation.	RW	N
Work with MassDOT to install "Now Entering Blue Hills Reservation" and "Now Leaving Blue Hills Reservation" signs along routes I-93 and 24 in order to increase awareness of the reservation among drivers passing through.	RW	N
Using new traffic count data, conduct an assessment of pedestrian safety.	RW	N
Conduct annual monitoring of Conservation Restrictions.	RW	N
Work with the Massachusetts State Police to develop a speed enforcement plan.	RW	N
Install "Share the Road" and bicycle vehicular traffic warning signs on internal park roads and parkways to increase driver awareness of the presence of cyclists.	RW	N
Develop a written agreement for the use of the Green Street dressage field.	LB	N
Conduct active habitat management for state-listed rare species; as recommended by the NHESP (2007a).	LB	N
Develop a survey and monitoring program for rare species; as recommended by the NHESP (2007a).	LB	N
Stabilize the partially collapsed segment of the stone paddock.	LB	N

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
As part of the reservation's Vegetation Management Plan, develop a vista clearing and maintenance protocols for the Hemenway Bench area.	LB	N
The Hemenway Bench should be cleaned by a qualified stone conservator to remove existing lichen.	LB	N
Assess the 25 Royall Street property for potential inclusion in DCR's Historic Curatorship Program.	LB	N
Remove existing fallen limbs, vegetation and saplings that are adjacent to the stone paddock and carefully remove any vegetation within the masonry.	LB	N
Initiate discussions with the MassDOT regarding the potential transfer to the DCR of an approximately two-acre, forested parcel between Fowl Meadow and the Blue Hills.	LB	N
Monitor boundaries for encroachment.	LB	N
Inventory Hemenway Pond's natural resources in order to identify management needs.	HE	N
Work with the Town of Milton and the Milton Historical Commission, and encourage them to actively preserve cultural resources.	HE	N
Vegetation and excess concrete should be carefully removed from the granite pillars and the joints repointed as necessary by a historic masonry expert.	HE	N
Advocate that MassDOT install a left-hand turn lane on Route 138 south for vehicles to enter the Trailside Museum south parking lot. Request that MassDOT perform a safety study and warrant analysis for a left-hand turn lane from Route 138 south into the Trailside Museum south parking lot.	GB	N
Have a structural engineer inspect the foundation of the ski area's main lodge and make recommendations for its maintenance or repair.	GB	N
Request that Ski Blue Hills LLC repair, replace, or remove the shed at the bottom of the beginner's slope.	GB	Y
Work with the ski area operator to ensure that all portions of the ski slopes have an "erosion-protective cover of vegetation."	GB	IP
Modify signs and striping at the Trailside Museum north and south parking lots to ensure compliance with accessible parking requirements.	GB	N
Implement parking lot upgrades as described in the Trailside Museum Master Plan (Pressley Associates 2008).	GB	N
Promote the long-term leasing of the William F. Rogers Ski Area.	GB	N
Add a Gateway sign to the northeast corner of the Route 138 and Blue Hill River Road intersection. Provide Wayfinding Guide signs for the Trailside Museum, Houghton's Pond, and the Regional Office.	GB	N
Work with Ski Blue Hills LLC to pursue a comprehensive approach to environmental sustainability, such as through adoption of the Sustainable Slopes Charter (National Ski Areas Association 2005).	GB	N
Update the study of alternative water supplies for snowmaking at the William F. Rogers Ski Area (Leggette, Brashears & Graham, Inc. 2001).	GB	N/A
Conduct an engineering assessment of the ski area's existing drainage system to determine its condition and ability to control runoff, and to estimate the cost of repair, modification, or replacement.	GB	N
Install a Trailside Museum Wayfinding Guide sign on the north side of Hillside Street, opposite the exit of the Houghton's Pond main parking lot.	GB	N
Explore assigning the cost of maintaining Summit Road, on a proportional basis, to the tenants atop Great Blue Hill.	GB	N
Implement recommendations identified in the Blue Hills Pond Watershed Management Plan (Baystate Environmental Consultants, Inc. 2006).	GB	N
Conduct active habitat management for state-listed rare species; as recommended by the NHESP (2007a).	GB	N
Restore examples of the Ridgetop Pitch Pine-Scrub Oak community type on Houghton and Hemenway hills.	GB	N
Manage trails, recreation, landscaping, roads, and construction relative to rare plants, insects, and natural communities; as recommended by the NHESP (2007a).	GB	N
Develop a survey and monitoring program for rare species; as recommended by the NHESP (2007a).	GB	N
Plan landscaping, maintenance, and construction to avoid impacts to rare snakes; as recommended by the NHESP (2007a).	GB	IP
Remove graffiti from the Great Blue Hill Observation Tower, Eliot Pavilion and the Eliot Memorial Bridge.	GB	N
Replace the Great Blue Hill Observation Tower and Eliot Pavilion's roof and repair damaged masonry.	GB	N
Repair soffit damage on the ski area's compressor building and garage.	GB	N

