



Massachusetts Department of Conservation and Recreation
Bureau of Resource Protection
Resource Management Planning Program

RESOURCE MANAGEMENT PLAN

Myles Standish Complex

Including Myles Standish State Forest, Kingston State Forest, Ellisville Harbor State Park, Pilgrim Memorial State Park including the National Monument to the Forefathers, Standish Monument Reservation, and Scusset Beach State Reservation





PUBLIC REVIEW DRAFT



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RESOURCE MANAGEMENT PLAN

2022

Charles D. Baker, Governor
Karyn E. Polito, Lieutenant Governor
Kathleen A. Theoharides, Secretary
Stephanie Cooper, Acting Commissioner

PUBLIC REVIEW DRAFT

The Massachusetts Department of Conservation and Recreation (DCR), an agency of the Executive Office of Energy and Environmental Affairs, oversees 450,000 acres of parks and forests, beaches, bike trails, watersheds, dams, and parkways. Led by Acting Commissioner Stephanie Cooper, the agency's mission is to protect, promote, and enhance our common wealth of natural, cultural, and recreational resources. To learn more about the DCR, our facilities, and our programs please visit us www.mass.gov/dcr. Contact us at mass.parks@state.ma.us.



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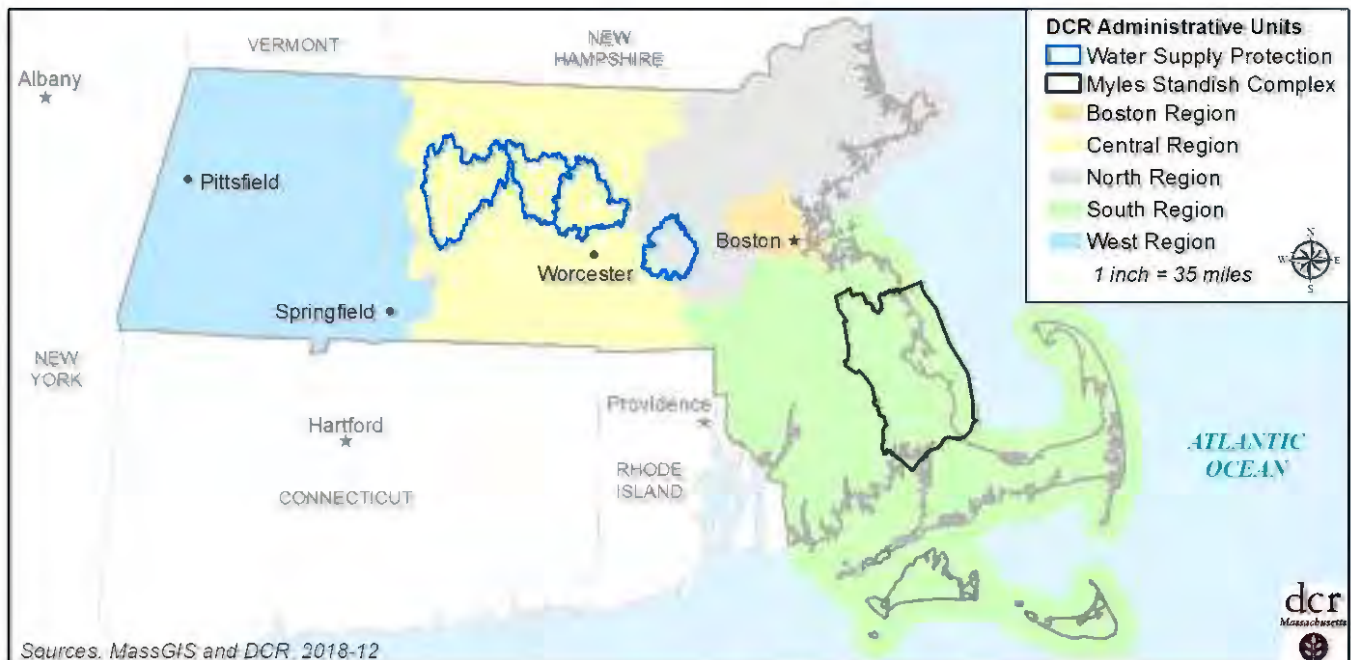
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Map of Massachusetts showing DCR Regions and the location of the Myles Standish Complex.

PREFACE

Massachusetts' park system is among the largest in the nation, with over 450,000 acres of forests, parks, reservations, recreation facilities, flood control sites, reservoirs, and watersheds. These properties protect resources, both rare and common, from the top of Mount Greylock in the Berkshires to the Boston Harbor Islands. They also provide outstanding diverse recreation opportunities. The health and happiness of people across the Commonwealth depends on the accessibility and quality of these natural resources, recreation facilities, and great historic landscapes. The Massachusetts Department of Conservation and Recreation (DCR) stewards these properties and their resources, and continues to improve the vital connection between people and the environment.

DCR's mission is to *Protect, promote, and enhance our common wealth of natural, cultural, and recreational resources for the well-being of all*. One of the ways that this is achieved is through the development and implementation of Resource Management Plans (RMPs) for every park, forest, and reservation entrusted to DCR's care. RMPs, such as this one, provide an inventory and assessment of environmental, cultural, historic, and recreation resources; identify current management practices and capabilities; and develop specific and

implementable management recommendations to address the highest priority needs.

These plans, which are developed with public input, are intended to meet the information needs of DCR's decision makers and property managers. However, they are also of interest to a variety of stakeholders including elected officials, friends groups, partner organizations, state agencies, park visitors, and park neighbors. They are of value to anyone interested in the long-term protection and sustainability of Massachusetts' parks. Although specific staffing levels and administrative structure may change over time, the resource protection goals remain the same. The plan identifies the resource protection priorities for today, and to guide future managers in making informed decisions.

The subject of this RMP is the Myles Standish Complex. (See map, above, for the Complex's location.)

This RMP was developed prior to, and during, the Coronavirus Disease 2019 (COVID-19) pandemic. Information contained herein reflects pre-, and anticipated post-, pandemic conditions. During this pandemic, DCR has taken numerous measures for the health and safety of visitors and staff. These measures have been taken in response to rapidly

changing public health conditions; conditions that continue to change. DCR's response to the pandemic is not documented in this RMP. Instead, this RMP describes park operations activities considered typical pre-pandemic.

PUBLIC REVIEW DRAFT

EXECUTIVE SUMMARY

INTRODUCTION

The Massachusetts Department of Conservation and Recreation (DCR) is responsible for the informed, responsible stewardship of approximately 450,000 acres in its care. Resource Management Plans (RMPs) are the mechanism through which resources are evaluated and stewardship goals identified. These plans guide the management of DCR's properties by setting priorities and help DCR achieve its mission to protect, promote, and enhance our common wealth of natural, cultural, and recreational resources for the well-being of all.

The Department of Conservation and Recreation is directed by legislative mandate (M.G.L. Chapter 21: Section 2F) to prepare management plans for "all reservations, parks, and forests under the management of the department." These plans "shall include guidelines for the operation and land stewardship of the aforementioned reservations, parks and forests, shall provide for the protection and stewardship of natural and cultural resources and shall ensure consistency between recreation, resource protection, and sustainable forest management."

There are several audiences for RMPs. They are primarily intended to provide information about property characteristics to guide DCR's decision makers and property managers but are of value to anyone interested in the long-term stewardship of the lands and resources under DCR's care.

This plan covers the Myles Standish Complex.

THE MYLES STANDISH COMPLEX

The Myles Standish Complex includes approximately 12,900 acres of DCR-owned properties in the Town of Plymouth and adjacent communities. It includes state parks, forests, and reservations; other DCR-owned properties; and properties on which the DCR holds a legal interest.

The following six parks, and their associated properties, are included in the Myles Standish Complex:

- Myles Standish State Forest
- Kingston State Forest

- Ellisville Harbor State Park
- Pilgrim Memorial State Park; including National Monument to the Forefathers
- Standish Monument Reservation
- Scusset Beach State Reservation

The DCR also owns the following real properties in the Complex; not all are managed by the DCR:

- Hanover Branch Rail Trail
- John J. Armstrong Skating Rink
- Bay Farm
- Mulliken's Landing
- Fire Observation Towers (5) and three associated parcels of land.

In addition to these real assets, the DCR holds conservation restrictions on 27 properties (1,712.5 acres, total). It also has a regulatory interest in two Areas of Critical Environmental Concern (ACECs) that are located within the Complex.

