

Appendix A. Plan Contributors.

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation</i>		
Allen, Kevin	Office of Cultural Resources	Historic resources
Ayub, Jorge	Ecology Program	Coastal ecology
Backman, Andy	RMP Program	Park planning
Baecker, Jim	RMP Program	Park planning
Barletta, Antonio	Government Affairs	Legislative relations
Berkland, Ellen	Office of Cultural Resources	Archaeological resources
Bonney, Brittany	Bureau of Planning and Resource Protection	Research permits
Botelho, Paul	Assistant Chief Engineer	Capital projects
Brown, Stephen	Bureau of Planning and Resource Protection	Energy conservation
Cavanagh, Paul	RMP Program	Natural resources planning
Celino, Dave	Bureau of Fire Control and Forestry	Fire management
Dautreuil, Virginia	Manuel F. Correllus State Forest	Islands properties
Driscoll, Dan	Bureau of Planning and Resource Protection	Recreation planning
Fiesinger, Anne	Office of External Affairs	Public meetings
Fisher, Sean	Office of Cultural Resources	DCR archives, agency history
Greene, Judy	Office of Cultural Resources	DCR plan archives
Gregory, Paul	Bureau of Forestry	Forest resources and infrastructure
Jahnige, Paul	Greenways and Trails Program	Recreation
Kelley, Todd	Interpreter	Nickerson state park
Kimball, David	GIS Program	GIS
Leschen, Alison	Waquoit Bay National Estuarine Research Reserve (formerly)	WBNERR operations
Levy, Eric	Field Operations Team Leader	CCRT, Hawksnest and Nickerson state parks
Matrango, Fran	Roland C. Nickerson State Park	Park operations
Mora, Jordan	Waquoit Bay National Estuarine Research Reserve	GIS
Moran, Barbara	Website Information Officer	Web page content
Nigro, Josh	Fire District 1	Fire control
O'Brien, Danny (deceased)	Bike Trails Planner	CCRT
Orfant, Joe	Director, Bureau of Planning, Design, & Resource Protection	Park planning
Ouelette, Steve	Bureau of Ranger Services	Park regulations and safety
Pastore, Karl	Regional Director	Park operations
Perry, Les	Shawme-Crowell State Forest	Park operations and history
Petersen, Jon	District Manager (formerly)	Park operations
Plocinski, Loni	GIS Program	Park planning, GIS
Provencher, Shaun	Land Protection Program	South region properties
Putnam, Nancy	Ecology Program	Plant ecology, wetlands
Rassman, James	Waquoit Bay National Estuarine Research Reserve	Land stewardship
Servos, Katie	Office of Cultural Resources	DCR plan archives
Silva, Jason	Director of Policy (formerly)	DCR policy
Singleton, John	Waquoit Bay National Estuarine Research Reserve	Park operations

Appendix A. Plan Contributors. (Continued)

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation</i>		
Scapicchio, Stephen	Revenue Director	Revenues for parks in Complex
Straub, Jim	Lakes and Ponds Program	Pond health
Strother, Eve	Deputy General Counsel	Long-term leases and permits
Teixeira, Ruth	Director of Park Improvement	Groundwater discharge permits
Tipton, Nat	RMP Program	Park planning
Tompkins, Laurie	Waquoit Bay National Estuarine Research Reserve	WBNERR programming
Varkonda, John (deceased)	Manuel F. Correllus State Forest	Correllus state forest
Weidman, Chris	Waquoit Bay National Estuarine Research Reserve	Research at WBNERR
Wilmot, Amy	Regional Interpretive Coordinator	Interpretation
Woodward, Emily	Long-term Permits and Lease Manager	Long-term leases and permits
Wysocki, Anita	Camping Program Coordinator	Camping use data
Yetman, Joe	South Region Engineer	Capital projects
<i>Other Affiliations</i>		
Chase, Tom	The Nature Conservancy	Martha's Vineyard conservation
Connolly, Bryan	Natural Heritage and Endangered Species Program (formerly)	Flora of Massachusetts
Harper, Lynn	Natural Heritage and Endangered Species Program	State-listed species conservation
Holt, Emily	Natural Heritage and Endangered Species Program	State-listed species conservation
Hughes, Pat	Brewster Board of Selectmen	Municipal relations
Hurley, Steve	MassWildlife	Quashnet River
Lach, Mike	Harwich Conservation Trust	Harwich open space
LeBlanc, Denis	United States Geological Survey	Cape Cod groundwater monitoring
LeClerc, Priscilla	Martha's Vineyard Commission	Martha's Vineyard transportation
Locke, Brian	Friends of the Crosby Mansion	Crosby Mansion, local history
Miller, Chris	Town of Brewster, Natural Resources and Shellfish	Natural resources of Brewster
Miller, John	Nantucket Disc Golf, Inc.	Disc golf
Richardson, Leslie	Cape Cod Commission	Seasonal population estimates
Simmons, Tim	Natural Heritage and Endangered Species Program	Correllus fire management history
Thornton, Martina	Dukes County Manager	Sylvia state beach
Veno, Bill	Martha's Vineyard Commission	Martha's Vineyard planning
Weidman, David	Nantucket Disc Golf, Inc.	Disc golf course operations
Wortman, Marilyn	Human Resources Coordinator/Parks Administrator, Town of Edgartown	South Beach management

Appendix B. Public Participation.

In accordance with M.G.L. Chapter 21: Section 2F, this Resource Management Plan for the Nickerson Management 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 Nickerson Management Complex RMP began in the fall of 2013. A notice of a public meeting and of the DCR's intent to prepare an RMP for the Nickerson Management Complex was published in the November 20, 2013 Environmental Monitor (Volume 81, Issue 2). Notices were also posted at the Complex's parks and mailed to approximately 120 stakeholders.

An initial public meeting was convened at Cape Cod Community College, Barnstable on December 5, 2013. Approximately 12 people attended this meeting, which ran from 6:30 to 8:00 P.M.

A second public meeting, in the form of an open house, was held in the garage at Manuel F. Correllus State Forest on December 7, 2013, from 1:00 to 3:00 P.M. Announcement of this open house was also published in the November 20, 2013 issue of the Environmental Monitor and included in mailings. Approximately 10 people attended.

The initial public comment period ran from December 5, 2013 through January 10, 2014; 15 sets of written comments were received.

Public Comment on Draft RMP

Notice of two public meetings on the draft RMP for the Nickerson Management Complex, and of the availability of the plan, was published in the January 7, 2015 Environmental Monitor (Volume 83, Issue 5). Meeting notices were also posted at the Complex's parks and mailed to stakeholders. The first meeting was held on January 29, 2015 at the West Barnstable Fire Station; approximately 14

people attended. The second meeting was held on February 7, 2015 at the headquarters at Manuel F. Correllus State Forest. Approximately 16 people attended.

The public comment period on the draft RMP ran from January 30 through March 9, 2015; 22 sets of written comments were received.

B.2. CHANGES TO THE FINAL DRAFT OF THE NICKERSON MANAGEMENT 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).

Nearly all proposed recommendations were consistent with this criterion.

2. A park's Landscape Designation.

Some proposed recommendations were removed from further consideration due to incompatibilities with Landscape Designations. For example, a recommendation to use the fire lanes of Manuel F. Correllus State Forest for a large-scale solar energy facility was not consistent with the majority of that property being classified as Reserve. Under this designation, "rights for new commercial wind installations and commercial solar installations" will not be granted (DCR 2012:27).

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.

Several proposed recommendations suggested the expansion of existing recreation facilities or the development of new ones. For example, the expansion of the Hooper bike trail within Nickerson state park. Although this recommendation is consistent with both the focus of RMPs and Nickerson's designation as Parkland, it did not meet the standards for a priority recommendation and was not included in the plan.

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

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

Executive Summary

Numbers of attendees at the January 29 public meeting, and the number of subsequent sets of written comments were added.

The number of recommendations was updated.

Table ES.1. Recommendations were updated to reflect changes in subsequent chapters.

Section 1. The Nickerson Management Complex

Figure 1.1. The boundary of Manuel F. Correllus State Forest was corrected.

1.4. Natural Resources. Information on tidal restrictions was updated.

Table 1.4.1. Salt marshes were removed from, and coldwater rivers and streams added to, this table.

1.9. Management Resources. Additional detail was added to clarify the role of the Cape Cod District Manager.

Table 1.9.1. Staffing information was updated as of April, 2015.

1.10. Management Practices. Information on Land Stewardship Zoning, which was erroneously omitted from the public review draft, was added.

The description of Districts of Critical Planning Concern (DCPC) was revised to clarify that such designations do not apply to state properties.

Information on fertilizers and associated DCPCs was updated to reflect the non-regulatory status of DCPCs on state lands.

Section 2. Shawme-Crowell State Forest

Table 2.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

2.3. Cultural Resources. Information was added to identify difficulty that modern travel trailers and motorhomes have making the turn into the Park Entrance Area.

Information was added to identify that the vegetation in the historic Park Entrance Area obscures views of traffic when vehicles are exiting the park.

2.4. Recreation Resources. The number of geocaches at Shawme was updated.

2.5. Infrastructure. Information on road conditions was added.

2.8. Management Practices. Information was added on the use of fertilizers.

Table 2.8.3. Information on mulching and fertilizing was added.

2.9. Recommendations. Two recommendations, to trim vegetation at the park's entrance and to repair road surfaces in the camping areas, were added.

Section 3. Waquoit Bay National Estuarine Research Reserve

Table 3.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

Table 3.3.2. Entries in the "In Use" column were revised to include only buildings.

3.4. Recreation Resources. The number of geocaches was updated.

3.8. Management Practices. Information was added on the use of fertilizers.

Table 3.8.3. Information on mulching and fertilizing was added.

Section 4. South Cape Beach State Park

Figure 4.1. Park boundaries were corrected.

Table 4.1.1. Area and perimeter metrics were recalculated and updated.

Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

Table 4.2.1. The Lakes and Ponds metric was recalculated.

Table 4.2.2. Flooding, Hurricane Inundation, and Sea Level Rise metrics were recalculated and updated.

4.2. Natural Resources. Priority Habitat metrics were recalculated and updated.

The number of bird species reported on eBird for this park was updated.

4.8. Management Practices. Information was added on the use of fertilizers.

Information on MassWildlife's stocking of pheasant was relocated from elsewhere in this chapter and added here.