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Repair masonry damage to the Eliot Memorial Bridge and replicate the two missing plaques.	GB	N
Restore historic views from the Eliot Memorial Bridge and Eliot Tower without negatively affecting state-listed species or promoting invasive plants. This recommendation may be implemented in advance of the Vegetation Management Plan.	GB	N
Repair masonry damage to the shed at the weather observatory.	GB	N
Research the historic significance of structures at the William F. Rogers Ski Area.	GB	N
Replace the Great Blue Hill pump house roof's sheathing and shingles.	GB	N
Establish a long-term agreement with Mass Audubon for the operation of the Trailside Museum and Norman Smith Environmental Education Center.	GB	N
Strategize with the Massachusetts Audubon Society on ways to implement the Trailside Museum Master Plan (Pressley Associates 2008).	GB	N
Provide Trail Watch, or other trained volunteers, at the Eliot Pavilion on busy weekends to answer questions and promote enhanced compliance with trail regulations.	GB	N
Create a Forest and Park Supervisor I position to provide dedicated on-site support to the Trailside Museum.	GB	N
Work with MassDOT to improve pedestrian safety along Route 138.	GB	N
Establish a functioning complex of historic and non-historic buildings at the Brookwood Farm entrance by: continuing the existing relationship with the North Bennet Street School; reconstructing the historic barn; stabilizing and initializing rehabilitation of the Gate Keeper's Cottage; and constructing a new park operations barn.	BF	Y
Solicit a curator, through the Historic Curatorship Program, for the Gate Keeper's Cottage.	BF	N
Promote partnerships that help preserve the cultural resources and historic uses of Brookwood Farm.	BF	N
As part of the reservation's Vegetation Management Plan, manage the sugar maple allée to preserve this historic landscape feature.	BF	N
Correct the deed (Book 6600, Page 479) for the portion of Brookwood Farm near Carisbrooke Road, Milton, to exclude a third, 0.46+/- acre parcel. This parcel is identified as "Lot A" in Book 4642, page 524 of the Norfolk County Registry of Deeds.	BF	N
Construct a replacement for the William J. Scannell Bath House.	HP	Y
Make a portion of Picnic Site 4 accessible by installing accessible grills and picnic tables, and creating a hardened path to nearby accessible parking.	HP	N
Modify signs and striping at the main and Site 5 parking lots to ensure compliance with accessible parking requirements.	HP	P
Decrease the amount of litter in the Houghton's Pond parking lots by establishing an anti-littering awareness campaign, providing additional compacting trash receptacles, and revisiting the timing of existing litter management activities.	HP	N
Create a Forest and Park Supervisor I position to provide support for managing Houghton's Pond.	HP	Y
Improve the fishing access area on the west side of Houghton's Pond to eliminate erosion and restore the vegetated buffer.	HP	N
Establish a safe pedestrian connection between Houghton's Pond and Brookwood Farm by improving the intersection of Hillside Street and Blue Hill River Road in Milton.	HP	N
Provide bike parking.	HP	N
Create a universally accessible fishing platform on the southeast shore of Houghton's Pond.	HP	N
Establish an accessible path from parking area to the picnic Site 5.	HP	N
Review the Massachusetts National Guard's contingency plans to use the Houghton's Pond ball fields; revoke or modify the 40-year-old permit, as necessary.	HP	N
Stencil catch-basins to indicate "Do not dump. Drains to Houghton's Pond," in accordance with the DCR Storm Water Management Plan (DCR 2007b).	HP	N
Reset the granite steps on new bases.	HP	N
Stabilize the water fountain feature.	HP	N
Work with MassDOT to explore bicycle accommodations on the Ponkapoag Trail Bridge.	HP	N/A
Designate and operate a portion of the Regional Office as the reservation's primary contact station and direct visitors to this location. [Note: the Captain's House is no longer the Regional Office.]	HQ	N
Prepare a universal access renovation plan for the contact station and associated visitor parking at the Regional Office. [Note: the Captain's House is no longer the Regional Office.]	HQ	N