PUBLIC PARTICIPATION IN DEVELOPING THIS RESOURCE MANAGEMENT PLAN

Notice of a public meeting and of the DCR's intent to prepare an RMP for the Myles Standish Complex was published in the November 20, 2013 Environmental Monitor (Volume 81, Issue 2). An initial public meeting was convened at the Plymouth Public Library on December 10, 2013. Approximately 26 people attended this meeting, which ran from 6:30 to 8:00 P.M.

The initial public comment period ran from December 10, 2013 through January 14, 2014; 15 sets of written comments were received.

Notice of a public meeting on the draft RMP for the Myles Standish Complex, and of the availability of the plan, was published in the February 23, 2022 Environmental Monitor (Volume 98, Issue 4). Meeting notices were also posted at the Complex's parks and e-mailed to stakeholders. The meeting was held on March 1, 2022 over Zoom; ## people participated.

The public comment period on the draft RMP ran from February 23 through March 25, 2022; ## sets

of written comments were received. Additional comments were received from the Massachusetts Historical Commission and MassWildlife.

Additional information on the public process for this RMP is provided in Appendix B (Public Participation).

This Resource Management Plan was submitted to the DCR Stewardship Council on **Month Day**, 2022, and was adopted by the council on **Month Day**, 2022.

RECOMMENDATIONS

One hundred and three management recommendations were developed for the Complex in its entirety, individual parks within the Complex, and associated properties. Thirty-three of these were included in a previous RMP and meet current prioritization criteria (DCR 2011), so are included in this plan. For a recommendation to be considered priority it must address one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Priority recommendations are summarized in Table ES-1.

Table ES.1. Summary of management recommendations for the Myles Standish Complex.

Recommendation	Complex Myles Standish Kingston Ellisville Pilgrim Memorial Standish Monument Scusset Beach
NATURAL RESOURCES	
Implement general recommendations contained in the <i>Invasive Plant Management Plan: South Region</i> (BSC Group 2017).	X - - - - -
Restore and maintain a mosaic of fire influenced natural communities for state-listed and uncommon plants and wildlife in consultation with NHESP and FRISAC. Removal of tree plantations, cutting, invasive species control, and controlled burning will be considered under the guidelines of forest management, fire management, and habitat management plans with the goal of achieving landscape level pine barrens restoration.	- X - - - - -
Conduct both natural and cultural resource surveys to identify sensitive resources in areas scheduled for fuel reduction, controlled burn, or plantation removal operations.	- X - - - - -
Avoid bulldozing, harrowing or other soil scarification activities in areas dominated by native shrubs or in areas of high archaeological sensitivity. In limited circumstances, following archaeological approval and with NHESP oversight, scarification may be an appropriate ecological restoration and management tool.	- X - - - - -
In consultation with NHESP, develop a mowing plan for the roadside firebreaks that is more patchy and less frequent, in order to protect rare species and to allow a more complex vegetation structure to develop. Mowing should be timed to promote rare species.	- X - - - - -
Create new turtle nesting areas and additional basking habitat for the northern red-bellied cooter according to the NHESP Guidelines for Creating Turtle Nesting Habitat (NHESP 2009) in consultation with NHESP Turtle Biologist.	- X - - - - -
Promote native plant propagation and reintroduction for food and shelter to benefit native wildlife using locally obtained stock of native genotype.	- X - - - - -
Post invasive species information signs at the East Head Reservoir, Rocky, Curlew, and Charge ponds' fisherman landings that warn boat owners of the need to avoid transporting invasive species from pond to pond on their boats.	- X - - - - -
Survey and monitor for introduced aquatic invasive plants in ponds with boat access and eliminate or control these species to the greatest extent feasible.	- X - - - - -
Implement the terrestrial invasive plant management recommendations for Myles Standish State Forest, as identified in the <i>Invasive Plant Management Plan: South Region</i> (BSC Group 2017).	- X - - - - -
Restore compacted and eroded areas at Charge, Fearing, Barrett, College, and Curlew ponds using clean fill that is free of plant propagules.	- X - - - - -
Conduct field surveys to confirm identity of <i>Myotis</i> bat(s) in forest; consult with NHESP and USFWS, as appropriate, to develop and implement management guidance.	- X - - - - -
Implement recommendations contained in the forthcoming fire management plan	- X - - - - -
Implement recommendations contained in the forthcoming Habitat Management Plan, once approved by the NHESP.	- X - - - - -
Implement recommendations contained in the forthcoming South District Forest Resource Management Plan.	- X - - - - -

Recommendation	Complex	Myles Standish	Kingston	Ellisville	Pilgrim Memorial	Standish Monument	Scusset Beach
Protect the coastal plain pondshore community at Great Mink Hole and Wolf Pond through regulated access and informational signage.	-	-	X	-	-	-	-
Develop a barrier beach management plan for barrier beach Pm-12.	-	-	-	X	-	-	-
Continue piping plover and tern management activities to protect populations and to ensure compliance with state and federal law.	-	-	-	X	-	-	X
Consider implementing seasonal beach closures to protect marine mammals and migratory and staging shorebirds from disturbance.	-	-	-	X	-	-	-
Remove trees and shrubs from former agricultural fields and manage fields, via mowing and/or fire, to restore fields to historic extent and to promote grassland bird habitat.	-	-	-	X	-	-	-
Work with local, state, and federal agencies, and stakeholders to support long-term solutions by others to the stability and sedimentation of the Ellisville Harbor inlet and improve the health of the marsh and estuary.	-	-	-	X	-	-	-
Prepare and implement a Climate Change Resiliency plan to protect the state park, including the Portico base and Plymouth Rock, from sea-level rise and storm surge.	-	-	-	-	X	-	-
CULTURAL RESOURCES							
Avoid alterations of undisturbed areas around ponds and wetlands; restore eroded and disturbed areas.	-	X	-	-	-	-	-
Conduct an archaeological survey to evaluate the significance of known and potential archaeological (pre-contact) and historic sites, and record sites on MHC Archaeological Site Forms, where needed. Use inventory to develop a Cultural Resource Protection Plan to provide enhanced protection, interpretation, and management of these resources.	-	X	-	-	-	-	-
Back fill the "Homestead" dump site to eliminate the OHV track and restore original topography.	-	X	-	-	-	-	-
Manage the CCC Camp site in accordance with cultural resource best management practices. Park staff should monitor the area for illegal digging and impacts from vegetation and erosion.	-	X	-	-	-	-	-
Rehabilitate the Fearing Pond Bathhouse, in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties, to serve the Fearing Pond Day Use Area. Interim stabilization of the significant building may be needed in the short term.	-	X	-	-	-	-	-
Complete MHC Area forms for the Headquarters Complex and for the Operations Complex, to determine the history and significance of the Headquarters Building, the Ten Stall Building and the Parks Operations Barn. Manage resources in accordance with DCR Cultural Resource Policy.	-	X	-	-	-	-	-
Maintain Lower College Pond, Bare Hill, Fearing Pond, Alden, and Upper College Pond roads as historic parkways according to the Preservation Guidelines for Historic Parkway (DCR 2007b).	-	X	-	-	-	-	-
Evaluate cottages under DCR's control for historic significance and disposition.	-	X	-	-	-	-	-
Find tenant or use for the Wing House. If no tenant or use can be found, demolish building in accordance with applicable regulations.	-	-	-	X	-	-	-
Complete restoration of Forefathers Monument as outlined in 2006 RMP, to include injecting small cracks and consolidating friable stone surfaces, cleaning stone, resetting loose stones, and repointing all joints.	-	-	-	-	X	-	-