Table 4.8.3. Information on mulching and fertilizing was added.

Figure 4.2. Park boundaries were corrected.

Section 5. Washburn Island

Table 5.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

5.2. Natural Resources. Information was added on the number of birds reported in eBird.

Table 5.3.2. Entries in the "In Use" column were revised to include only buildings.

5.4. Recreation Resources. The number of geocaches was updated.

5.8. Management Practices. Information was added on the use of fertilizers.

Table 5.8.3. Information was added on mulching and fertilizing.

Section 6. Quashnet Woods State Reservation

Table 6.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

6.2. Natural Resources. Text on the potential impacts of hurricane inundation on the Childs River parcel was rewritten to improve clarity.

Table 6.3.2. Entries in the "In Use" column were revised to include only buildings.

6.4. Recreation Resources. The number of geocaches was added.

6.8. Management Practices. Information was added on the use of fertilizers.

Section 7. Roland C. Nickerson State Park

Table 7.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

7.2. Natural Resources. The number of bird species reported on eBird for this park was updated.

7.3. Cultural Resources. Information on the amount of money and labor invested in the Crosby Mansion was updated to reflect values provided by Foley (2015).

Table 7.3.2. Entries in the "In Use" column were revised to include only buildings.

7.4. Recreation Resources. The number of geocaches was updated.

Information was added on a car top boat launch at Cliff Pond.

7.5. Infrastructure. Information was added on sidewalk construction along Route 6A.

Table 7.5.1. Entries in the "In Use" column were revised to include only buildings.

7.8. Management Practices. Information was added on the use of fertilizers.

7.9. Recommendations. Information was added to the list of areas designated Zone 3 to reflect that Figure 7.2 includes a basketball and tennis court at the former Camp Seascape.

Table 7.9.1. Two recommendations were added; the first regarding leasing a DCR-owned house at 207

Weathervanes Way, and the second regarding sidewalk and crosswalk construction.

The recommendation to close trails was modified to include the restoration of these trails.

The recommendation regarding the dune crossings on dunes along Cape Cod Bay was modified to include the posting of regulatory and informational signs.

Section 8. Hawksnest State Park

Table 8.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

8.2. Natural Resources. Information was updated on the number of birds reported for this park in eBird.

Table 8.3.1. The deed for the parcel of land containing Hawksnest Cemetery has been referenced.

8.3. Cultural Resources. Text was modified to reflect that unmarked graves may be present in Hawksnest Cemetery.

8.4. Recreation Resources. The number of geocaches was updated.

8.8. Management Practices. Information was added on the use of fertilizers.

Text was added that references management requirements for lands purchased with Land and Water Conservation Fund monies.

Information was added on the relationship between the Harwich Six Ponds DCPC and park management.

Table 8.9.1. The recommendation to create a gravel parking lot was modified to clarify that this lot is a replacement for parking lost by the gating of Round Cove Road.

The recommendation to assess, close, and reroute trails was modified to emphasize that this recommendation is only for DCR-owned lands.

The recommendation to install kiosks has been modified to include the posting of emergency contact information at all kiosks.

Section 9. Cape Cod Rail Trail

9.1. Introduction. Text was modified to emphasize that this chapter includes only those portions of the

CCRT that are owned or under the control of the DCR.

9.4. Recreation Resources. The number of geocaches was updated.

Table 9.5.1. Minor corrections were made to entries in the entries in the “In Use” column.

9.8. Management Practices. Information was added on the use of fertilizers.

Table 9.8.3. Information was added on mulching and fertilizing.

Table 9.9.1. A recommendation was added to review sight lines at road crossings.

An additional recommendation was added to work with municipalities to increase safety at road crossings.

Section 10. Manuel F. Correllus State Forest

Figure 10.1. The western boundary of the forest was corrected.

Table 10.1.1. Area and perimeter metrics were recalculated.

Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

10.2. Natural Resources. The percent of the forest classified as Priority Habitat was recalculated.

The percentage of Correllus that is forested was recalculated.

The number of bird species reported on eBird for this park was updated.

Table 10.2.3. The draft version of this table incorrectly identified Bayard’s green adder mouth as an insect; this has been corrected.

10.3. Cultural Resources. Information on historic pathways has been expanded.

The location of the Four Town Bound has been corrected.

10.4. Recreation Resources. The list of recreation activities was expanded.

The number of geocaches was updated.

Information was added on the lack of pavement markings at most of the bike path’s road crossings.

Table 10.5.1. Entries in the “In Use” column were revised to include only buildings.

10.8. Management Practices. Recommendations pertaining to Correllus in the draft Hazard Mitigation Plan for Dukes County (MVC 2014) have been added.

Information on MassWildlife’s “key sites” for conservation has been expanded.

Text was added to acknowledge that The Nature Conservancy assists DCR with fire break creation and implementation of prescribed burns.

Information was added on the use of fertilizers.

Table 10.8.3. Information was added on mulching and fertilizing.

10.9. Recommendations. Information on the Multi-use Path Significant Feature Overlay was modified to emphasize that management of the bike path at Correllus must be done in a manner sensitive to and consistent with the surrounding area’s Reserve designation.

Table 10.9.1. The recommendation to prepare a comprehensive fire management plan was modified to include the adjacent Smith Preserve.

A recommendation was added to install stop signs and pavement markings at specific locations along the bike path.

A recommendation was added to improve the forest’s trail map and trail signs.

A recommendation was added to actively promote trail user etiquette and safety.

The recommendation to prepare an updated Management and Maintenance Plan for the combined Pohogonot Tract and Smith Preserve was changed to a recommendation to “periodically review and, if necessary, revise” the Management and Maintenance Plan.

A recommendation was added to reclassify the Martha’s Vineyard Disc Golf Course as Parkland.

Figure 10.2. The western boundary of the forest was corrected.

Section 11. Joseph A. Sylvia State Beach

Figure 11.1. Park boundaries were corrected.

An additional parking area is indicated in this figure.

11.2. Natural Resources. The number of bird species reported on eBird for the adjacent Felix Neck Wildlife Sanctuary was updated.

Table 11.1.1. Area and perimeter metrics were recalculated.

Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

Table 11.2.1. The acreage of Lakes and Ponds was recalculated.

Table 11.2.2. Flooding, Hurricane Inundation, and Sea Level Rise metrics were recalculated and updated.

Table 11.3.2. Two additional cultural resources, stone groins and the Farm Pond–South Culvert, were added to the table.

11.4. Recreation Resources. Information was added on bicycle parking.

11.5. Infrastructure. Additional information was added on the parcel at 174 Sea View Avenue, Oak Bluffs.

The parking text was revised to include an informal parking lot north of Big Bridge.

Information on the condition of trails, as provided by the MVC (2015), was added to the text.

Table 11.5.1. The Farm Pond–North Culvert was added; corresponding information was added to the accompanying text.

Table 11.5.3. The table was amended to include parking spaces at the informal parking lot north of Big Bridge.

11.8. Management Practices. Information was added on the planned culvert replacement at 174 Sea View Avenue.

Information was added on four easements held by MassDOT.

Figure 11.2. Park boundaries were corrected.

Section 12. South Beach State Park

12.2. Natural Resources. Information was added on the current rate of erosion.

The number of bird species reported on eBird for this park and for the nearby Katama Airport was updated.

Table 12.3.2. Entries in the “In Use” column were revised to include only buildings.

12.5. Infrastructure. Information was added on the number of crosswalks on Atlantic Drive.

Table 12.5.1. Entries in the “In Use” column were revised to include only buildings.

Section 13. Nantucket State Forest

13.2. Natural Resources. The number of bird species reported on eBird for this park was updated.

13.4. Recreation Resources. The number of geocaches was updated.

13.8. Management Resources. The description of the DCR’s obligations to the NHESP for forest management in the North Pasture was expanded.

Information was added on the use of fertilizers.

Section 14. Reforestation Lots

Table 14.1.1. Information on DCPCs was removed from the list of Regulatory Designations to reflect their lack of regulatory status on state lands.

14.2. Natural Resources. Text regarding historic plans of reforestation lots was rewritten to clarify their value as important sources of information on land use history and the introduction of non-native trees.

Numbers of bird species reported on eBird for the Sandwich Reforestation Lot and Brewster State Forest were updated.

14.4. Recreation Resources. The number of geocaches was updated.

Table 14.8.2. The date of the Forest Cutting Plan for Flax Pond/Fisherman’s Landing was corrected.

Table 14.5.1. Entries in the “In Use” column were revised to include only buildings.

14.8. Management Resources. Information was added on the use of fertilizers.

Section 15. Fire Observation Towers

Table 15.5.1. Minor corrections were made to entries in the “In Use” column.

15.8. Management Practices. Information was added on the use of fertilizers.

Appendix B

Descriptions of edits made to the draft RMP were added.

Appendix H

Ten references were added.

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.

Report Title	Date
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 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.
- **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.

- **October 9, 2013.** NHESP invited to DCR internal stakeholders meeting for preparation of a RMP for the Nickerson Management Complex.
- **October 28, 2013.** NHESP provided shape files for boundaries of properties within the Nickerson and Myles Standish Management Complexes.
- **October 30, 2013.** NHESP provides DCR with the following information for each property in the management complex: MESA-listed species; documented natural communities; certified and potential vernal pools; and BioMap2 Core habitats and Critical natural Landscapes.
- **January 27, 2014.** Inquiry made into status of NHESP review of fire break management activities at Manuel F. Correllus State Forest.

- **April 11, 2014.** DCR requests and receives rare species information for fire observation towers.
- **May 9, 2014.** E-mail exchange regarding need for NHESP review of bike paths within the Nickerson Management Complex.
- **July 21, 2014.** Verification of rare species habitat at WBNERR.
- **August 4, 2014.** At DCR's request, NHESP reviews their files to determine if DCR had submitted all documents required by the 2001 conservation permit for fire break maintenance at Correllus.
- **August 12, 2014.** NHESP provides clarification of status of NHESP for maintenance of the Nantucket Disc Golf Course.
- **August 27, 2014.** E-mail exchange regarding Priority Habitat in Correllus in regard to pine plantations, and potential use of name of rare species susceptible to collection.
- **November 11, 2014.** Phone call to NHESP to discuss size of Coastal Plain Pondshore Significant Feature Overlay.
- **December 4, 2014.** NHESP point of contact is provided internal review copy of Nickerson Complex RMP.
- **January 5, 2015.** NHESP provides comments on internal review draft. A copy of the comment letter follows, below.