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Develop approximately 300 feet of trail, between the southern terminus of Wolcott Path and the Hillside Street crosswalk, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a).	HQ	N
Upgrade the Hillside Street crosswalk in front of the Brian T. Broderick Stables.	HQ	N
Install Wayfinding Guide signs on the south side of Hillside Street, to direct visitors into the Regional Office's drive and short-term parking.	HQ	N
Provide bike parking.	HQ	N
Install a Wayfinding Guide sign on the south side of Hillside Street so that visitors leaving the Regional Office are directed to the Trailside Museum.	HQ	N
Investigate the potential septic system connection at the Police Station.	HQ	N
Identify and implement temporary structural stabilization measures for the Brian T. Broderick Stables.	HQ	Y
Pursue historic curatorship for the Brian T. Broderick Stables.	HQ	N/A
Update the 2004 (DCAM 2004) renovation plan for the Brian T. Broderick Stables, to reflect new reuse assumptions.	HQ	N
Repair the structural damage to the salt shed.	OP	Y
Assess the masonry damage on the maintenance garage and Repair Shop #1 to determine the cause and identify repair needs.	OP	N
Modify signs and striping at the Ulin Rink parking lot to ensure compliance with accessible parking requirements.	UN	N
Upgrade the Ulin Rink sign to reflect that it now operates under a lease agreement.	UN	N
Evaluate locations of trails relative to the dens of state-listed snakes and reroute or close trail segments, as necessary, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a).	BH	N
Request that MassDOT install "Trail Crossing" signs and distance plaques at the intersection of Route 28 and the Skyline Trail.	BH	N
Add the gravel parking lots along Route 28 to DCR's surface improvement schedule.	BH	N
Maintain the current physical extent of the Ridgetop Pitch Pine-Scrub Oak community type on Buck Hill and restore this community on Tucker Hill. Provide for scenic vistas on those hilltops where there is no potential for conflict with state-listed snakes.	BH	N
Conduct annual monitoring of stonework at the Bugbee Path cellar hole and carefully perform routine vegetation removal.	BH	N
Complete the mothballing of the Randolph Avenue Stable by ensuring that all openings are properly sealed and there is adequate ventilation.	BH	N
Conduct a structural and needs assessment and explore potential future reuse options for the Randolph Avenue Stable.	BH	N
Require that Trail Watch members operating in this section receive training in snake biology and conservation, and submit Rare Species Observation Forms to NHESP for all rare snakes observed.	CH	Y
Evaluate locations of trails relative to the dens of state-listed snakes and reroute or close trail segments, as necessary, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a).	CH	P
Install Wayfinding Guide signs at the intersection of Chickatawbut Road and Route 28.	CH	N
Request that MassDOT install "Trail Crossing" signs and distance plaques at the intersection of Route 28 and the Skyline Trail.	CH	N
Create universally accessible parking and picnic facilities on the north side of the Chickatawbut Overlook parking area.	CH	N
Improve the crosswalk at the Chickatawbut Overlook.	CH	N
Provide bike parking.	CH	N
Plan landscaping, maintenance, and construction to avoid impacts to rare snakes; as recommended by the NHESP (2007a).	CH	N
Exclude all non-emergency vehicles, except in exigent situations, and non-utility company motor vehicles from trails in rare snake habitat east of Route 28.	CH	N
Reinstitute seasonal nighttime closings of Chickatawbut Road, east of Route 28, and Wampatuck Road; as recommended by the NHESP (2007a).	CH	N
Conduct active habitat management for state-listed rare species; as recommended by the NHESP (2007a).	CH	N
Manage trails, recreation, landscaping, roads, and construction relative to rare plants, insects, and natural communities; as recommended by the NHESP (2007a).	CH	N