Recommendation	Complex	Myles Standish	Kingston	Ellisville	Pilgrim Memorial	Standish Monument	Scusset Beach
Repair concrete steps and granite stairs from Allerton Street to the Dedication Panel Rehabilitate pathway between circular driveway and Liberty statue, and recreate pathway to Morality statue, in keeping with the original site design.	-	-	-	-	X	-	-
Assess condition of the monument and Standish sculpture; develop a rehabilitation, conservation, and maintenance plan.	-	-	-	-	-	X	-
Assess the condition of the metal railings along the walkway to the monument; repair as needed.	-	-	-	-	-	X	-
Restore water views from base of tower and limited areas in the eastern parking lot.	-	-	-	-	-	X	-
The circa 1957 Scusset Beach Pavilion (i.e., Bathhouse and Maintenance Building) should be preserved by rehabilitating the structures for modern use while preserving distinctive architectural features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.	-	-	-	-	-	-	X
Fill under walkways, former playground site, courtyard, and eating terrace at the Bathhouse and Garage/Concession with sand to prevent further collapse.	-	-	-	-	-	-	X
RECREATION							
Upgrade camping sites and facilities in all of the forest's campgrounds so that 5% or more are fully accessible.	-	X	-	-	-	-	-
Assess the appropriateness and demand for water and electric hookups in one or more camping area.	-	X	-	-	-	-	-
Install standard DCR trail markings and signs at the Pratts Pond parcel.	-	-	X	-	-	-	-
Install gates along roads in the Pratts Pond parcel at the following locations, and elsewhere, to limit illegal OHV and four-wheel-drive vehicle access: North entrance to Route 44 underpass; South entrance to Route 44 underpass; Existing trailhead east of Route 80; and north of Route 44.	-	-	X	-	-	-	-
Work with the Town of Kingston to limit vehicle access to portions of Camp Nekon that abut the state forest and connect to the forest's trails system.	-	-	X	-	-	-	-
Add accessible tables, grills, and paths to the picnic grove.	-	-	-	-	-	-	X
INFRASTRUCTURE							
Acquire or protect in-holdings and adjacent properties containing significant pine barrens habitat.	-	X	-	-	-	-	-
Conduct deed research to clarify the title of the 69-acre parcel on the western shore of Little Widgeon Pond.	-	X	-	-	-	-	-
Complete repairs to six Charge Pond camping area comfort stations.	-	X	-	-	-	-	-
Design and renovate forest headquarters for universal access and better use of existing space.	-	X	-	-	-	-	-
Continue rehabilitation of the Perry House.	-	X	-	-	-	-	-
Undertake a feasibility study for reopening Fearing Pond Road over East Head Pond Dam to public vehicles. Resolve right of way legal issues and develop design options and cost estimates.	-	X	-	-	-	-	-
Improve internal park road signage including mileage to key locations.	-	X	-	-	-	-	-

Recommendation	Complex	Myles Standish Kingston	Ellisville	Pilgrim Memorial Standish Monument	Scusset Beach
Using a multi-pronged approach to trail closure, close and naturalize unauthorized trails that are damaging to sensitive resources, in poor condition, redundant, confusing, or otherwise not desired by DCR.	-	X	-	-	-
Do not route trails along pond shores, including trails for bicycling, horseback riding, or hiking. Any existing trails through Coastal Plain Pondshore communities should be re-routed (NHESP 2007).	-	X	-	-	-
Create an ADA accessible trail from the headquarters parking lot with connections to the existing paved multi-use trail and a scenic overlook of East Head Reservoir. Provide trail wheelchairs at the Interpretive Center for use on the trail.	-	X	-	-	-
Continue multi-use path repairs to eliminate cracks, root heaves, and potholes.	-	X	-	-	-
Continue efforts to establish a multi-use trail network that connects all campgrounds to each other, to the forest headquarters, to day-use areas, and to regional trails.	-	X	-	-	-
Install trail orientation signs and trail map dispensers at all trail head parking facilities. Install intersection directional signs, reassurance markers, and blazes along trails and forest roads.	-	X	-	-	-
Assess the potential benefits and liabilities associated with pursuing a trail easement on the nature trail around East Head Reservoir.	-	X	-	-	-
Implement recommendations identified in the DCR's Accessibility Assessment.	-	X	-	X	-
Obtain an easement, right of way, or other legal instrument that permanently provides for crossing private property in order to access the Holmes Lot.	-	-	X	-	-
Establish a park gateway along Route 80 with vehicle parking, kiosk, and a connection to existing trails.	-	-	X	-	-
Work with abutter to mitigate for the cutting of trees along north boundary of park in 2016.	-	-	-	X	-
Remove stair platform from above the bluff. Secure all trails to the bluff and post as closed. If possible, reuse platform materials on site.	-	-	-	X	-
Close former parking area along State Road and revegetate.	-	-	-	X	-
Repair park access road and parking lot, including improvements to road drainage to minimize erosion. Develop and implement a maintenance schedule for the road and lot.	-	-	-	X	-
Review the park's trails, identify needed/desired trails, close confusing and redundant trails, and install appropriate signs and markings.	-	-	-	X	-
Repair the trail tread along the sloping segment approaching the beach.	-	-	-	X	-
Increase visibility between the parking lot, former parking area along State Road, and the former agricultural fields by thinning and limbing trees, and thinning shrubs to increase visibility through the woods in order to reduce depreciative activities.	-	-	-	X	-
Work with the Town of Plymouth to construct a crosswalk from the end of the westerly sidewalk on North Street, across to Carver Street to improve access to Cole's Hill.	-	-	-	-	X
Conduct boundary research to definitively determine ownership of the intertidal area between the Water Street seawall and the Mean Low Water line.	-	-	-	-	X
Construct universally accessible parking and a pathway to the Forefathers Monument.	-	-	-	-	X

Recommendation	Complex	Myles Standish	Kingston	Ellisville	Pilgrim Memorial	Standish Monument	Scusset Beach
Pave surface of circular loop road using an historically sensitive surface that is accessible, develop an ongoing protocol for its maintenance, and implement protocol on an ongoing basis.	-	-	-	-	X	-	-
Conduct an assessment of existing facilities to meet the needs of the park in regard to office space, equipment storage and repair, and visitor services.	-	-	-	-	X	-	-
Install an accessible surface over the eating terrace at the snack bar to provide universal access to picnic tables.	-	-	-	-	-	-	X
Identify options to reinforce the boardwalk to beach to accommodate utility vehicle access in emergency situations. If boardwalk cannot reasonably be reinforced, assess purchasing smaller, lighter vehicles that may safely pass over existing boardwalk.	-	-	-	-	-	-	X
Maintain connector road between beach parking lot and Phillips Road to allow use by emergency vehicles.	-	-	-	-	-	-	X
Assess the need for, and feasibility of, reconfiguring the entrance to the park and dump station to increase traffic flow and decrease wait times.	-	-	-	-	-	-	X
Install security lighting in Fish Pier parking lot and along walkway between the lot and the park headquarters.	-	-	-	-	-	-	X
VISITOR SERVICES							
Develop spring interpretive programs to support educational field trips related to the Massachusetts Science Curriculum Framework to provide opportunities for students to visit the forest.	-	X	-	-	-	-	-
Develop a comprehensive interpretive plan that identifies appropriate means to assist visitors to better understand the natural and cultural resources of the forest. This plan should focus on the primary resources: the pine barrens and associated features such as frost pockets, kettle ponds, and the plants and animals that depend on these habitats.	-	X	-	-	-	-	-
Provide new interpretive kiosks at the Fearing Pond bath house, Charge Pond Road Parking Lot #5, and Fire Tower Parking Lot #6. These kiosks should include a map of the forest, forest rules, descriptions of facilities available in the forest, and a brochure holder for trail maps.	-	X	-	-	-	-	-
Install interpretive panels and trail map holders on the existing kiosks at the East Entrance Parking Lot #4 and the Upper College Pond Road Parking Lot #2, including a map of the forest, forest rules, and a description of facilities available in the forest. Provide a Fire Danger Sign at the East Entrance.	-	X	-	-	-	-	-
Update the Welcome Wayside panel to include a current property map, regulations, and agency information.	-	-	-	X	-	-	-
Develop interpretive materials related to Native American life in Plymouth both before and after contact.	-	-	-	-	X	-	-
Develop interpretive materials related to Native American life in Plymouth both before and after contact.	-	-	-	-	X	-	-
Develop interpretive materials.	-	-	-	-	X	X	-
Publicize the Forefathers Monument to visitors to Pilgrim Memorial.	-	-	-	-	X	-	-