Commonwealth of Massachusetts



Division of Fisheries & Wildlife

Wayne F. MacCallum, *Director*

December 31, 2014

Paul M. Cavanagh
Department of Conservation and Recreation
Southeast Region Headquarters
P.O. Box 66
South Carver, MA 02366

RE: Draft *Nickerson Planning Unit Resource Management Plan*

Dear Mr. Cavanagh:

The Massachusetts Natural Heritage & Endangered Species Program (NHESP) is pleased to offer comments on the December, 2014, draft of the *Nickerson Management Complex Resource Management Plan*. In general, we support the Resource Management Plan as written and we appreciate DCR's attention to rare species issues. Our concerns are noted below.

In the Executive Summary, the draft Plan notes that only priority management recommendations were included, where such recommendations meet one or more of these criteria:

- Regulatory compliance or compliance with legal agreements.
- Health and safety of park visitors and employees.
- Immediate pending loss of a natural, cultural, or recreation resource.

We were pleased to see that appropriate attention was paid in the draft to the need to manage important natural resources, such as MESA-listed species or Priority Natural Communities, to forestall immediate and pending losses of these resources. As 321 CMR 10.05 states: "All state agencies shall utilize their authorities in furtherance of the purposes of MESA and 321 CMR 10.00: review, evaluate and determine the impact on Endangered, Threatened and Special Concern species or their habitats of all works, projects or activities conducted by them; and use all practicable means and measures to avoid or minimize damage to such species or their habitats." Within that section it also states (under 321 CMR 10.05(2)(c)3): "Management Policies. Unless specifically required otherwise by statute, localities on state owned lands that provide habitat for state listed species shall be managed for the benefit of such listed species. **Said agencies shall give management priority to the protection, conservation, and restoration of Endangered, Threatened, and Special Concern species occurring on state owned lands.**" [Emphasis added.] While we certainly recognize the limited staff time and funding DCR can bring to bear on this issue (indeed, we here at DFW are under the same limitations), we appreciate DCR's efforts to prioritize efforts to meet these statutes.

Section 1, p. 1-5, Vernal Pools: Not all Certified Vernal Pools (CVPs) are legally protected. CVPs with documented occurrences of MESA-listed rare species are protected under MESA. Additional CVPs in resource areas as defined under the Wetlands Protection Act are protected under that Act. Some vernal pools may be protected by the Army Corps under Section 404 of the federal Clean Water Act. Certain

municipalities protect all vernal pools under local vernal pool bylaws. CVPs, and especially adjacent uplands, that do not fall into one of these categories are not legally protected.

Section 1, p. 1-7, Table 1.4.2: As of December 30, 2014, the NHESP database indicates that 67 MESA-listed species have mapped habitat on the entirety of the Nickerson Complex. Three of these species are proposed for de-listing from MESA; although these de-listings have been approved by the Fisheries & Wildlife Board, NHESP is unable to say with certainty when these approved changes will be published legally.

Section 1, p. 1-7, Federally-listed Species: Red Knot (*Calidris canutus*) was very recently listed as Threatened under the federal Endangered Species Act. NHESP will propose this bird for listing as Threatened under MESA, as required under statute, but we cannot say with certainty when this listing will be published legally.

Section 1, p. 1-8, Natural Communities: Note that Pine Barrens are dependent on occasional disturbances, such as fires, for their continued existence. If wild fires are suppressed, DCR must supply prescribed fires or other management in order to conserve these globally rare types of natural communities.

Section 2, Shawme-Crowell State Forest, p. 2-3, Table 2.2.3: Eastern Whip-poor-will and Water-willow Stem Borer are no longer considered by NHESP to have habitat at Shawme-Crowell.

Section 3, WBNERR, p. 3-4, Table 3.2.3: Bushy Rockrose has been proposed for de-listing. NHESP concurs with DCR's priority recommendation to continue ongoing rare plant monitoring and management activities on this property.

Section 4, South Cape Beach State Park, p. 4-5: Note that this property has at least one population of the native and non-invasive Common Reed (*Phragmites australis* ssp. *americanus*); efforts to eradicate the invasive should avoid stands of this native subspecies. NHESP has no reports of Priority Natural Communities on this property, but this may be due to a lack of survey effort. Observations of Coastal Forest/Woodland, Maritime Beach Strand, Maritime Dune, and Maritime Shrubland should be sent to NHESP. NHESP concurs with DCR's priority recommendation to continue ongoing rare shorebird monitoring and management activities at this site.

Section 5, Washburn Island: MESA review #14-33080 covers a burn plan for this site, approved by NHESP in March, 2014. As of this date, NHESP has not received word that this burn was carried out; please advise us if it has been. NHESP concurs with DCR's priority recommendation to continue ongoing rare shorebird monitoring and management activities at this site.

Section 6, Quashnet Woods State Reservation: MESA review #13-32276 provides conditions for a Forest Cutting Plan; NHESP approved this in April, 2014. As of this date, NHESP has not received word that these conditions have been met; please advise us if they have been. NHESP recommends that habitat management benefiting New England Cottontail be included as a priority recommendation.

Section 7: Nickerson State Park, p. 7-5, Table 7.2.4: Currently, NHESP does not consider Eastern Spadefoot or Northern Harrier to have habitat on this property. Conversely, we currently consider these additional MESA-listed species to have habitat on these properties:

- Mitchell's Sedge (*Carex mitchelliana*, Threatened)
- Oysterleaf (*Mertensia maritima*, Endangered)
- Maryland Meadow Beauty (*Rhexia mariana*, Endangered)

- Seabeach Dock (*Rumex pallidus*, Threatened)
- Spatterdock Darner (*Rhionaeschna mutata*, Special Concern, proposed for de-listing)
- Terete Arrowhead (*Sagittaria teres*, Special Concern)
- Salt Reedgrass (*Spartina cynosuroides*, Threatened)

NHESP concurs with DCR's priority recommendations to continue the existing management and monitoring of state-listed beach-nesting birds at this site, with expansion of the management area as needed; to assess loop trails around coastal plain ponds and minimize impacts to rare plants and the pondshores; and to survey the Coastal Shore and Dune Management Unit for state-listed plants and use the resulting information to inform dune management. Note that the proposed treatment of Cliff Pond with alum needs review by NHESP under MESA.

Section 8, Hawksnest State Park, p. 8-3, Table 8.2.3: NHESP currently considers these additional MESA-listed species to have habitat on this property:

- Long-beaked Bald-sedge (*Rhynchospora scirpoides*, Special Concern)
- Pondshore Knotweed (*Persicaria puritanorum*, Special Concern)
- Terete Arrowhead (*Sagittaria teres*, Special Concern)

NHESP concurs with DCR's priority recommendation to assess loop trails around the coastal plain ponds and minimize impacts to rare plants and the pondshores.

Section 9, Cape Cod Rail Trail, p. 9-5, Table 9.2.3: Currently, NHESP does not consider Coastal Heathland Cutworm, Dune Noctuid Moth, Pine Barrens Bluet, and Sharp-shinned Hawk to have habitat on the Cape Cod Rail Trail. Conversely, these species do have documented habitat on these properties:

- Pondshore Knotweed (*Persicaria puritanorum*, Special Concern)
- Spatterdock Darner (*Rhionaeschna mutata*, Special Concern, proposed for de-listing)

Note that the proposed 3.7-mile Dennis-Yarmouth proposed extension underwent MESA review in 2010 and 2011, under review #10-28011. Re-establishment of a parallel bridle path may also need review under MESA.

Section 10, Correllus State Forest, p. 10-4, Table 10.2.3: Currently, NHESP does not consider Barn Owl, Crane-fly Orchid, and Eastern Box Turtle to have habitat on this property. Conversely, these species do have documented habitat on this property:

- Eastern Whip-poor-will (*Caprimulgus vociferus*, Special Concern)
- Waxed Sallow Moth (*Chaetagnela cerata*, Special concern)
- Unexpected Cynia (*Cynia inopinatus*, Threatened)

The invasive species section text says four species have been observed, but Table 10.2.4 lists six species.

NHESP agrees with DCR that the construction of the disc golf course and model airplane field in Priority Habitat was not reviewed under MESA, as required. DCR should file for after-the-fact review of these two projects.

NHESP strongly recommends that DCR include production and implementation of a comprehensive fire management plan as a priority recommendation for Correllus; without such management, DCR will lose the federally listed, state-listed, and globally rare species and natural communities that DCR is charged with conserving on this site. NHESP looks forward to advising DCR on the elements of a fire management plan, including appropriate measures for management of firebreaks.

Section 11, Sylvia State Beach, p. 11-4, Table 11.2.3: NHESP no longer considers there to be habitat for Eastern Box Turtle at this site. NHESP concurs with DCR's priority recommendation to continue ongoing rare shorebird monitoring and management activities.

Section 12, South Beach State Park, p. 12-4, Table 12.2.3: Currently, there is one additional MESA-listed species documented for this site:

- The Pink Streak (*Dargida rubripennis*, Threatened)

Section 13, Nantucket State Forest: NHESP review #09-270108 covers habitat management for the disc golf course; this determined that to avoid “take” of state-listed species, the plan must be followed, including timing restrictions for vegetation maintenance. NHESP concurs with DCR’s priority recommendations for this site.

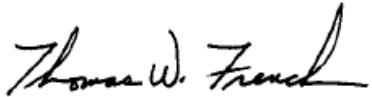
Section 14, Reforestation Lots: NHESP has no comments on this section.

Section 15, Fire Towers: Detailed maps of these locations would be helpful. Otherwise, NHESP has no comments on this section.

Section 16, Appendices: P. A-20, Properties Boundaries, refers to the Mount Holyoke Range Planning Unit.

Thank you for allowing NHESP the opportunity to comment on the draft Resource Management Plan. If you have any questions regarding our comments, please contact Lynn Harper, Habitat Protection Specialist, in our Westborough office at 508-389-6351.