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Maintain the current physical extent of the Ridgetop Pitch Pine–Scrub Oak community type on Chickatawbut, Fenno, Kitchamakin, Wampatuck, and Rattlesnake hills. Provide for scenic vistas on those hilltops where there is no potential for conflict with state-listed snakes.	CH	N
Develop a survey and monitoring program for rare species, as recommended by the NHESP (2007a).	CH	N
Create and monitor turtle nesting habitat; as recommended by the NHESP (2007a).	CH	N
Develop and implement vista clearing protocols for the Chickatawbut Overlook viewshed. This recommendation may be implemented in advance of the VMP.	CH	N
Develop and implement vegetation maintenance protocols for the Chickatawbut Observation Tower, Chickatawbut Pavilion, and picnic area. This recommendation may be implemented in advance of the VMP.	CH	N
Remove graffiti from the Chickatawbut Observation Tower and Chickatawbut Pavilion.	CH	N
Investigate permanently closing the portion of Chickatawbut Road between the intersection with Wampatuck Road and the entrance to the Pine Hill Cemetery.	CH	N
Conduct annual monitoring of the stonework of the Glover site’s cellar hole and carefully perform routine vegetation removal following guidance provided by the Office of Cultural Resources.	CH	N
Require that Trail Watch members operating in this section receive training in snake biology and conservation, and submit Rare Species Observation Forms to NHESP for all rare snakes observed.	QQ	Y
Revise signs at the Granite Rail Quarry compressor house to indicate that rock climbing access is available on Ricciuti Drive and not permitted at this location.	QQ	N
In association with the City of Quincy, remove the wooden shed from the northwest parking lot of the Quincy Youth Baseball facility along Ricciuti Drive.	QQ	N
Post signs at the DCR’s Quincy Quarries parking lot indicating that additional parking and quarry access are available at the Quincy Youth Baseball parking lots.	QQ	N
Implement remaining mitigation measures for the draining of the Quincy Quarries and dedicate any remaining funds for site improvement.	QQ	Y
Exclude all non-emergency vehicles, except in exigent situations, and non-utility company motor vehicles from trails in rare snake habitat east of Route 28.	QQ	N
Plan landscaping, maintenance, and construction to avoid impacts to rare snakes; as recommended by the NHESP (2007a).	QQ	N
Demolish the house and garage at 57 Bunker Hill Lane, Quincy.	QQ	Y
Stabilize and mothball the Granite Rail Quarry compressor house.	QQ	N
Pursue historic curatorship for the Granite Rail Quarry compressor house.	QQ	N
Monitor boundaries for encroachment.	QQ	N
Require that Trail Watch members operating in this section receive training in snake biology and conservation, and submit Rare Species Observation Forms to NHESP for all rare snakes observed.	SM	Y
Remove the playground located on the north side of Mayor William T. Shea Memorial Rink.	SM	Y
Modify signs and striping at the Shea Rink parking lot to ensure compliance with accessible parking requirements.	SM	N
Develop a written agreement for the use of the St. Moritz Horseshoe Club.	SM	N
Request that the St. Moritz Horseshoe Club repair, replace, or remove its shed.	SM	N
Upgrade the Shea Rink sign to reflect that it now operates under a lease agreement.	SM	N
Install a memorial marker at the Sergeant Robert Allen Curry Ball Field.	SM	N
Plan landscaping, maintenance, and construction to avoid impacts to rare snakes; as recommended by the NHESP (2007a).	SM	N
Exclude all non-emergency vehicles, except in exigent situations, and non-utility company motor vehicles from trails in rare snake habitat east of Route 28.	SM	N
Develop a watershed management plan for the St. Moritz Ponds.	SM	N
Conduct a survey for additional remnants of historic winter recreational use of the St Moritz area.	SM	N
Monitor boundaries for encroachment.	SM	Y
Open appropriate, existing trails to mountain bike use, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a). Revisit the impacts of this recommendation on natural resources, golf course operations, trail user conflicts, and public safety in the upcoming Trail System Plan.	PO	Y