Recommendation	Complex	Myles Standish	Kingston	Ellisville	Pilgrim Memorial	Standish Monument	Scusset Beach
MANAGEMENT PRACTICES							
Explore opportunities for increased partnerships, including friends groups, to increase public use and enjoyment of DCR parks.	X	-	-	-	-	X	-
Continue to exclude motorized off-highway vehicles (OHV) from Myles Standish and limit motorized vehicle traffic on unpaved forest service roads and utility corridors to minimal traffic for the purposes of maintenance, safety, habitat management and monitoring. Monitor and enforce OHV restriction using the Park Watch Program with law enforcement support.	-	X	-	-	-	-	-
All maintenance, repair, and improvement activities (e.g. grading, culverts, swales, shoulder work) of dirt roads in Priority Habitat are subject to regulatory review under MESA. The preferential use of washed stone over unwashed stone or pavement is recommended to lessen adverse environmental impacts within areas identified as Priority Habitat.	-	X	-	-	-	-	-
Institute a Memorandum of Agreement with MassWildlife to define operational responsibilities for the Quail and Pheasant Wildlife Management Areas; include requirement for a management plan.	-	X	-	-	-	-	-
Work with MassWildlife to prepare a management plan for the Pheasant and Quail Management Areas in order to control non-native species, restore and maintain a mosaic of fire-influenced natural communities, and reduce trail impacts.	-	X	-	-	-	-	-
Concentrate recreational activities in previously established beach, boat launch, and camping areas using educational signs and gates.	-	X	-	-	-	-	-
Develop a recreation master plan for all the forest's developed ponds to assess opportunities for improved public amenities, such as overnight accommodations, for visitors, while protecting sensitive resources.	-	X	-	-	-	-	-
For the remaining privately-owned cottages, continue to manage in accordance with the terms and conditions set forth in the Seasonal Cottage Campsite Permit and applicable law.	-	X	-	-	-	-	-
Increase enforcement of speed limit and commercial vehicle regulations.	-	X	-	-	-	-	-
Establish a lease with UMass for the operation of the Rocky Pond Cranberry Bogs.	-	X	-	-	-	-	-
Establish an agreement with the Friends of Myles Standish State Forest.	-	X	-	-	-	-	-
Review Chapter 91, Section 2A and determine level of compliance related to assets acquired, built, or improved by the Pilgrim Tercentenary Commission, and make corrections where needed.	-	-	-	-	X	-	-
Negotiate and execute an agreement with Plimoth Plantation to structure their use and volunteer services for Pilgrim Memorial State Park (gift shops) and Frazier State Pier (Mayflower II exhibits).	-	-	-	-	X	-	-
Establish, implement, and promulgate special use permit protocols for event permitting of the Amphitheater and the restored grounds.	-	-	-	-	X	-	-
Explore partnerships, including a friends group, to increase public use and enjoyment of Standish Monument Reservation.	-	-	-	-	-	X	-



Many of the Complex's parks have connections to the Pilgrims and the Plymouth Colony. (See Appendix K for photo information.)

SECTION 1. THE MYLES STANDISH COMPLEX

1.1. INTRODUCTION

The Town of Plymouth is called “America’s hometown,” reflecting its role in the European colonization of America. Although not the oldest permanent English settlement in the country, Plymouth is the most prominent in the story of America. Plymouth Rock, the first Thanksgiving, the Mayflower Compact, and the stoicism and perseverance of the Pilgrims all loom large in both the American identity and popular culture.

When the Pilgrims arrived, they found that their new home was already inhabited. Native American tribes, with complex cultures and societies, had lived here as stewards of the land for millennia. The landing of the Mayflower forever changed the lives of native peoples living in Plymouth and beyond. The region’s social and natural landscapes were quickly reshaped.

The Massachusetts Department of Conservation and Recreation (DCR) owns several parks in the Town of Plymouth and adjacent communities. It also

leases federal land along the Cape Cod Canal to operate one additional park. These properties include forests, ponds, and saltmarshes that provide an approximation of what the region was like at the time of the Pilgrim’s arrival and contain globally significant resources. Also among these parks are archaeological sites and historic sites, including several monuments to the Pilgrims. These parks, which are administered through DCR’s Cape Cod District, are collectively referred to as the Myles Standish Complex (i.e., the Complex). A map of properties and facilities that comprise the Complex is presented in Figure 1.1.1.

The Complex includes a variety of recreation opportunities, including two of DCR’s largest campgrounds, an ice arena, a waterfront amphitheater for the performing arts, fresh and saltwater beaches, abundant opportunities to hunt and fish, hiking trails, paved multi-use paths, and resources for other passive, nature-based recreation. It also includes multiple historic resources and heritage tourism sites.

The Myles Standish Complex



1.2. RESOURCE MANAGEMENT PLANS

The DCR is responsible for the informed, responsible stewardship of approximately 450,000 acres of forests, parks, reservations, recreation facilities, flood control sites, reservoirs, and watersheds in its care. Resource Management Plans (RMPs) developed in association with field staff, technical experts, and the public are the mechanism through which resources are evaluated and stewardship goals identified. These plans guide the management of DCR's properties by setting priorities, targeting capital and operational resources, protecting sensitive resources, and improving communication and cooperation with park visitors and the surrounding communities. They also help DCR achieve its mission to protect, promote, and enhance our common wealth of natural, cultural, and recreational resources for the well-being of all.

The Department of Conservation and Recreation is directed by legislative mandate (M.G.L. Chapter 21: Section 2F) to prepare management plans for "all reservations, parks, and forests under the management of the department." These plans "shall include guidelines for the operation and land stewardship of the aforementioned reservations, parks and forests, shall provide for the protection and stewardship of natural and cultural resources and shall ensure consistency between recreation, resource protection, and sustainable forest management." In 2021 DCR launched a new accelerated RMP program to generate shorter, foundational plans for individual DCR properties in a matter of five years. The Myles Standish Complex RMP is the last plan that follows the previous program template.

The legislative mandate also establishes two other requirements. First, that the DCR "shall seek and consider public input in the development of management plans, and shall make draft plans available for a public review and comment period through notice in the Environmental Monitor." Second, management plans must be reviewed and adopted by the DCR Stewardship Council, a thirteen-member citizen oversight entity. Within 30 days of adoption, the Commissioner "...shall file a copy of such management plans as adopted by the council" with the Secretary of State and the Joint

Committee on the Environment, Natural Resources and Agriculture.

RMPs are developed in the context of these five guiding principles:

Good Stewardship. DCR takes care of the public resources entrusted to its care.

Visitor Experience. Every visitor can experience, enjoy, understand, and appreciate the significance of the resources.

Identity. Management is consistent with the core identity of a park.

Resiliency. DCR protects resources and manages for future generations, preparing for the effects of climate change such as sea level rise, increase in severe weather, and warmer temperatures.

Model Management. DCR will employ practices that demonstrate and promote a model of resource-based stewardship and sustainable forest management, balancing natural, cultural, historic, and recreational needs.

This Resource Management Plan (RMP) provides an inventory and assessment of the environmental, cultural, and recreation resources; identifies current management practices and capabilities; and develops specific, implementable management recommendations to address the highest priority needs within the Myles Standish Complex.

There are several audiences for RMPs. They are primarily intended to meet the information needs of DCR's decision makers and property managers. However, they are also of interest to a variety of stakeholders including: elected officials, friends groups, partner organizations, state agencies, park visitors, and park neighbors. They are of value to anyone interested in the long-term stewardship of the lands and resources under DCR's care.

Public Input

Public input is an important part of the RMP process. The legislative mandate that requires the preparation of management plans directs the Commissioner of the DCR to "seek and consider public input in the development of management plans, and ... make draft plans available for a public review and comment period through notice in the Environmental Monitor."

There were two public input periods associated with the preparation of the Myles Standish Complex RMP; one at the start of the process and the second when the draft document was released. Both included public notification, posting in the Environmental Monitor, a public meeting, and a public comment period. Additional information on public participation in the development of this plan is provided in Appendix B.

Massachusetts Division of Fisheries and Wildlife (MassWildlife) Involvement

MassWildlife, through its biologists, district staff, and Natural Heritage and Endangered Species Program (NHESP) provides technical information and expertise throughout the planning process. The NHESP also reviews and comments on draft RMPs, as required by statute. Under the Massachusetts Endangered Species Act (MESA) all “State agencies shall submit to NHESP any draft management plans they prepare for State owned lands on which State listed species are known to occur” (MESA; 321 CMR 10.05(2)C.2). DCR submitted the internal review Draft RMP to NHESP for review and comment, as required by statute. MassWildlife’s comments on this plan are presented in Appendix C.

Massachusetts Historical Commission (MHC) Program Involvement

State agencies must notify the Massachusetts Historical Commission (MHC) prior to undertaking a public project or funding or licensing a private project (950 CMR 71.04). Although management plans, such as RMPs, are not traditional projects and do not require submission of a formal Project Notification Form, DCR has elected to solicit comments in order to better protect the Commonwealth’s archaeological and historic resources. MHC’s comments are incorporated into the draft plan following the public comment period. MHC’s comments on this plan are presented in Appendix D.

Stewardship Council

Following public comment and revision, draft RMPs are submitted to the DCR Stewardship Council for review. Each draft RMP is presented at a public meeting of the Stewardship Council for their consideration. Once adopted, the RMP becomes final.