Sincerely,

A handwritten signature in black ink that reads "Thomas W. French". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Thomas W. French, Ph.D.
Assistant Director
Natural Heritage &
Endangered Species Program

Appendix D. Select Massachusetts Regulations Applicable to the Nickerson Management Complex.^a

CMR ^b	Title	Comments
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.
257 CMR 2.00	Certification of Operators of Wastewater Treatment Facilities	Evaluates and certifies the operation of wastewater treatment facilities in order to ensure proper management, operation, and maintenance.
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.
301 CMR 20.00	Coastal Zone Management Program	Establishes a Coastal Zone Management Program in order to “secure for the inhabitants of the Commonwealth the objectives and benefits of the federal Coastal Zone Management Act.”
301 CMR 21.00	Coastal Zone Management Program Federal Consistency Review Regulations	Requires program review for all activities in the Coastal Zone, adjacent marine waters, adjacent state waters, or coastal watersheds of all activities that are federal activities or development projects, require a federal license or permit, involve Outer Continental Shelf exploration, or involve federal assistance to activities of state or local governments. This includes all activities that require permits issued by the Army Corps of Engineers (e.g., for dredging or filling wetlands) or the Environmental Protection Agency (e.g., NPDES permits).
302 CMR 5:00	Ocean Sanctuaries	Defines five ocean sanctuaries off the Massachusetts coast and assigns the Department of Environmental Management (now the DCR) “the responsibility for exercising the “care and control” of these sanctuaries.”
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.”

Appendix D. Select Massachusetts Regulations. (Continued)

CMR^b	Title	Comments
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.
310 CMR 9.00	Waterways	<p>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.</p> <p>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.</p>
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.
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.
310 CMR 27:00	Underground Injection Control Regulations	Protects underground sources of drinking water by regulating the underground injection of hazardous wastes and other fluids having the potential to contaminate groundwater.
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 5.00	Ground Water Discharge Permit Program	Regulates the discharge of pollutants, including sewage, into the groundwater.
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.
314 CMR 12.00	Operation and Maintenance and Pretreatment Standards for Wastewater Treatment Works and Indirect Dischargers	Ensures proper operation and maintenance of wastewater treatment facilities and sewer systems.
314 CMR 19.00	Oil Spill Prevention and Response	Provisions to prevent or reduce the risk of oil spills from tank vessels operating in Buzzards Bay and other designated areas (e.g., Vineyard Sound) of special interest within Massachusetts’ waters.

Appendix D. Select Massachusetts Regulations. (Continued)

CMR^b	Title	Comments
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.
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.”
322 CMR 6.00	Regulation of Catches	Establishes regulations for lobster, horseshoe crab, shellfish, finfish, and squid harvests.
322 CMR 7.00	Permits	Includes requirements for shellfish, lobster, and recreational saltwater fishing permits.
323 CMR 2.00	The Use of Vessels	Regulates the operation of motorboats, canoes, and kayaks. Includes special regulations for a portion of select rivers. 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.
323 CMR 4.00	The Operation of Personal Watercraft	These regulations “protect the public safety by establishing rules of conduct governing the operation of personal watercraft.”
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.
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.
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.

Appendix D. Select Massachusetts Regulations. (Continued)

CMR^b	Title	Comments
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.”
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.”

Appendix E. 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.

Appendix F. GIS Supplemental Information.

F.1. METHODOLOGY

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

Property Boundaries

The digital boundaries for each property within the Nickerson Management Complex can be described, based on the source data, one of three ways: highly accurate, reasonably accurate and less than accurate. Approximately 37% of the digital boundaries are based on highly accurate data, e.g. surveys and/or hydrographic or town boundaries. An additional 27% of the digital boundaries are based on reasonably accurate data, e.g. draft parcel data, georeferenced plans and/or orthophotography. The remaining digital boundaries (36%) are based on less than accurate data, e.g. a digital sketch or an undocumented source.

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, as the boundary for each zone and/or Significant Feature Overlay in an effort to make the areas easily identifiable for DCR field staff.

Shawme-Crowell State Forest – The Zone 3 areas are defined by the existing footprint of the developed areas, with the following two exceptions: 1) the MassDOT operations yard, where an administrative road serves as the western boundary; and 2) the undeveloped portion of Camping Area 2, where a trail serves as the eastern boundary and a forest road, buffered by 125 feet, serves as the southwest boundary.

Waquoit Bay National Estuarine Research Reserve – See Section 3.9.

South Cape Beach State Park – See Section 4.9 for a description of the Zone 1 and Zone 3 areas. The

Rare Shorebird Significant Feature Overlay includes areas south of Dead Neck Road, as well as sparsely vegetated areas on the eastern side of the entrance to Waquoit Bay.

Washburn Island – See Section 5.9 for a description of the Zone 1 areas. The Rare Shorebird Significant Feature Overlay includes the sparsely vegetated, dune and intertidal areas facing Vineyard Sound.

Quashnet Woods State Reservation – See Section 6.9.

Roland C. Nickerson State Park – See Section 7.9 for a description of the Zone 1 areas. The Zone 3 areas are defined by the existing footprint of the developed areas, with two exceptions. The first is the Entrance and Headquarters/Operations areas, which in a counterclockwise direction, follows the tree line at the western edge of the bus stop area to and along the northern limit of the parking area; then north along the paved path that connects to the Cape Cod Rail Trail; west along the rail trail to a forest road; south along the forest road for approximately 550 feet; due east for approximately 550 feet to the main entrance road; north along the eastern side of the main entrance road; then along Route 6A to the bus stop area.

The second is the Stephen L. French Youth Forestry Camp, which in a counterclockwise direction, follows the northern side of the entrance road to an east-west oriented trail; then east along the trail; north along a north-south running trail to a point 100 feet away from Flax Pond and an unnamed wetland; then along the 100 foot buffer to another north-south running trail; south along the trail to a point 100 feet away from Cliff Pond and an unnamed wetland; then along the 100 foot buffer to an east-west running trail; east along the trail to Flax Pond Road; then north along the western side of Flax Pond Road to the entrance road.

The Rare Shorebird Significant Feature Overlay begins approximately 600 feet northeast of the town’s parking area, in line with a stone jetty, and extends northeast to the property line.

Hawksnest State Park – See Section 8.9.

Cape Cod Rail Trail – The Zone 3 areas are defined by the existing footprint of the developed areas, with the following four exceptions:

- Route 6A, Brewster (0 Main Street) includes an area that is centered on the bike rental building and parking area, and approximately 360 feet, along the frontage of Route 6A, by 220 feet.
- 0 Long Pond Road, Brewster, north of Route 137, includes an area that is approximately 100 feet, along the frontage of Long Pond Road, by 400 feet.
- 0 LeCount Hollow Road, north of the existing Wellfleet trailhead, includes an area that is approximately 85 feet, along the frontage of LeCount Hollow Road, by 400 feet.
- 2516 State Highway Route 6, Wellfleet, includes an area that is approximately 85 feet, along the frontage of Route 6, by 400 feet.

Manuel F. Correllus State Forest – See Section 10.9.

Joseph A. Sylvia State Beach – See Section 11.9 for a description of the Zone 1 and Zone 3 areas. The Rare Shorebird Significant Feature Overlay includes the area east of Beach Road from the Big Bridge to a location approximately 2,000 feet northwest of the bridge.

South Beach State Park – See Section 12.9.

Nantucket State Forest – See Section 13.9.

Reforestation Lots – See Section 14.9.

Fire Observation Towers – See Section 15.9.

F.2. MASSGIS DATALAYERS

A summary of the MassGIS datalayers used by the DCR GIS Program to generate and display data within the Nickerson Management Complex RMP is presented below, in Table F.1.

Table F.1. Summary of MassGIS datalayers used to create the Nickerson Management Complex RMP.^a

Datalayer Name	Additional Information
Areas of Critical Environmental Concern	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/acecs.html
Community Boundaries from Survey Points	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/townsurvey.html
DCR Roads and Trails	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/dcrtrails.html
EPA Designated Sole Source Aquifers	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
FEMA National Flood Hazard Layer	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/nfhl.html
Hurricane Surge Inundation Zones	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/hurr-inun.html
Land Use (2005)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/lus2005.html
Major Watersheds	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/watrshds.html
Massachusetts House Legislative Districts (2012)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/house2012.html
Massachusetts Senate Legislative Districts (2012)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/senate2012.html
MassDEP Hydrography (1:25,000)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/hd.html
MassDEP Wetlands (1:12,000)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/depwetlands112000.html
MassDOT Roads	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/eotroads.html
NHESP Certified Vernal Pools	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/cvp.html
NHESP Potential Vernal Pools	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/pvp.html
NHESP Priority Habitats of Rare Species	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/prihab.html
NOAA Coastal Services Center Sea Level Rise Data: 1-6 ft Sea Level Rise Inundation Extent	http://maps.massgis.state.ma.us/czm/moris/metadata/moris_noaa_slr_combined.htm
Outstanding Resource Waters	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/orw.html
Protected and Recreational OpenSpace	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/osp.html
USGS Color Ortho Imagery (2008/2009)	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2008.html

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 G. Photo Credits.

All photos were taken by the DCR except as noted in Table G.1. DCR photos were cropped, resampled to 300 DPI, and autocorrected using the Auto Smart Fix feature in Adobe Photoshop Elements version 6.