Appendix I. Management recommendations for the Blue Hills Planning Unit (DCR 2011)

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Replace the irrigation system at the Ponkapoag Golf Course with an automatic irrigation system, and provide associated mitigation (Bowles 2009).	PO	N/A
Increase seasonal staffing at Ponkapoag Golf Course, by up to five positions, to permit improved course maintenance in accordance with industry standards.	PO	N/A
Modify signs and striping at the Ponkapoag Golf Course parking lot to ensure compliance with accessible parking requirements.	PO	N/A
Improve the tees, greens, bunkers, and cart paths at Ponkapoag Golf Course.	PO	N/A
Correct "extreme flooding" conditions on Course #1 at Ponkapoag Golf Course.	PO	N/A
Certify Ponkapoag Golf Course as an Audubon Cooperative Sanctuary (Audubon International 2009).	PO	N/A
Create an Assistant District Manager position for the Golf Courses District.	PO	N/A
Develop limited recreation infrastructure at Indian Line Farm, including the creation of: a small (i.e., eight or fewer spaces) gravel parking lot; a nested-loop trail; and a connector trail from the Indian Line Farm parking lot to Redman Farm Path. Employ guidelines detailed in <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a).	PO	N/A
Request copies of Transient Non-community Water System licenses from the AMC and YMCA camps and keep them on file at the Regional Office. Make provision of copies of these licenses a condition of future permits.	PO	N
Install a Cantilevered Identification Signs at each of the four following locations: Ponkapoag Trail off-ramp, at the entrance to the YMCA Ponkapoag Outdoor Center; Canton Avenue, Randolph, at the entrance to the AMC Ponkapoag Camp; Randolph Street, Canton, at the entrance to Fisherman's Beach; and Washington Street, Canton, at the entrance to the Indian Line Farm parking area.	PO	P
Work with the AMC Ponkapoag Camp to bring the camp into compliance with State Sanitary Code.	PO	N
Investigate the benefits of active habitat management at Ponkapoag Pond and Bog in order to prevent the shading of pod-grass by other vegetation and to promote the regeneration of Atlantic white cedar; as recommended by the NHESP (2007a).	PO	N
Create and monitor turtle nesting habitat; as recommended by the NHESP (2007a).	PO	N
Replace the missing gutter at the Carpenter's House to prevent additional water damage.	PO	N/A
As part of the reservation's Vegetation Management Plan, manage the sugar maple allée to preserve this historic landscape feature.	PO	N/A
Manage vegetation at Pump House B, the Randolph Street cellar hole, and the concrete foundation pad at Fisherman's Beach.	PO	N
Stabilize the masonry at the Ezekiel Fisher saw/grist mill site.	PO	N/A
Conduct annual monitoring of the stonework of cellar holes and the Ezekiel Fisher saw/grist mill site, and carefully perform routine vegetation removal following guidance provided by the Office of Cultural Resources.	PO	N/A
Monitor boundaries for encroachment.	PO	N
Open appropriate existing trails to mountain bike use, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a). Revisit the impacts of this recommendation on natural resources, trail user conflicts, and public safety in the upcoming Trail System Plan.	PE	Y
Contact MassDOT to clarify use of the replacement of bridge over Route 24 by DCR administrative vehicles.	PE	N
Develop a written agreement with North Randolph Little League for the operation and management of the ball fields.	PE	N
Update future versions of the Blue Hills Reservation Trail Map and Guide to identify new off-reservation parking resulting from the Article 97 land transfer.	PE	N
Develop a written agreement with the Town of Randolph for the use of the Donovan School parking lot for visitor parking during ranger-led hikes.	PE	N
Pursue recommendations of the Phase I Initial Site Investigation and Tier Classification report (GEI Consultants, Inc. 2009).	PE	Y
Replace the perimeter fence at the Nike Launcher Area and post <i>No Trespassing</i> signs to discourage vandalism.	PE	N
Stabilize and mothball the Nike Launcher Area's sentry station, generator building, and garage.	PE	N/A
Remove graffiti from the Nike Launcher Area's buildings.	PE	N/A
Monitor boundaries for encroachment.	PE	Y