1.3. MYLES STANDISH COMPLEX

This RMP covers the Myles Standish Complex, which includes six parks and a variety of properties and real assets that the DCR holds in fee. In addition, there are several properties in which the DCR holds legal interest or interest in regulatory review. (Figure 1.1) The term “park” is used generically throughout this RMP to refer to all manner of DCR parks, forests, and reservations.

Parks

The following six parks, and their associated properties, are included in the Myles Standish Complex:

- Myles Standish State Forest (Myles Standish)
- Kingston State Forest (Kingston)
- Ellisville Harbor State Park (Ellisville Harbor)
- Pilgrim Memorial State Park; including National Monument to the Forefathers (Pilgrim Memorial)
- Standish Monument Reservation (Standish Monument)
- Scusset Beach State Reservation (Scusset Beach)

Each of these parks is covered in its own chapter, in Sections 2 through 7 of this RMP. Other properties, including a rink, fire observation towers, and other real assets are only addressed in this section, as are DCR’s legal interests in non-DCR properties.

Connector Parkways

There are no connector parkways.

Other DCR Properties and Real Assets

Skating Rinks

There is one DCR-owned skating rink in the Complex. An overview of this rink is provided in Table 1.3.1.

Table 1.3.1. Physical, political, and regulatory settings of skating rinks within the Myles Standish Complex.

	Armstrong Rink
Area (acres):	5.03
Management^a:	Facilities Management Corp.
Landscape Designation^b:	Not Assessed
Legislative Districts:	
House	1 st Plymouth
Senate	Plymouth and Barnstable
Regulatory Designations:	None known

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

The John A. Armstrong Memorial Skating Rink is located at 103 Long Pond Road, Plymouth. It was constructed in 1972 and named through an Act of the Legislature in honor of John A. Armstrong, "a former member of the General Court" (Chapter 623 of the Acts of 1972). It is operated by Facilities Management Corporation (FMC) under the terms of a 25-year Skating Rink Lease dated June 20, 2002.



Armstrong Rink, Plymouth. (See Appendix K for photo information.)

There is parking for 157 vehicles; 151 general spaces and 6 HP spaces. The HP spaces are 9-foot-wide, with 5-foot-wide aisles. There are no "Van Accessible" signs.

The building and parking lot are in adequate condition. The retaining wall along the Long Pond Road side of the building has begun to collapse.

Approximately one-third of the parcel is undeveloped. These areas have abundant and diverse invasive plants. (Table 1.3.2) An unidentified honeysuckle (*Lonicera* sp.) is also present on the parcel; it may also be invasive.

Table 1.3.2. Known invasive plants of Armstrong Rink.

Species^a	Status^b	Source^c
Asiatic bittersweet	I	1
Black locust	I	1
Black swallow-wort	I	1
Japanese knotweed	I	1
Multiflora rose	I	1
Norway maple	I	1

a. Presented alphabetically, by common name.

b. Plants are classified as being either Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).

c. Information contained in this table was obtained from the following sources:

1. Incidentally observed by RMP Planner, June 2016.

Swimming Pools

There are no swimming pools in the Complex.

Hanover Branch Rail Trail

The Hanover Branch Rail Trail is located along an approximately 3.25-mile-long former railroad bed in the towns of Abington, Rockland, and Hanover. In Abington and Rockland the trail surface is paved; in Hanover it is gravel. Information on the political and regulatory setting of the Hanover Branch Rail Trail is presented in Table 1.3.3.

Table 1.3.3. Physical, political, and regulatory settings of the Hanover Branch Rail Trail.

Setting	Name or Metric
Location:	Abington, Rockland, Hanover
Length (miles)^a:	Abington 0.30 Rockland 2.30 Hanover 0.65
Management:	Towns of Abington, Rockland, and Hanover
Landscape Designation^b:	Not Assessed
Legislative Districts:	
House	5 th Plymouth 7 th Plymouth
Senate	Norfolk and Plymouth Second Plymouth and Bristol
Regulatory Designations:	None Known

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

DCR acquired ownership of the Hanover Branch Rail Trail from the Massachusetts Bay Transit Authority (MBTA) through the National Park Service's Federal Lands to Parks (FLP) Program. In exchange for a portion of Wompatuck State Park

needed for construction of the Greenbush Line, the MBTA provided DCR with a one-mile-long paved bicycle/walking path from the Cohasset Greenbush station to Wompatuck State Park and an approximately 3.25-mile-long segment of the former Hanover Branch Railroad. The railroad bed was acquired by DCR “to be managed for conservation and recreation purposes for public hiking and trail use.” The DCR owns the land, with local municipalities providing trail improvements (e.g., widening and paving) and management. DCR contributed financially to these improvements in the form of matching grants.



Example of Hanover Branch Rail Trail segment. (See Appendix K for photo information.)

There are no signs along the rail trail indicating DCR’s ownership or role in funding trail improvements. Similarly, there is no sign indicating FLP involvement in the acquisition of this railroad for recreational purposes.

Bay Farm

Bay Farm is located along the shore of Kingston Bay. It provides coastal access, water views, and fields and thickets for passive recreation. The site has been occupied by Europeans since 1627 and by Native Americans for millennia prior. Portions are owned by the Town of Duxbury to the north, the Town of Kingston to the south, and DCR in the middle. (Table 1.3.3) These properties are cooperatively managed under a 1989 Memorandum of Understanding, for “the benefit of the residents of the towns and the Commonwealth” (DEM et al. 1989). The southern terminus of the Bay Circuit Trail is located on the property. DCR’s Myles Standish Monument is visible from the farm’s shore.

Bay Farm’s vegetation varies with location, which is a function of ownership. The Duxbury portion is primarily managed as a cultural grassland, with lesser amounts of upland forest and salt marsh. Grassland species, such as bobolink and blue-eyed grass, may be readily observed. The DCR and Kingston properties are mostly forested with a mixture of native, non-native, and invasive species. A Shrub Swamp and Emergent Marsh extend northward from the Kingston property into the DCR parcel. Salt marsh fringes the DCR property along the Bay. Portions of the managed grassland extend southward from the Duxbury property onto DCR-owned land. Vegetation associated with past agricultural use (e.g., fruit trees) or the abandonment of pasture (e.g., eastern red cedar) is common on the DCR parcel. A series of Norway maples, planted by previous owners, parallels the bay. A preliminary assessment found non-native invasive plants abundant and widely distributed on the DCR-owned land. (Table 1.3.4)

Table 1.3.4. Physical, political, and regulatory settings of Bay Farm.

Setting	Name or Metric
Location	Duxbury, Kingston
Area (acres)^a:	7.75 - DCR 44.10 - Town of Duxbury 29.01 - Town of Kingston
Management:	Towns of Duxbury and Kingston
Landscape Designation^b:	Parkland
Legislative Districts:	
House	12 th Plymouth
Senate	Plymouth and Barnstable Plymouth and Norfolk
Regulatory Designations:	Priority Habitat (Duxbury only)

- Calculated using a Geographic Information System (GIS).
- For a summary of DCR’s landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.



The DCR portion of Bay Farm is located along the margin of Duxbury's grasslands (left) and Kingston's woodlands (right). (See Appendix K for photo information.)

Table 1.3.5. Known invasive plants of DCR's Bay Farm.

Species ^a	Status ^b	Source ^c
Asiatic bittersweet	I	1
Black swallow-wort	I	1
Common reed	I	1
Japanese knotweed	I	1
Multiflora rose	I	1
Norway maple	I	1

- a. Presented alphabetically, by common name.
b. Plants are classified as being either Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).
c. Information contained in this table was obtained from the following sources:
1. Incidentally observed by RMP Planner, June 2016.

There is little infrastructure. Only 0.16 miles of trails, through forest and field, are located on DCR property. A gravel parking lot for approximately 23 vehicles is located primarily on Town of Duxbury property, with one corner of the lot on DCR property.

Mulliken's Landing

This property consists of two parcels of land along the north shore of the Jones River, in Kingston. The western parcel belongs to the Town of Kingston and the eastern parcel to DCR. These parcels were acquired in 2002 to provide access, including car top boat access, to the Jones River. Additional information on this property is provided in Table 1.3.5.

Table 1.3.6. Physical, political, and regulatory settings of Mulliken's Landing.