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

Page	Photo	Photographer	Source ^a	Modifications ^b	Creative Commons ^c	Terms of Use
1-1	Coast Guard Beach Eastham	Margo Tabb	MOTT	C, R	Yes	A, ND
1-4	Crowe's Pasture	William DeSousa-Mauk	MOTT	C, R	Yes	A, ND
1-5	Cape Cod from space	-	NASA	C, R	No	A
1-7	New England cottontail	-	USFWS	C, R	Yes	A
1-8	Walkers Pond, Harwich	Mike Lach	Lach	C, R	No	A
1-11	Surfcasting	Ryan Hagerty	USFWS-NDL	C, R	No	A
1-14	Pocasset River ACEC Sign	Paul Cavanagh	Manomet	A, C, R	No	-
1-15	Eastern box turtle	Karen Wilson	Wilson	A, C, R	No	A
4-4	Hurricane inundation	-	Oliver	C, R	No	-
5-1	View from campsite	Scott Hamlin	Hamlin	C, R	Yes	A, N, S
5-4	Hurricane inundation	-	Oliver	C, R	No	-
7-1	Nickerson State Park	-	MOTT	C, R	Yes	A, ND
7-4	Hurricane inundation	-	Oliver	C, R	No	-
7-19	Braided trails	-	MassGIS	C, R	No	-
7-19	Dune crossings	-	Oliver	C, R	No	-
9-1	Cape Cod Rail Trail	-	MOTT	C, R	Yes	A, ND
9-6	Jenkins Bog	-	MOTT	C, R	Yes	A, ND
11-4	Hurricane inundation	-	Oliver	C, R	No	-
11-7	Edgartown train	-	Penn	C, R	Yes	A, N, S
11-8	Cycling at Sengekontacket	© L.A. Brown Photography	MOTT	C, R	Yes	A, N
12-4	Hurricane inundation	-	Oliver	C, R	No	-
12-4	Northern harrier	Amanda Boyd	USFWS-NDL	C, R	Yes	A
12-7	South Beach 1952	-	Funk	C, R	No	-
12-7	South Beach 2010	-	Funk	C, R	No	-
12-8	South Beach surfer	-	MOTT	C, R	Yes	A, N
12-11	Rocket motor	-	EODT	C, R	No	-
13-6	Father and daughter cycling	-	MOTT	C, R	Yes	A, ND
13-7	Disc golfer	-	NDGI	C, R	No	A

- Sources of photographs include: EODT = EODT, Inc. (2013); Funk = Funk et al. (2011); Hamlin = Scott Hamlin via Creative Commons; Lach = courtesy Mike Lach, Harwich Conservation Trust; Manomet = courtesy Manomet Center for Conservation Sciences; MassGIS = Massachusetts Office of Geographic Information; MOTT = Massachusetts Office of Travel and Tourism via Creative Commons; NASA = National Aeronautics and Space Administration Earth Observatory (<http://earthobservatory.nasa.gov/Images/?eocn=topnav&eoci=images>); Oliver = MassGIS's Online Mapping Tool; follow links to corresponding maps used to generate images; NDGI = Nantucket Disc Golf, Inc.; Penn = Penn State Special Collections via Creative Commons; USFWS = U.S. Fish and Wildlife Service via Creative Commons; USFWS-NDL = US Fish and Wildlife Service National Digital Library (<http://digitalmedia.fws.gov/cdm/>); and Wilson = courtesy Karen Wilson.
- Modifications include: A = Auto Smart Fix in Photo Shop Elements 6.0; C = Cropping to either 3.5 x 2.625 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.
- Pictures obtained through Creative Commons (<http://creativecommons.org/>) are identified with a "Yes;" they are hot linked to the associated Creative Commons license(s).
- Photos obtained through Creative Commons have the following terms of use; they are: A = Attribution; N = Non-Commercial; ND = No Derivatives; and S = Share Alike. Other sources of photos requiring attribution are also identified by the letter A.

Appendix H. References.

- Albert Veri & Associates, Inc. 1990.** Environmental Impact Report, final; South Cape Beach State Park, Mashpee, Massachusetts. September 12, 1990. Providence, RI.
- Andrews, E. F., and K. T. Blackshaw 2010.** Birding Nantucket. Book Surge Publishing. Nantucket, MA.
- Austin, T., J. Edson, W. McGillis, C. von Alt, M. Purcell, R. Petitt, M. McElroy, J. Ware, and R. Stokey. 2000.** The Martha's Vineyard Coastal Observatory: A long-term facility for monitoring air-sea processes. Pages 1937–1941, *In* OCEANS 2000 MTS/IEEE Conference and Exhibition; Proceedings, Volume 3.
<http://www.who.edu/science/AOPE/dept/McGillis/2000_oceans.pdf>; accessed November 26, 2014.
- Barbour, H. 1993.** RE: Ecological management at Katama Plains, Edgartown. Letter to J. Varkonda, Edgartown Conservation Commission; November 8, 1993.
- Birdsey, R. 2010.** RE: Plantation on Martha's Vineyard. E-mail to P. Gregory; February 22, 2010.
- Berger, John J. 1984.** Rebirth of a river. *Yankee Magazine*. October Issue, pages 94–99 and 150–154.
- Brouillette-Jacobson, D. M. 2008.** Analysis of coastal erosion on Martha's Vineyard, Massachusetts: A paraglacial island. M.S. Thesis; University of Massachusetts, Amherst.
<<http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1266&context=theses>>; accessed November 17, 2014.
- Brown, S. 2013.** Sengekontacket Pond plays host to a million tiny pioneers. *Vineyard Gazette*; June 6, 2013.
<<http://vineyardgazette.com/news/2013/06/06/sengekontacket-pond-plays-host-million-tiny-pioneers?k=vg5499cf3638d2c>>; >; accessed December 23, 2014.
- Cape Cod Bird Club and Massachusetts Audubon Society. 2005.** Birding Cape Cod. On Cape Publications. Yarmouth, MA.
- Cape Cod Commission. n.d.** Cape Cod's sole source aquifer.
<<http://www.capecodcommission.org/index.php?id=169>>; accessed November 13, 2014.
- Cape Cod Commission. 2001.** Cape Cod atlas of tidally restricted marshes: Cape Cod, Massachusetts. Conducted & prepared by Cape Cod Commission for the Massachusetts Wetland Restoration Program. December, 2001. Barnstable, MA.
<<http://www.capecodcommission.org/resources/coastalresources/TidalAtlas.pdf>>; accessed November 13, 2014
- Cape Cod Commission. 2013.** Cape Cod 2012 Regional Transportation Plan: 2012–2035. Endorsed August 22, 2011; revised May 20, 2013.
<http://www.capecodcommission.org/resources/transportation/rtp/CapeCodRTP_Revised_05202013.pdf>; accessed November 14, 2014.
- Cape Cod Commission. 2014.** 2013 Traffic counting report for Cape Cod, Massachusetts. June 2014.
<http://www.capecodcommission.org/resources/transportation/counts/pdf_count/TCR_2013_complete.pdf>; accessed November 14, 2014.
- Cardoza, J. E., G. S. Jones, and T. W. French. n.d.** State mammal list.
<<http://www.mass.gov/eea/agencies/dfg/dfw/fish-wildlife-plants/state-mammal-list.html>>; accessed November 13, 2014.
- Cardoza, J. E., and P. G. Mirick. 2009.** State reptiles and amphibian list. *Fauna of Massachusetts Series No. 3*. Last updated April 2009.
<<http://www.mass.gov/eea/agencies/dfg/dfw/fish-wildlife-plants/state-reptiles-and-amphibians-list.html>>; accessed November 13, 2014.
- Carpenter, V. 1997.** Dragonflies and Damselflies of Cape Cod. Cape Cod Museum of Natural History. Brewster, MA.
- Church, J. A., P. U. Clark, A. Cazenave, J. M. Gregory, S. Jevrejeva, A. Levermann, M. A. Merrifield, G. A. Milne, R. S. Nerem, P. D. Nunn, A. J. Payne, W. T. Pfeffer, D. Stammer, and A. S. Unnikrishnan. 2013.** Sea level change, *In*: Climate change 2013: The physical science basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley (eds.)]. Cambridge University Press. Cambridge, UK and New York, NY.
<http://www.climatechange2013.org/images/report/WG1_AR5_Chapter13_FINAL.pdf>; accessed November 13, 2014.

Clarke, G. L. 2006. Distribution of rare plants on the central plain of Martha's Vineyard: Implications for conservation and management. M.S. Thesis, University of Massachusetts, Amherst. <https://www.umass.edu/nebarrensfuels/publications/pdfs/gretel%20final%20thesis_v6.pdf>; accessed December 3, 2014.

CLE Engineering, Inc. 2011. Expanded Environmental Notification Form and waiver request: Farm Pond Tidal Restoration Project. Prepared for the town of Oak Bluffs. October, 2011. <<http://friendsoffarmpond.net/pdf/ENFcompleteR1withoutplans.pdf>>; accessed March 20, 2015.

Coastal Systems Group and Cape Cod Commission. 2009. Brewster freshwater ponds: Water quality status and recommendations for future activities. Final report, September 2009, for the Town of Brewster and Barnstable County. <https://sp.barnstablecounty.org/ccf/public/Documents/Plasant%20Bay/2009%20BrewsterPonds_FinalReport.pdf>; accessed November 14, 2014.

Cubasch, U., D. Wuebbles, D. Chen, M. C. Facchini, D. Frame, N. Mahowald, and J.-G. Winther. 2013. Introduction, *In*: Climate change 2013: The physical science basis, Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Stocker, T. F., D. Qin, G.-K. Plattner, M. Tignor, S. K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex, and P. M. Midgley (eds.)]. Cambridge University Press. Cambridge, UK and New York, NY.

Dautreuil, V. 2014. Knapweed at South Beach. E-mail to P. Cavanagh; September 12, 2014.

Delbonis, P. 1989. South Beach bombs reappear in regions of severe erosion. Vineyard Gazette, Friday June 30, 1989, pages 1 and 6.

Dunwiddie, P. W. 1989. Forest and heath: The shaping of the vegetation on Nantucket Island. *Journal of Forest History*. July 1989:126–133. <<http://www.jstor.org/discover/10.2307/4005122?uid=3739696&uid=2129&uid=2&uid=70&uid=4&uid=3739256&sid=21105192602433>>; accessed November 13, 2014.

Edey, N. A., Sr. 1998. The last stand of the heath hen. *Intelligencer* 39(4):155–174. <http://longnow.org/revive/wp-content/uploads/2014/06/The_Last_Stand_of_the_Heath_Hen_M_Edey.pdf>; accessed December 3, 2014.

Edmonds, S. 1988. A brief history of Nickerson state park. Stacie Edmonds, Summer Interpreter 1988, Nickerson state park, summer project.

EOD Technology, Inc. (EODT) 2013. Site specific final report for the Time Critical Removal Action (TCRA) at former Cape Poge Little Neck Bomb Site, Chappaquiddick Island, Dukes County, Massachusetts, and former Moving Target Machine Gun Range at South Beach, Martha's Vineyard, Edgartown, Massachusetts. Contract: W912DY-04-D-0019; Task Order: 0020; Project Number: D01MA0595. May 2013.

Federal Highway Administration. 2009. Manual on uniform traffic control devices for streets and highways. 2009 Edition. U.S. Department of Transportation, Federal Highway Administration. <<http://mutcd.fhwa.dot.gov/>>; accessed December 3, 2014.

Field, G. W. 1908. A report upon the eastern pinnate grouse or heath hen. Abstract from the forty-second annual report of the Massachusetts Commissioners on Fisheries and Game for the year ending December 31, 1907.