Recommendation	Section of Reservation <sup>a</sup>	Implemented? <sup>b</sup>
Open existing trails to mountain bike use, in accordance with <i>Trails Guidelines and Best Practices Manual</i> (DCR 2010a). Revisit the impacts of this recommendation on natural resources, trail user conflicts, and public safety in the upcoming Trail System Plan.	WS	Y
Develop a written agreement with the tenant's association at the Ridge at Blue Hills regarding adoption and expansion of the picnic area.	WS	N
Revoke the permit issued to Ridge Arena that allows for the parking of vehicles along the old Route 128.	WS	N
<p>a. The sections of the Reservation are: BF = Brookwood Farm; BH = Buck Hill; CH = Chickatawbut Hill; GB = Great Blue Hill; HE = Hemenway Pond; HP = Houghton's Pond; HQ = Reservation Headquarters; LB = Little Blue Hill; OP = Operations Yard; PE = Ponkapoag East; PO = Ponkapoag (not including golf course); QQ = Quincy Quarries; SM = St. Moritz; UN = Unquity Road; and WS = West Street.</p> <p>b. Implementation codes include: N = No, the recommendation was not implemented; N/A = the recommendation is no longer applicable; P = the recommendation was partially implemented; Y = Yes, the recommendation was fully implemented;</p>		

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## Appendix J. Rapid Assessment and Trail System Recommendations for Wrentham, Franklin, and F. Gilbert Hills State Forests

### RAPID ASSESSMENT AND TRAIL SYSTEM RECOMMENDATIONS



### WRENTHAM, FRANKLIN, F.G. HILLS STATE FORESTS

#### OVERVIEW:

At nearly 2,900 acres, F. G. Hill, Franklin and Wrentham State Forests, managed under one unit, contain lovely mixes of wetland habitats, diverse woodlands and rocky outcrops. These are three of only eight DCR properties that allows motorized trail use, and each has one or two loop trails designated for use by off-highway motorcycles (OHM).

These forests are largely surrounded by a mix of commercials, industrial and residential neighborhoods along and bisected by the Route 495, with multiple trail access points from adjacent private properties.

#### F. GILBERT HILLS (1,027 acres)

A headquarters building and year-round staff are situated at F. G. Hills which has over 30 miles for forest roads and trails

including an OHM loop and the long-distance Warner hiking trail.

#### WRENTHAM (1,024 acres)

Has one gravel parking area, approximately 35 miles of forest roads, motorcycle trails, and non-motorized trails, also including sections of the Warner Trail.

#### FRANKLIN (843 acres)

In minimally developed with no day use area or formal entrance. Parking is available adjacent to a neighboring town water tank. Franklin contains nearly 19 miles of forest road and trails, including the eastern terminus of the 22-mile Southern New England Trunkline Trail (SNETT) that runs all the way to Douglas.