Setting	Name or Metric
Location:	Kingston
Area (acres)^a:	1.30 (DCR) 1.06 (Town of Kingston)
Management:	Town of Kingston
Landscape Designation^b:	Not Assessed
Legislative Districts:	
House	12 th Plymouth
Senate	Plymouth and Barnstable
Regulatory Designations:	None Known

- c. Calculated using a Geographic Information System (GIS).
d. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

The parcel's vegetation indicates a history of disturbance; invasive plants are abundant. (Table 1.3.6) Approximately 40% of the DCR-owned parcel is estuarine and covered in common reed. Upland vegetation includes black oak, red maple, eastern red cedar, black birch, and staghorn sumac; many of which are covered in Oriental bittersweet. Vegetation on the Town's parcel is similar to that on the DCR parcel; grape and poison ivy are abundant. At least one species of honeysuckle is also present.

Table 1.3.7. Known invasive plants of Mulliken's Landing.

Species ^a	Status ^b	Source ^c
Black swallow-wort ^e	I	1
Common reed ^{d,e}	I	1
Japanese barberry ^d	I	1
Oriental bittersweet ^{d,e}	I	1

- a. Presented alphabetically, by common name.
b. Plants are classified as being either Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).
c. Information contained in this table was obtained from the following sources:
1. Incidentally observed by RMP Planner, June 2016.
d. Observed on DCR-owned parcel.
e. Observed on Town of Kingston-owned parcel.

A parking lot and trailhead are located on DCR property. The gravel lot has space for approximately 10 vehicles. The trailhead includes a wooden kiosk constructed as part of a Girl Scout Gold Award project. As long as the kiosk remains in good working condition, DCR does not have any plans to replace it. A carved stone bearing the words "Mulliken's Landing, Dedicated April 20, 2002" and images of semaphore flags and a compass rosette is also located at the trailhead. The first 25 feet of trail

is on DCR property, the remaining 285 feet are located on Town of Kingston property. This trail ends on the banks of the Jones River.



Marker and trail at Mulliken's landing. (See Appendix K for photo information.)

Fire Observation Towers

DCR's Forest Fire Control Districts are based on county boundaries; Complexes are not. As a result, this one Complex includes portions of two fire districts. The Bournedale Fire Tower is located in

District 1 (Barnstable County); all others are located in District 2 (Plymouth County). These fire observation towers are summarized in Table 1.3.7.



This Kingston fire observation tower and access road are located on municipal conservation land. (See Appendix K for photo information.)

In addition to the current towers, footings remain of two former towers. Concrete footings are located just outside the Kingston tower's perimeter fence. Concrete footings are also present at the former site of the Carver tower, which was adjacent to the Perry House in Myles Standish State Forest. (See Section 2)

Table 1.3.8. Physical, political, and regulatory settings of fire observation towers within the Myles Standish Complex.

	Hanson	Kingston	Carver	Plymouth	Bourne
Address	0 High St.	80 Monk's Hill Rd.	Three-Cornered Pond Rd.	250 Old Sandwich Rd.	0 Bournedale Rd.
Construction Date:					
Tower	-	-	-	-	1947
Cabin	-	-	-	-	1968
Accessory Buildings	0	0	1	5	1
Property Owner	DCR	Town of Kingston ^a	DCR ^b	DCR	Private ^c
Area (acres):					
Parcel (Acres) ^d	0.19	0.46	N/A	2.00	N/A
Fenced-in Area (feet)	-	24 x 28	40 x 65	100 x 125	35 x 35
Perimeter (miles):	0.07	N/A	N/A	0.23	N/A
Landscape Designation^e:	N/A	N/A	Reserve	N/A	N/A
Legislative Districts:					
House	6 th Plymouth	12 th Plymouth	1 st Plymouth, 2 nd Plymouth	1 st Plymouth	5 th Barnstable
Senate	2 nd Plymouth & Bristol	Plymouth & Barnstable	Plymouth & Barnstable 1 st Plymouth & Bristol	Plymouth & Barnstable	Plymouth & Barnstable
State-Listed Species:	0	1	40	2	1
Regulatory Designations:	None known	None known	Priority Habitat	None known	Area of Critical Environmental Concern

a. A 99-year lease was established in 1972.

b. Located within Myles Standish State Forest. See Section 2 for more information on this park.

c. In 1995, a 2,500 square-foot parcel containing this tower was to be conveyed to the Commonwealth (Book 190084, Page 57). There is no record that this conveyance occurred.

d. Calculated using a Geographic Information System (GIS).

e. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

There are natural and/or cultural resource considerations for some of these towers. Rare species are associated with the Carver tower. Two towers are located within the boundaries of two areas included in the Inventory of Historic and Archaeological Assets of the Commonwealth; the Hanson tower within the Bonney Hill Area (HNS.C), and the Plymouth tower within in the Pine Hills Community Area (PLY.BB).

Broadband communication equipment is attached to all towers. Massachusetts State Police communications equipment and an equipment shelter are associated with the Plymouth tower.

Boat Ramps

The DCR manages one Office of Fishing and Boating Access (OFBA) facility in the Complex. Information on this facility is summarized in Table 1.3.8.

Table 1.3.9. Physical, political, and regulatory settings of boat ramps within the Myles Standish Complex.

Long Pond-Little Long Pond	
Location	
Water Body	Long Pond Little Long Pond
Town	Plymouth
Park	N/A
Owner	OFBA
Manager	DCR - Myles Standish SF
Area (acres):	1.73
Ramp Material:	Long Pond - Concrete Little Long Pond - Gravel
Trailer Capacity^a:	28
Landscape Designation^b:	N/A
Legislative Districts:	
House	1 st Plymouth
Senate	Plymouth and Barnstable
State-Listed Species	Northern Red-bellied Cooter
Regulatory Designations:	Priority Habitat Sole Source Aquifer

- There is one accessible space and 27 other designated trailer spaces. OFBA indicates that the parking area adjacent to Little Long Pond has a capacity of six cars.
- Because this ramp is not owned by DCR, there is no landscape designation. For a summary of DCR's landscape designations, see <https://www.mass.gov/files/documents/2016/08/ro/ld-factsheet-final.pdf>

This facility is located between Little Long Pond to the north, and Long Pond to the south. There is a gravel boat ramp into Little Long Pond for the launching of car-top boats and a one-lane concrete

ramp into Long Pond for the launching of boats on trailers. Between the two ramps is a parking lot on the north side of West Long Pond Road. The southern part of this lot is restricted to use by vehicles with boat trailers, and the north for use by "shore fishermen or vehicles with car-top boats." An accessible portable toilet is located at the junction of the two parking areas. There are two trash barrels; one located next to the portable toilet and the other adjacent to the concrete boat ramp. DCR personnel mow grass, pick up litter, and empty the trash barrels on an as needed basis. Unlike most OFBA facilities, there is no bulletin board or main identification sign. A small metal sign at the entrance to the parking lot indicates "Fisherman Boat Access" and bears the logos of the OFBA and DCR.



Long Pond, as seen from the OFBA boat ramp facility. (See Appendix K for photo information.)

Legal Interests

In addition to real assets, DCR holds a number of legal interests in non-DCR properties. This includes Conservation Restrictions, access rights, and regulatory interests within Areas of Critical Environmental Concern.

Conservation Restrictions (CRs)

The Myles Standish Complex includes private and municipal properties on which the DCR holds CRs. (Table 1.3.9.) CRs are permanent legal agreements that allow a landowner to continue to own and use their land while transferring a legal interest to DCR. This interest restricts actions, such as development or excavation, that harm the conservation values of the land. By acquiring these interests, DCR is able to limit development, protect important natural and

cultural resources, and promote the sound, long-term stewardship of a property. Many CRs also provide public access to the land for compatible outdoor recreation. In 2016, DCR initiated a CR Stewardship Program to monitor its CRs and to cultivate strong working relationships with landowners. Locations of CRs are depicted on the Complex map (Figure 1.1.1) and on individual property maps.

Table 1.3.10. DCR-held conservation restrictions for properties associated with the Myles Standish Complex.

Town	Owner ^a	Acres ^b
Bourne	North Sagamore Water District	10.0
Plymouth	Town of Plymouth (14)	783.0
Plymouth	Joslin Diabetes Foundation, Inc. ^c (3)	28.0
Plymouth & Wareham	Moby Dick Council, Inc., Boy Scouts of America ^d (6)	798.4
Wareham	Massachusetts Audubon Society ^e (3)	93.1
Total		1,712.5

- Numbers in parentheses are the number of parcels included in the conservation restriction.
- Approximate acreage (+/-), as reported in CR documentation.
- Jointly held with Wildlands Trust.
- Jointly held with Massachusetts Department of Fish and Game.
- Jointly held with Mass Audubon.