Foley, J. W. 2015. RE: Cape and Islands RMP – Nickerson state park Comments. Letter to P. Geigis; February 20, 2015.

Forbush, E. H. 1912. A history of the game birds, wild fowl, and shore birds of Massachusetts and adjacent states. Massachusetts State Board of Agriculture.

Foster, D. R., and G. Motzkin. 1999. Historical influences on the landscape of Martha's Vineyard: Perspectives on the management of the Manuel F. Correllus State Forest. Harvard Forest Paper No. 23. Petersham, MA. <<http://harvardforest.fas.harvard.edu/sites/harvardforest.fas.harvard.edu/files/publications/pdfs/vineyard.pdf>>; accessed November 13, 2014.

Freeman, R. 2012. South Pasture, Nantucket State Forest, Habitat Management Plan. NHESP Tracking No.:09-27018. February 17, 2012. Laurentide Environmental, Nantucket, MA.

French, T. W. 2006. File # 06-16393; Project Name: Restoration of Nantucket State Forest. Letter to J. Rassman; August 24, 2006.

French, T. W. 2013. RE: Project Location: Nickerson State Park, Brewster, Project Description: Fire road improvement plan, NHESP Tracking No.: 13-32131. Letter to P. Gregory; June 13, 2013.

Fuller, S., and A. Tur. 2012. Conservation strategy for the New England cottontail (*Sylvilagus transitionalis*). U.S. Fish and Wildlife Publications, Paper 320. <<http://digitalcommons.unl.edu/usfwspubs/320>>; accessed November 13, 2014.

- Funk, R. L., R. J. Feldpausch, and B. Bridge. 2011.** Final report: Wide Area Assessment (WAA) for marine munitions and explosives of concern. ESTCP Project MR-200808. August 2011. Tetra Tech EC, Inc., Bothell, WA.
- Gaines, A. G., Jr. 1995.** A natural systems assessment of Sengekontacket Pond, Martha's Vineyard: Managing domestic wastewater at the coast. Final Report. Prepared for Friends of Sengekontacket, Inc.; June 1995. <<http://www.mvcommission.org/doc.php/System%20Assessment%20Gaines%202795.pdf?id=505>>; accessed November 17, 2014.
- Gannett Fleming, Inc. 1998a.** Environmental Audit Report: Shawme-Crowell State Forest, Sandwich, MA. December 1998.
- Gannett Fleming, Inc. 1998b.** Environmental Audit Report: Waquoit Bay National Estuarine Research Reserve, Falmouth, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998c.** Environmental Audit Report: South Cape Beach, Mashpee, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998d.** Environmental Audit Report: Washburn Island, Falmouth, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998e.** Environmental Audit Report: Cape Cod Bay property, Brewster, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998f.** Environmental Audit Report: Hawksnest State Park, Harwich, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998g.** Environmental Audit Report: Black Pond, Harwich, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998h.** Environmental Audit Report: Manuel Correllus state forest, Vineyard Haven (sic), Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998i.** Environmental Audit Report: Joseph Sylvia State Reservation (sic), Martha's Vineyard, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998j.** Environmental Audit Report: Nantucket State Forest, Nantucket, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998k.** Environmental Audit Report: Falmouth State Forest (sic), Falmouth, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998l.** Environmental Audit Report: Sandwich State Forest lands (sic), Sandwich, Massachusetts. December 1998.
- Gannett Fleming, Inc. 1998m.** Environmental Audit Report: Sheep Pond, Brewster, Massachusetts. December 1998.
- Gannett Fleming, Inc. 2000.** Environmental Audit Report: Cape Cod Rail Trail, Dennis to Wellfleet, Massachusetts. March 2000.
- Geist, M. (Editor) 1996.** The ecology of the Waquoit Bay National Estuarine Research Reserve. National Oceanic and Atmospheric Administration, Office of Coastal Resources Management, Sanctuaries and Reserves Division and Massachusetts Department of Environmental Management, Forest and Parks – Region 1. <http://www.nerrs.noaa.gov/Doc/PDF/Reserve/WQB_SiteProfile.pdf>; accessed November 18, 2014.
- Goldstein, P. Z. 1992.** Informative occurrences of insects in the Manuel Correllus state forest, Martha's Vineyard Island, Massachusetts. December, 1992. Comments and management recommendations. Unpublished report to the Massachusetts Natural Heritage and Endangered Species Program. University of Connecticut, Storrs.
- Goldstein, P. Z. 1994.** Update of rare insect occurrences in the Manuel F. Correllus State Forest and vicinity, Martha's Vineyard, Dukes County, Mass., USA. Documentation of regionally rare insects and management recommendations. Unpublished report to the Massachusetts Natural Heritage and Endangered Species Program. University of Connecticut, Storrs.
- Gregory, P. n.d.** Emergency forest management proposal. Name: Barnstable red pine salvage.
- Harper, L. 2013.** RE: Shapefiles for upcoming RMPs. E-mail to P. Cavanagh, with attachment; October 31, 2013.
- Higgins, K. 1984.** Eldridge Cemetery. Massachusetts Historical Commission. Form E – Burial Grounds. <<http://mhc-macris.net/Details.aspx?MhcId=BRE.802>>; November 24, 2014.
- Horsley Witten Group. 2013.** Town of Brewster, Massachusetts Integrated Water Resource Management Plan; Phase II. Final report. January 28, 2013. <http://www.horsleywitten.com/brewsterIWRMP/reports/130128_Final%20IWRMP%20Report_Brewster.pdf>; accessed November 14, 2014.
- Idman, J. 2015.** Phone conversation with P. Cavanagh; March 23, 2015.
- Ingelfinger, F. 2014.** RE: Skaket Creek/Namskaket Marsh. E-mail to P. Cavanagh, with attachments; June 5, 2014.

- Keay, D. 2000. (Compiler)** The history of the Quashnet River Valley. Waquoit Bay National Estuarine Research Reserve, Department of Environmental Management. Waquoit, MA.
- Keith, A. R., and S. A. Spongberg. 2008.** Island life: A catalog of the biodiversity on and around Martha's Vineyard. Published in cooperation with the Marine Biological Laboratories, Woods Hole, MA.
- Kelley, T. 2014.** Observations and concerns as the park interpreter at NSP. E-mail to P. Cavanagh; August 27, 2014.
- Kirwan, M. L., G. R. Guntenspergen, A. D'Alpaos, J. T. Morris, S. M. Mudd, and S. Temmerman. 2010.** Limits on the adaptability of coastal marshes to rising sea-level. *Geophysical Research Letters*, Vol. 37, L23401.
- Louis Berger Group, Inc. 2010.** Waquoit Bay stream restoration master plan: Falmouth and Mashpee, Massachusetts. December 2010. Prepared for Waquoit Bay National Estuarine Research Reserve.
- Maio, C. V., A. M. Gontz, C. R. Weidman, and J. P. Donnelly. 2014.** Late Holocene marine transgression and the drowning of a coastal forest: Lessons from the past, Cape Cod, Massachusetts, USA. *Paleogeography, Paleoclimatology, Paleocology* 393(2014):146–158.
- Manomet Center for Conservation Sciences and the Commonwealth of Massachusetts Division of Fisheries and Wildlife (Manomet and DFW). 2010.** Climate change and Massachusetts fish and wildlife: Volume 2; habitat and species vulnerability. April 2010. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/cwcs/cli-mate-change-habitat-vulnerability.pdf>>; accessed November 13, 2014.
- Martha's Vineyard Commission. (MVC) 1996.** 1996 Management plan for South Beach, Edgartown, Massachusetts.
- Martha's Vineyard Commission. (MVC) 2006.** Population and Housing Profile of Martha's Vineyard. 3/20/2006. <<http://www.mvcommission.org/doc.php/Population%20and%20Housing%20Profile.pdf?id=614>>; accessed November 13, 2014.
- Martha's Vineyard Commission. (MVC) 2010.** Island Plan: Charting the future of the Vineyard. <<http://www.islandplan.org/doc.php/Island%20Plan%20Web%20Version.pdf?id=2560>>; accessed November 17, 2014.
- Martha's Vineyard Commission. (MVC) 2014.** Hazard Mitigation Plan for seven towns in Dukes County, 2014. Draft March 19, 2014. <<http://www.mvcommission.org/mvc-studies-and-reports>>; accessed March 23, 2015.
- Martha's Vineyard Commission. (MVC) 2015.** Comments on Draft RMP for Nickerson Complex. E-mail to DCR Updates; March 16, 2015.
- Mason, A. 1991.** Notice of Intent/Forest Cutting Plan. Various areas, Shawme-Crowell State Forest, Weeks and Smith lots. Dated 11 18, 1991.
- Mason, A. 1983.** '03 Project: Nantucket State Forest. Memorandum to L. Lee; June 30, 1983.
- Mason, A. 2003.** Forest Management Plan for the Nantucket State Forest. April, 2003.
- Mason, A., and R. McNamara. 1980.** Forest Management Plan for Nantucket State Forest. October, 1980.
- Massachusetts Army National Guard. 2009.** Camp Edwards Training Site Integrated Natural Resources Management Plan. Revised 2009. Camp Edwards, MA. <<http://states.ng.mil/sites/MA/resources/erc/inrmp-2007/CE-INRMP2009.pdf>>; accessed November 13, 2014.
- Massachusetts Department of Conservation and Recreation. (DCR) n.d.a.** Best Management Practices: Vernal pool certification on DCR lands. <<http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmp/s/vernal-pool-certification-on-dcr-lands.pdf>>; accessed December 22, 2014.
- Massachusetts Department of Conservation and Recreation. (DCR) n.d.b.** Best Management Practices: Managing terrestrial invasive plants. <<http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmp/s/managing-terrestrial-invasive-plants.pdf>>; accessed November 13, 2014.
- Massachusetts Department of Conservation and Recreation. (DCR) n.d.c.** Best Management Practices: Managing aquatic invasive plants. <<http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmp/s/managing-aquatic-invasive-plants.pdf>>; accessed November 13, 2014.
- Massachusetts Department of Conservation and Recreation. (DCR) n.d.d.** Best Management Practices: Closing and restoring trails. <<http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmp/s/closing-and-restoring-trails.pdf>>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.e. Best Management Practices: Trail maintenance. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/trail-maintenance.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.f. Graphics standards manual.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.g. Best Management Practices: Historic landscapes-built features. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/historic-landscapes-built-features.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.h. Best Management Practices: Vegetation in historic landscapes. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/historic-landscapes-vegetation.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.i. Best Management Practices: Historic building maintenance. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/historic-building-maintenance.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.j. Best Management Practices: Mothballing historic buildings. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/mothballing-historic-bldgs.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.k. Best Management Practices: Archaeological features. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/archaeological-features.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) n.d.l. Best Management Practices: Cemeteries and burial grounds. <http://www.mass.gov/eea/docs/dcr/stewardship/rmp/bmps/cemeteries-and-burial-grounds.pdf>; accessed November 14, 2014.