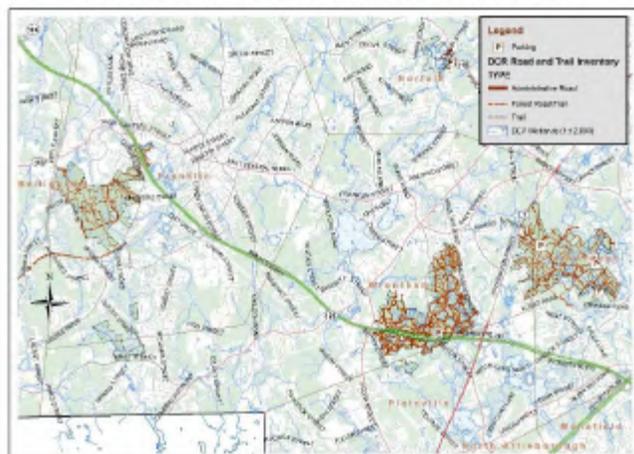
#### TRAIL EXPERIENCES AND FEATURES

The primary “managed trail uses” at these forests are off-highway motorcycle, mountain biking and hiking.

Key features include the open woodlands, rocky outcrops and wetland habitats.

The Civilian Conservation Corps (CCC) was active in these forests and helped to develop their trail systems.

F. G. Hills, Wrentham and Franklin State Forests



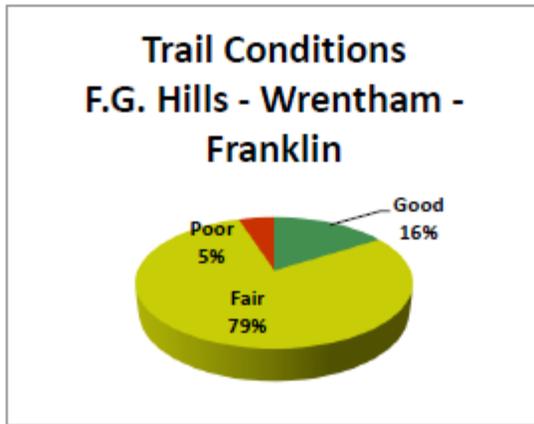
**TRAIL SYSTEM MANAGEMENT ISSUES**

- The primary trail system management issue is that there is poor separation and distinction between the designated motorized loops and trails that are designated as non-motorized.
- In Wrentham, there are nearly 50 intersections of motorized and non-motorized trails.
- The Warner Trail (a long-distance hiking trail) is currently routed on several sections of motorcycle trail.
- There is currently a lack of clear signage and blazing designating and distinguishing motorized versus non-motorized trails.
- The current trail maps area somewhat confusing and inaccurate.
- Numerous access points from adjacent properties limit DCR’s ability to monitor and control use.
- Trails at the forests are mostly classified in “Fair” condition. This is, to some extent, the nature of motorized trail use.

**RECOMMENDATIONS:**

**PLANNING:**

- Seek opportunities to close, restore and naturalize trails in these forests, particularly:
  - Rutted trails in poor condition
  - Non-motorized segments that connect between motorized segments
  - Illegal trails
  - Trail segments that lead off DCR property on to adjacent private parcels
- Consider opportunities to reduce the number of intersections between motorized and non-motorized trails particularly east of Taunton Road.
- Designate one-way travel on the OHM loops for all wheeled uses.
- Explore opportunities to re-route the Warner Trail off of motorized trails, and through key parking area.



- Trail density at the forests is quite high. At F.G. Hills and Wrentham it is over 11 kilometers / square kilometer. This is higher than DCR’s target range for a forest designated as Woodland (3-6) or Parkland (6-9).

**EDUCATION AND WAYFINDING:**

- Continue efforts to install trailhead and intersection signage at strategic locations, including signage the denoted allowed uses.
- Install welcome kiosks at Franklin and F. G. Hills, High Rock Road to display rules, regulations and user information.
- Clearly blaze motorcycle loops in yellow.