Access Rights

The DCR may hold easements or deeded rights of access on private lands that abut DCR-owned land. Information on known access rights is presented in individual chapters, as appropriate.

Areas of Critical Environmental Concern (ACECs)

ACECs are places in Massachusetts that receive special recognition because of the quality, uniqueness, or significance of their natural and cultural resources. The DCR has a statutory role in their stewardship. Within ACECs, the DCR shall “take actions, administer programs, and revise regulations in order to” acquire useful scientific data; preserve, restore, or enhance resources; and ensure that activities in or impacting the area minimize adverse effects on seven specific resource values. (301 CMR 12.00)

There are two ACECs in the Myles Standish Complex; the DCR owns or holds a legal interest in one and has a structure in the second. (Table 1.3.9) Additional information on these ACECs may be

found at <https://www.mass.gov/lists/acec-designations>.

Table 1.3.11. Areas of Critical Environmental Concern (ACEC) within the Myles Standish Complex, and DCR properties that occur within those areas.

ACEC	DCR Property
Ellisville Harbor	Ellisville Harbor State Park
Herring River Watershed	Bourne Fire Tower

1.4. NATURAL RESOURCES

Physical Features

The Complex is located in an area characterized by glacial outwash, recessional moraines, and kettle ponds. Below ground is the Plymouth-Carver Aquifer, a 140-square-mile area of water saturated glacial sand and gravel (Hansen and Lapham 1992). Although the topography is similar at a regional scale, differences emerge when looking at individual parks. Properties associated with moraines (e.g., Plymouth and Bourne fire towers) or drumlins (e.g., Standish Monument) have steeper topographic relief than do properties largely located on outwash (i.e., Myles Standish and Kingston state forests). Coastal properties (i.e., Pilgrim Memorial, Ellisville Harbor, and Scusset Beach) tend to be flat areas abutting hills.

Water Resources

The Complex’s parks are located in the following three watersheds:

- Buzzards Bay
- South Coastal
- Taunton

Two parks, Myles Standish and Kingston, occur within more than one watershed. All other parks are located entirely within the South Coastal Watershed.

There are 3.01 miles of flowing waters. Most (2.26 miles, 75.1%) are tidal creeks associated with either Ellisville Harbor or Scusset Beach. Inland properties have little flowing water.

Flood Zones

Properties with rivers, streams, and wetlands may be subject to flooding. Flooding impacts vary among

properties; the potential impacts of 100- and 500-year floods are addressed at the property level.

Hurricane Surge Inundation Zones

The potential impacts of storm surge due to Category 1–4 hurricanes are addressed at the property level. It is worth noting that the models used to generate these projections are based on the sea-level of the recent past, and do not consider projected sea-level rise. Projections, therefore, should be considered near-future impacts.

Climate Change

“Unequivocal evidence...shows that the atmospheric concentrations of important greenhouse gases...have increased over the last few centuries” (Cubasch et al. 2013:121). Associated with increased atmospheric CO₂ levels are: sea level rise, increases in temperature trends, changes in the frequency and intensity of extreme weather events, changes in the frequency and intensity of precipitation, and an increase in CO₂ and decrease in pH in oceans (U.S. Global Change Research Program 2014). Of these, only the projected impacts of sea level rise may be readily assessed at the park level. The projected impacts on fish and wildlife habitat are used as an indicator of overall climate impacts on natural resources. This information is presented by habitat type below and is not included in individual park chapters.

In 2016, Governor Baker issued Executive Order No. 569: *Establishing an Integrated Climate Change Strategy for the Commonwealth*. Two years later the Commonwealth formally adopted the resulting *Massachusetts State Hazard Mitigation and Climate Adaptation Plan* (Commonwealth of Massachusetts 2018). This plan identifies observed and projected climate trends, associated hazards, and guidance and strategies for governmental entities to proactively address climate change impacts through adaptation and resiliency measures.

Projected Sea-Level Rise

The Intergovernmental Panel on Climate Change (IPCC; Church et al. 2013) developed projections of sea-level rise based on four emission models and multiple time frames. The model that considered the highest concentration of gasses and aerosols (i.e., the RCP 8.5 model) predicted a 0.3m (12 inch) likely increase in global mean sea level over the next 30–

50 years (i.e., from present through 2046–2065). Because this considers the highest concentrations of emissions of the four scenarios modeled by the IPCC, it errs on the side of caution. IPCC projections reflect global mean sea-level rise; local conditions may differ. “It is very likely that in the 21st century and beyond, sea level change will have a strong regional pattern” (Church et al. 2013).

Sea-level rise projections based on data specific to Boston are likely better suited for assessing potential impacts to DCR’s coastal properties than are global averages. Under the Intermediate and Intermediate-High scenarios, relative mean sea level in Boston Harbor is projected to rise by 1.4 and 1.7 feet, respectively, by 2050 (<http://www.resilientma.org>). Under the High and Extreme scenarios, sea level is projected to rise 2.4 to 3.1 feet during the same period. Similar increases have been projected for Woods Hole and Nantucket, indicating that these values may be reasonably applied to the entire Massachusetts coast (Commonwealth of Massachusetts 2018). Because coastal elevation data for Massachusetts are only available in one-foot increments, we have used two feet for calculating the acreage and area impacted by both the Intermediate and Intermediate-High scenarios, and a three-foot increase for both the High and Extreme scenarios. As a result, we provide only two estimates of sea level rise for our coastal properties. Acreage values for sea-level rise impacts, therefore, should be interpreted as approximations based on best available sea level rise and digital elevation data. Refined estimates of impacts will be generated as improved sea level rise data and finer resolution digital elevation models become available.

Projected Impacts on Fish and Wildlife Habitat

Manomet and MassWildlife (2010) assessed the vulnerability of Massachusetts’ habitat types to climate change. Their results indicate one vulnerable and two critically vulnerable habitat types within the same geographic area as the Myles Standish Complex. Anticipated responses to climate change, by habitat type, are identified in Table 1.4.1.

Table 1.4.1. Predicted responses of habitat types to climate change.^a

Predicted Response ^b	Habitat Type ^c
Likely to Greatly Benefit	Southern/central hardwood forest
Likely to Benefit	Warm water ponds, lakes, and rivers
Less Vulnerable	Atlantic white cedar swamp Hardwood swamps Pitch pine-scrub oak Riparian forests Shrub swamp Vernal pools
Vulnerable	Emergent marshes
Critically Vulnerable	Brackish marsh Intertidal mudflats and sandflats

a. From Manomet and MassWildlife (2010).

b. Predicted responses to climate change are: Likely to Greatly Benefit = Increase in extent; Likely to Benefit = Moderate increase in extent; Less Vulnerable = Either no change, or moderate change, in extent; Vulnerable = At risk of being greatly reduced in extent; and Critically Vulnerable = At risk of being eliminated or nearly so.

c. These habitat types are either known to occur, or are likely to occur, within the Complex.

Rare Species

State-listed Species

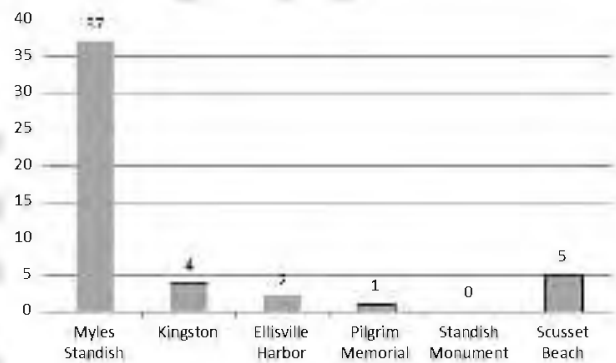
Forty-three state-listed species are documented from the six parks in the Complex. (Table 1.4.2) Some are so vulnerable to collection that the NHESP limits information on their occurrence. The NHESP refers to these species as “data sensitive.” In the Myles Standish Complex, there are two species of data sensitive animals. (Table 1.4.2)

The number of state-listed species per park ranges from 0–37. (Figure 1.4.1) Thirty-nine are known from only one park, three from two parks, and one from three parks. In addition, there are no state-listed species associated with Standish Monument, Armstrong Rink, or most fire towers.

Table 1.4.2. Number of state-listed species, by type and state rank, known to occur on DCR-owned properties in the Myles Standish Complex.