Massachusetts Department of Conservation and Recreation. (DCR). 2007a. NPDES Storm Water Management Plan for coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for storm water charges from Small Municipal Separate Storm Sewer Systems (MS4s). Revision 3: July 17, 2007. Boston, MA. <http://www.mass.gov/dcr/stewardship/stormwater/downloads/swmp.pdf>; accessed September 21, 2012.

Massachusetts Department of Conservation and Recreation. (DCR) 2007b. Historic parkway preservation treatment guidelines. March 2007. <http://www.mhd.state.ma.us/downloads/manuals/HPguidelinesfinal.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) 2010. Manual for Continuous Forest Inventory field procedures. Bureau of Forestry, Division of State Parks and Recreation. April 2010.

Massachusetts Department of Conservation and Recreation. (DCR) 2012a. Landscape designations for DCR parks & forests: Selection criteria and management guidelines. March 2012. <http://www.mass.gov/eea/docs/dcr/ld/management-guidelines.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) 2012b. Final Landscape Designation list. April 2012. <http://www.mass.gov/eea/docs/dcr/ld/acreage.pdf>; accessed April 2, 2015.

Massachusetts Department of Conservation and Recreation. (DCR). 2012c. Trail guidelines and best practices manual. Updated March, 2012. <http://www.mass.gov/eea/agencies/dcr/services-and-assistance/grants-and-technical-assistance/dcr-guidelines.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation. (DCR) 2013. Fire District # 1, Nickerson State Park, 2013 fire road improvement plan.

Massachusetts Department of Conservation and Recreation. (DCR) 2014. Volunteers in parks program guide: Guidelines, requirements & standards. <http://www.mass.gov/eea/docs/dcr/volunteer/volunteer-guide-2014.pdf>; accessed November 13, 2014.

Massachusetts Department of Conservation and Recreation and Nantucket Disc Golf, Inc. (DCR and NDG) 2011a. Construction & maintenance guidelines for Nantucket Disc Golf (NDG) Course.

Massachusetts Department of Conservation and Recreation and Nantucket Disc Golf, Inc. (DCR and NDG) 2011b. Memorandum of Understanding by and between the Commonwealth of Massachusetts Department of Conservation and Recreation and Nantucket Disc Golf, Inc.

Massachusetts Department of Environmental Management. (DEM) 1993. Guidelines for Operations and Land Stewardship: Roland C. Nickerson State Park. May, 1993.

Massachusetts Department of Environmental Management. (DEM) 1994. An ecosystem management plan for the Manuel F. Correllus State Forest. Draft. December 1994.

Massachusetts Department of Environmental Management. (DEM) 1995a. Waquoit Bay National Estuarine Research Reserve, South Cape Beach Recreation Area, Management Plan. March 1995.

Massachusetts Department of Environmental Management. (DEM) 1995b. Special use permit to the Town of Edgartown for layout, construction and maintenance of bicycle paths within Manuel F. Correllus State Forest.

Massachusetts Department of Environmental Management. (DEM) 2001. Environmental Notification Form. Rehabilitation and maintenance of existing firebreaks-Manuel F. Correllus State Forest. August 31, 2001.

Massachusetts Department of Environmental Management and The Nature Conservancy. (DEM and TNC) n.d. Operating principles. Draft.

Massachusetts Department of Environmental Management and The Nature Conservancy. (DEM and TNC) 1996. Management and Maintenance Plan. Preliminary. Attachment B to Cooperative Management Agreement between the Commonwealth of Massachusetts Department of Environmental Management and The Nature Conservancy for the coastal sandplain addition to the Manuel F. Correllus State Forest.

Massachusetts Department of Fish and Game and The Nature Conservancy (DFG and TNC). 2010. BioMap 2: Conserving the Biodiversity of Massachusetts in a Changing World. Produced by the Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife and the Massachusetts Program of The Nature Conservancy. <<http://www.mass.gov/eea/docs/dfg/nhesp/land-protection-and-management/biomap2-summary-report.pdf>>; accessed November 13, 2014.

Massachusetts Department of Fish and Game and The Nature Conservancy (DFG and TNC). 2011. BioMap 2 Technical Report - building a better BioMap. A supplement to Conserving the Biodiversity of Massachusetts in a Changing World. Produced by the Natural Heritage & Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife and the Massachusetts Program of The Nature Conservancy. November, 2011. <<http://www.mass.gov/eea/docs/dfg/nhesp/land-protection-and-management/biomap2-tech-report-full.pdf>>; accessed November 13, 2014.

Massachusetts Department of Natural Resources. (DNR) 1970. Hawksnest Pond property; Harwich, Massachusetts.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2005. Cliff Pond, Brewster, Barnstable County, Cape Cod Watershed. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwclif.pdf>>; accessed November 18, 2014.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2005. Cliff Pond, Brewster, Barnstable County, Cape Cod Watershed. Updated July 2005. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwclif.pdf>>; accessed November 14, 2014.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2006a. Little Cliff Pond, Brewster, Barnstable County, Cape Cod Watershed. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwlitcl.pdf>>; accessed November 18, 2014.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2006b. Flax Pond, Brewster, Barnstable County, Cape Cod Watershed. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwflax.pdf>>; accessed November 18, 2014.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2006c. Higgins Pond, Brewster, Barnstable County, Cape Cod Watershed. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwhigg.pdf>>; accessed November 18, 2014.

Massachusetts Division of Fisheries and Wildlife. (MassWildlife) 2006d. Sheep Pond, Brewster, Barnstable County, Cape Cod Watershed. <<http://www.mass.gov/eea/docs/dfg/dfw/habitat/maps-ponds/dfwsheep.pdf>>; accessed November 18, 2014.

Massachusetts Invasive Plant Advisory Group. (MIPAG) 2005. The evaluation of non-native plant species for invasiveness in Massachusetts (with annotated list). Update: April 1, 2005. <http://www.massnrc.org/mipag/docs/MIPAG_FINDING_S_FINAL_042005.pdf>; accessed November 13, 2014.

Massachusetts Natural Heritage and Endangered Species Program. (NHESP) 2008. Biodiversity of Nickerson state park and Hawksnest State Park. Unpublished report to the Massachusetts Department of Conservation and Recreation. June 30, 2008.

Massachusetts Natural Heritage & Endangered Species Program (NHESP). 2009a. Guidelines for the certification of vernal pools. March 2009. Westborough, MA. <<http://www.mass.gov/eea/docs/dfg/nhesp/vernal-pools/vpcert.pdf>>; accessed January 14, 2015.

Massachusetts Natural Heritage & Endangered Species Program (NHESP). 2009b. Recreational trail maintenance and biodiversity conservation. Prepared for the Massachusetts Department of Conservation and Recreation, June 30, 2009. Westborough, MA.

Massachusetts Natural Heritage & Endangered Species Program (NHESP). 2012. Natural Community Fact Sheet: Salt marshes. <<http://www.mass.gov/eea/docs/dfg/nhosp/natural-communities-facts/salt-marsh.pdf>>; accessed November 13, 2014.

Massachusetts Natural Heritage & Endangered Species Program (NHESP). 2013. Nickerson state park; Brewster. Fire road improvement plan. NHESP tracking no. 13-32131.

Massachusetts Natural Heritage and Endangered Species Program and Massachusetts Department of Natural Resources Conservation (sic). 2009. Habitat management for a federally-listed plant...Falmouth.

Massachusetts Trial Court Law Libraries. 2012. Code of Massachusetts Regulations FAQ. May 29, 2012. <<http://www.lawlib.state.ma.us/source/mass/cmr/cmrfaq.html>>; accessed April 17, 2013.

MassHighway. 1997. Draft existing conditions report. Long-term protection and management alternatives for Beach Road, Oak Bluffs & Edgartown, Martha's Vineyard. August 1, 1997.

Mello, M. J., and T. Hansen. 2004. Butterflies across Cape Cod: A guide to finding, attracting, and observing butterflies on the Cape. John Hay Institute Publication No. 1. Cape Cod Museum of Natural History. Brewster, MA.

Moran, L., and K. Thurston. 2011. RE: Harwich ponds, 2009–2010 data review. EcoLogic memorandum to F. Sampson and H. Proft; April 18, 2011. <http://www.hwqtf.com/Memo_04-15-2011_LM.pdf>; accessed November 14, 2014.

Motzkin, G., R. Eberhardt, B. Hall, D. R. Fister, J. Harrod, and D. MacDonald. 2002. Vegetation variation across Cape Cod, Massachusetts: Environmental and historical determinants. *Journal of Biogeography* 29:1439-1454. <http://harvardforest.fas.harvard.edu/sites/harvardforest.fas.harvard.edu/files/publications/pdfs/Motzkin_JBiogeography_2002.pdf>; accessed November 13, 2014.

Mouw, A. R. 2002. The modern and historic fire regimes of central Martha's Vineyard, Massachusetts. M.S. Thesis, University of Massachusetts, Amherst. <https://www.umass.edu/nebarrensfuels/publications/pdfs/Mouw_thesis.pdf>; accessed December 3, 2014.

Mullan, J. W. 1958. The sea-run or "salter" brook trout (*Salvelinus fontinalis*) fishery of the coastal streams of Cape Cod, Massachusetts. Bulletin Number 17. May, 1958. Massachusetts Division of Fisheries and Game, Boston, MA. <<http://www.capecodtu.org/uploads/searun.pdf>>; accessed December 3, 2014.

Myers, K. C. 2014. Fix seen for unsafe rail trail tunnel: Improved lighting is just one solution to improve Eastham bicycle underpass. Cape Cod Times; September 23, 2014.