- Clearly blaze the Warner Trail in white.
- Request an improved map with accurate trail inventory data and scenic destinations.
- Work with the Friend of the SNETT to enhance signage on the SNETT

**OPERATIONS AND MAINTENANCE:**

- Work with King Philip Trail Riders and others to repair the worst trail damage locations.
- Close, by dropping trees and closing sight lines, any illegal trails or other trails segments identified for closure.
- Use temporary signage to alert users to planned closures.
- Engage volunteers in basic annual trail maintenance.



**CAPITAL:**

- Develop a small parking area and kiosk at the Warner trailhead on Madison Street, in Wrentham State Forest.
- Develop a parking area, with gate and contact station at High Rock Road, F.G. Hills.
- Submit an SCA crew request to complete selected trail closure, maintenance and re-route projects.
- Advocate for capital funds to repair and enhance the surface of the SNETT.



**LAND ACQUISITION:**

- Work with the DCR Land Acquisition Program to pursue acquisition of a parcel along Grove Street, Franklin that can be developed as a primary, formal parking area and park entrance.

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## Appendix K. Photo Credits

All photos were taken by the DCR except as noted in Table J.1. All photos were cropped to fit the page format and resampled to 300 DPI. Pictures taken by the DCR were also autocorrected using the Auto Smart Fix feature in Adobe Photoshop Elements version 6.

**Table K.1. Information on sources, modifications, and licensing of non-DCR photos used in this RMP.**

Page	Photo	Photographer	Source <sup>a</sup>	Modifications <sup>b</sup>	Creative Commons <sup>c</sup>	Terms of Use
1-5	Blue Hills Parkway	Ornoth	flickr	C, R	<a href="#">Yes</a>	A, N, ND
1-7	Manning Pool	City of Brockton	<a href="#">Brockton</a>	C, R	No	-
2-1	Ponkapoag/Great Blue 1	Charles Wohlers	flickr	C, R	<a href="#">Yes</a>	A, N, ND
2-20	Eliot Bridge 1907	MPC	unknown	C, R		
2-25	Houghton's Pond	Robert Gray	flickr	C, R	<a href="#">Yes</a>	A
2-41	Hunter check-in	Marion Larson	MassWildlife	C, R	No	-
3-5	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
5-1	Neponset River	Bill Llott	flickr	C, R	<a href="#">Yes</a>	A, N, ND
5-8	Canton Airport runways	-	<a href="#">Oliver</a>	A, C, R	No	-
5-11	Fowl Meadow/Neponset River	Bill Llott	flickr	C, R	<a href="#">Yes</a>	A, N, ND
6-4	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
6-10	CCC staff	Unknown, from print on file at F. Gilbert Hills SF	DCR	A, C, R	No	-
7-1	Morning calm on the boardwalk	"lastonein"	flickr	C, R	<a href="#">Yes</a>	A, N, ND
7-4	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
8-4	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
11-4	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
11-4	King rail	Carol Foil	flickr	C, R	<a href="#">Yes</a>	A, N, ND
13-4	Predicted flooding	-	<a href="#">Oliver</a>	A, C, R	No	-
13-4	Blanding's turtle	"Andrew C"	flickr	C, R	<a href="#">Yes</a>	A

- a. Sources of photographs include: flickr = flickr via Creative Commons; Mass Wildlife = photo provided by Massachusetts Division of Fisheries and Wildlife; Oliver = MassGIS's Online Mapping Tool; follow links to corresponding maps used to generate images.
- b. Modifications include: A = Auto Smart Fix in Photo Shop Elements 6.0; B = Portions of image blurred to remove commercial information or license plate numbers; C = Cropping to either 3.35 x 2.4 inches or 7 x 3.5 inches; and R = Resampling pictures to 300 DPI. Auto Smart Fix was not applied to any picture obtained through Creative Commons.
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