Nantucket Planning and Economic Development Commission. 2002. Monitoring the economy: An update to the 1993 Nantucket economic base study. June 2002. <<http://www.nantucket-ma.gov/DocumentCenter/View/1049>>; accessed January 16, 2015.

National Oceanic and Atmospheric Administration. (NOAA) 2011. 2011-2016 National Estuarine Research Reserve System Strategic Plan. <<http://www.nerrs.noaa.gov/Doc/PDF/Background/StrategicPlan2011.pdf>>; accessed November 13, 2014.

National Park Service. (NPS) 2008. Land and Water Conservation Fund State Assistance Program. Federal Financial Assistance Manual Volume 69. Effective Date: October 1, 2008. <<http://www.nps.gov/ncrc/programs/lwcf/manual/lwcf.pdf>>; accessed January 14, 2015.

National Park Service and Cape Cod Commission. (NPS and CCC) 2010. Study integrated bicycle plan for Cape Cod, bicycle feasibility study, in partnership with the Cape Cod Commission. August 2010. CACO133871. <http://www.capecodcommission.org/resources/transportation/2010_CCNS_Bike_Feasibility.pdf>; accessed November 14, 2014.

New England Environmental, Inc. 2010. Proposed improvements, canoe and kayak launch site. Draft. Hawksnest Pond, Harwich, MA. NEE File # 10-3552. April 22, 2010.

Oldale, R. N. n.d. Geologic history of Cape Cod, Massachusetts. <<http://pubs.usgs.gov/gip/capecod/>>; accessed November 13, 2014.

Patterson, W. A., III, G. L. Clarke, S. A. Haggerty, P. R. Seivert, and M. J. Kelty. 2005. Wildland fuel management options for the central plains of Martha's Vineyard: Impacts on fuel loads, fire behavior and rare plant and insect species. Final report submitted to the Massachusetts Department of Conservation and Recreation; RFR# DEM705. <<http://www.umass.edu/nebarrensfuels/publications/pdfs/FINAL%20DCR%20report.pdf>>; accessed November 14, 2014

- Patterson, W. A., III, and D. W. Crary, Jr. 2006.** Managing fuels in northeast pine barrens. Final report. Joint Fire Sciences Program Project No, 01C-3-1-05. <https://www.firescience.gov/projects/01C-3-1-05/project/01C-3-1-05_final_report.pdf>; accessed November 18, 2014.
- Petersen, J. 2014.** RE: Related to Nickerson Complex RMP. E-mail to A. Backman; December 24, 2014.
- Rane, F. W. 1915.** The State Forester of Massachusetts. Eleventh annual report, 1914. Public Document No, 73.
- Rassman, J. 2006a.** Forest cutting plan. Flax Pond/Fisherman's Landing. Dated November 17, 2006.
- Rassman, J. 2006b.** RE: Proposed restoration project on Nantucket State Forest. Letter to T. Simmons, T. Mahlstedt, J. DiMaio, and J. Varkonda; May 3, 2006.
- Regosin, J. 2013.** Habitat restoration needs. E-mail to P. Cavanagh, P. Gregory, N. Tipton, N. Putnam, A. Backman, and J. Scanlon; November 6, 2013.
- Regosin, J. 2015.** Supplemental comment RE: Nickerson complex RMP and MSSF. E-mail to P. Cavanagh; March 9, 2015.
- Richardson, L. 2014.** RE: Seasonal population increase. E-mail to P. Cavanagh, with attachment; March 12, 2014.
- Rizzo Associates, Inc. 1988.** Environmental Assessment report for Department of Environmental Management, Commonwealth of Massachusetts relative to South Beach Project, Edgartown, Massachusetts. May 13, 1988.
- Robert L. Fultz & Associates. 2002.** Environmental Notification Form. Herring Creek restoration. EOEA No. 12823.
- Sakolsky, G. 2008.** Cape Cod Mosquito Control Project letter to J. Rassem (sic). Dated October 21, 2008.
- Schile, L. M., J. C. Callaway, J. T. Morris, D. Stralberg, V. T. Parker, and M. Lelly. 2014.** Modeling tidal marsh distribution with sea-level rise: Evaluating the role of vegetation, sediment, and upland habitat in marsh resiliency. PLoS One 9(2) e88760. <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0088760>; Accessed March 4, 2015.
- Skehan, J. W. 2001.** Roadside geology of Massachusetts. Mountain Press Publishing Company. Missoula, MT.
- Simmons, T. 2014.** RE: Invasive plant info. E-mail to P. Cavanagh; September 12, 2014.
- Spongberg, S. A. 2008.** Overview and history of the flora and vegetation of Martha's Vineyard. Pages 159-181 *In* Island life: A catalog of the biodiversity on and around Martha's Vineyard. [A. R. Keith and S. A. Spongberg and collaborators P. Z. Goldstein and N. G. Miller] Published in cooperation with the Marine Biological Laboratories, Woods Hole, MA.
- Swain, P.C. and J.B. Kearsley. 2011.** Classification of the natural communities of Massachusetts. Version 1.4. Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries and Wildlife. Westborough, MA. <<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/natural-communities/classification-of-natural-communities.html#>>; accessed November 13, 2014.
- The Nature Conservancy. 2014.** Vineyard Habitat Network interactive "ecological neighborhoods" map of Martha's Vineyard. <<http://tnc.maps.arcgis.com/apps/OnePane/basicviewer/index.html?&extent={%22xmin%22:-7911846.107462791,%22ymin%22:5047596.228065086,%22xmax%22:-7812095.78555077,%22ymax%22:5096286.6150826765,%22spatialReference%22:{%22wkid%22:102100}}&appid=54dabe78270747428fd2d24d4e32287f>>; accessed November 14, 2014.
- Thoreau, H. D. 1908.** Cape Cod. Thomas Y. Crowell & Co., New York, NY. <<http://www.gutenberg.org/files/34392/34392-h/34392-h.htm>>; accessed November 17, 2014.
- Town of Nantucket. n.d.** General FAQs: How many people live on Nantucket? <<http://www.nantucket-ma.gov/Faq.aspx?QID=289>>; Accessed November 13, 2014.
- Truro Conservation Commission, The Truro Conservation Trust, and Massachusetts Coastal Zone Management Office. 1989.** High Head Conservation Area Management Plan. Truro, Barnstable County, Massachusetts. November, 1989.
- UXB International, Inc. 2010.** Draft Final Remedial Investigation Work Plan. Former Cape Poge Little Neck Bomb Target MRS, former Moving Target Machine Gun Range at South Beach MRS, & Tisbury Great Pond MRS. Martha's Vineyard, Massachusetts. Contract Number: W912DY-04-D-0019; Task Order Number: 0006. September 2010. Prepared for U.S. Army Corps of Engineers, New England District. Blacksburg, VA.
- Vanasse Hangen Brustlin and Camp Dresser & McKee, Inc. 2007.** The towns of Dennis and Yarmouth Cape Cod Rail Trail extension. August 31, 2007. <<http://www.yarmouth.ma.us/DocumentCenter/Home/View/800>>; accessed November 14, 2014.

- Waquoit Bay National Estuarine Research Reserve. (WBNERR). 2012.** Emergency Operations Plan for the Waquoit Bay National Estuarine Research Reserve: 2012.
- Waquoit Bay National Estuarine Research Reserve. (WBNERR). 2013.** Hurricane preparedness and response plan for the Waquoit Bay National Estuarine Research Reserve.
- Waquoit Bay National Estuarine Research Reserve. (WBNERR). 2014.** Waquoit Bay National Estuarine Research Reserve Management Plan: 2013–2017. Supporting coastal communities through science.
- Water Resource Services, Inc. 2014.** Investigation of algal blooms and possible controls for Cliff Pond, Nickerson state park, Brewster, Massachusetts. June 2014.
- Weiskel, P. K. 2011.** Update on USGS monitoring activities, Namskaket Creek, Orleans, Mass. April 20, 2011.
<http://www.town.orleans.ma.us/sites/orleansma/files/file/file/namsk_april_20_2011_vshort.pdf>; accessed November 14, 2014.
- Weiskel, P. K., L. A. DeSimone, and B. L. Howes. 1996.** A nitrogen-rich septage-effluent plume in a coastal aquifer, marsh, and creek system, Orleans, Massachusetts: Project summary, 1988-95. U.S. Geological Survey Open-File Report 96-111.
<<http://pubs.usgs.gov/of/1996/0111/report.pdf>>; accessed June 5, 2014.
- Whiddon, A. J. 2011a.** Prescribed Fire Plan. Administrative Unit(s): Manuel Correllus State Forest. Prescribed fire name: Northwest Tract-Edgartown.
- Whiddon, A. J. 2011b.** Prescribed Fire Plan. Administrative Unit(s): Manuel Correllus State Forest. Prescribed fire name: Northeast Tract.
- Whiddon, A. J. 2012a.** Prescribed Fire Plan. Administrative Unit(s): Waquoit Bay National Estuarine Research Reserve.
- Whiddon, A. J. 2012b.** Prescribed Fire Plan. Administrative Unit(s): Manuel Correllus State Forest. Prescribed fire name: Pohogonot Tract.
- Whiting, S. B. 1976.** Management plan for Martha's Vineyard State Forest, Martha's Vineyard, Massachusetts.
- Whiting, S. B., and B. B. Pesch 2007.** Vineyard Birds II: Where and what to see on Martha's Vineyard. Vineyard Stories, Edgartown, MA.
- Woods Hole Group, Inc. 2008.** Beach management plan: Sylvia state beach. April 2008.
<http://www.dukescounty.org/Pages/DukesCountyMA_NaturalResources/BeachManagement.pdf>; accessed November 17, 2014.
- Wortman, N. 2014.** Phone conversation with P. Cavanagh. May 5, 2014.

Recommended citation for this document:

Department of Conservation and Recreation. 2015. Nickerson Management Complex Resource Management Plan: including Shawme-Crowell State Forest, Waquoit Bay National Estuarine Research Reserve, South Cape Beach State Park, Washburn Island, Quashnet Woods State Reservation, Roland C. Nickerson State Park, Hawksnest State Park, Cape Cod Rail Trail, Manuel F. Correllus State Forest, Joseph A. Sylvia State Beach, South Beach State Park, Nantucket State Forest, and Reforestation Lots and Fire Observation Towers on Cape Cod and the Islands.