Type	Endangered	Threatened	Special Concern	Total
Birds	0	1	3	4
Insects	2	6	11	19
Plants	5	3	6	14
Reptiles	1	1	2	4
Data sensitive animal	2	0	0	2
Total	12	11	22	45

Figure 1.4.1. Number of State-listed species, by property.



The Complex’s rare species may be generally categorized as associated with the following habitats:

- Pine barrens
- Coastal beaches and near-shore areas
- Wetlands and wetland complexes, including bogs, coastal plain pondshores, emergent marshes, and forested wetlands

Additional information on rare species is presented at the property level.

Federally listed Species

Three federally listed species are known from the Complex’s parks; they are:

- Northern Red-bellied Cooter; Endangered
- Piping Plover; Threatened
- Roseate Tern; Endangered

Priority Habitat

Priority Habitat is a regulatory term that refers to the geographic extent of habitat for species protected under MESA. Activities within Priority Habitat may require review under MESA. (See Section 1.10.) Two parks have no Priority Habitat, the rest have between 35% and 93% Priority Habitat. Additional information on Priority Habitat is presented at the property level.

Vegetation

Information on the parks' vegetation is inconsistent. Some parks (i.e., Myles Standish) have been well-documented; for others there is little to no information. Information on vegetation is summarized in individual chapters as available and appropriate.

Invasive Species

An invasive plant management plan for the South Region was developed in 2017 (BSC Group 2017). Only one property in the Complex, Myles Standish State Forest, was surveyed for that plan. General management recommendations applicable to all properties in the South Region, and management recommendations specific to Myles Standish State Forest, are included in the plan (BSC Group 2017). Information is presented at the property level.

Priority Natural Communities

Natural communities are assemblages of plant species that occur together in space and time (Swain 2016). The amount and quality of information on these communities varies greatly among parks. Verified information comes from the NHESP data set (Harper 2017). Supplemental site-specific data are provided when available. This information is presented at the property level.

Twenty natural communities are known from the Complex. Ten of these have state ranks of S1–S3, and are considered Priority Natural Communities; they are:

- Coastal Plain Pondshore (S3)
- Maritime Beach Strand (S3)
- Maritime Dune (S3)
- Maritime Forest/Woodland (S2)
- Maritime Juniper Woodland/Shrubland (S1)

- Maritime Shrubland (S3)
- Pitch Pine-Scrub Oak (S2)
- Salt Marsh (S3)
- Sandplain Heathland (S1)
- Scrub Oak Shrubland (S2)

One additional community type, Black Oak-Scarlet Oak Woodland/Shrubland has a rank of S3/S4. Additional information on community types is available in a series of fact sheets at <https://www.mass.gov/service-details/natural-community-fact-sheets>.

Forests

DCR monitors its forests through an ongoing inventory process. Monitoring plots associated with the Continuous Forest Inventory (CFI) are located throughout most of the state, with the exception of properties in Greater Boston. In the Complex, plots are located in Myles Standish State Forest, Kingston State Forest, and Scusset Beach State Reservation. Information is incorporated into individual chapters as available and appropriate.

Wildlife

Site-specific information is largely lacking. However, a variety of resources are available for the region (e.g., Cardoza et al. n.d., Cardoza and Mirick 2009). Because bird watching is a popular recreational activity, information on birds is available for most parks; it is presented at the property level. A total of 288 species, over 57% of all birds known from Massachusetts, have been recorded in the Complex's parks.

1.5. CULTURAL RESOURCES

The Complex's archaeological and historic resources reflect the region's Native American history, agrarian and subsequent residential development, development of early park and recreation facilities, and institutionalized conservation. A summary of the Complex's cultural resources is presented in Table 1.5.1. An overview of the cultural development of the Myles Standish Complex is provided in Appendix E.

Table 1.5.1. Summary of cultural resources in the Myles Standish Complex.

Type	Number
National Historic Landmark	1
NR - Individually listed properties ^a	1
NR - Historic Districts ^a	2
MHC documented resources - Historic	23
MHC documented resources - Archaeological ^b	0
Verified resources not on NR or MHC inventories	72
Resources documented but unverified ^c	1

- Properties and districts listed in the National Register of Historic Places (NR) are automatically listed on the MHC inventory. For the purposes of this table, resources listed on the Register are not included among the number of MHC documented resources.
- Information on these resources is not publicly available. Because of this, most are not listed in Cultural Resource tables in Sections 2–7. However, archaeological resources on the National Register are included in these tables.
- Resources reported through various sources, but not yet field verified or confirmed.

The term *cultural resources* includes a variety of resources that reflect human history. The MHC has established terms to describe these resource types, they are:

- **Archaeological Site;** below ground or below water resources
- **Area;** collection of related properties within a specific geographic boundary
- **Building;** a fixed structure with four walls and a roof
- **Burial ground;** cemeteries and other places of human burial
- **District;** a concentration of sites, buildings, structures, or objects
- **Landscape;** a geographic area with cultural and natural features related to a historic activity or event
- **Object;** a resource that is primarily artistic or commemorative in nature, such as a monument
- **Structure;** resources constructed for utilitarian purposes like streets, bridges, and dams

All of these resource types are represented in the Complex; information is presented at the property level.

1.6. RECREATION ACTIVITIES

The Complex's parks are a mixture of coastal and inland properties, and the variety of recreation activities reflects these locations. Recreation at coastal properties is largely water-based, such as sunbathing, swimming, surfcasting, and beachcombing. An exception is Pilgrim Memorial State Park, which has no beach and limited recreation. At inland parks, the emphasis is largely on trail-based recreation such as hiking, mountain biking, and horseback riding. Some activities, such as camping, dog walking, hunting, fishing, nature study, picnicking, and swimming take place at both locations. There is no authorized OHV use; illegal riding is a significant issue at the Complex's two state forests. Athletic courts are largely absent, with only a single basketball court at Myles Standish. Single basketball nets, without courts, are located at Myles Standish and Scusset Beach. Finally, ice hockey and free skating take place at the Complex's only rink.

1.7. INFRASTRUCTURE

The amount and types of infrastructure vary among properties. In general, parks with administrative or operations facilities (e.g., Myles Standish) tend to be highly developed as do parks with concentrations of historic resources (e.g., Pilgrim Memorial).

Buildings and Structures

There is one dam in, and two adjacent to, the Complex's properties. (Table 1.7.1) Additional information on these dams is presented at the property level.

Table 1.7.1. Dams and dikes adjacent to properties in the Myles Standish Complex.

Name	National ID #	Municipality	Park/Facility	Jurisdictional ^a	Size Class ^b	Hazard Code ^c	Condition ^d	Owner ^e	Operator ^e
Wolf Pond Dam ^f	N/A	Kingston	Kingston	-	-	-	-	DCR	Unknown
East Head Dam	MA00376	Carver	Myles Standish	Y	I	Low	F	Davison Partners	Makepeace
Water Street Dam	MA02460	Plymouth	Pilgrim Memorial	N	-	N/A	-	Plymouth	Plymouth

- a. N = No, the dam or dike is not regulated by the DCR Office of Dam Safety (ODS); and Y = Yes, dam or dike is under the jurisdiction of the ODS (i.e., jurisdictional).
- b. Size Classes include: I = Intermediate; and L = Large.
- c. Jurisdictional dams are assigned one of the following hazard codes, based not on condition, but on potential impacts in the event of a dam failure: H = High; L = Low; S = Significant; and N/A = Not applicable.
- d. Condition Codes are: F = Fair; G = Good; P = Poor; and S = Satisfactory.
- e. Owner and Operator codes include: Makepeace = A. D. Makepeace Company of Wareham, Massachusetts; and Plymouth = Town of Plymouth.
- f. This dam, which was formerly part of a cranberry growing operation, was identified during the RMP planning process and is being added to DCR's Office of Dam Safety's database. Information is currently unavailable for most fields in this table.

Trails

There are two long-distance trails and one regional trail that connect to the Complex's parks. The long-distance trails are:

Claire Saltonstall Bikeway. This trail extends 135 miles from the Esplanade, in Boston, to downtown Provincetown. It passes by Kingston State Forest along Route 80, Myles Standish State Forest along Long Pond Road, and Ellisville Harbor State Park along Route 3A. Maps of this bikeway are available at <http://www.masspaths.net/bikeways/ccbw/>.

Bay Circuit Trail & Greenway. This trail is actually a 230-mile-long network of trails that extend from Plum Island, Newburyport, to Kingston Bay, Duxbury. It passes through Bay Farm. Additional information may be found at <http://www.baycircuit.org/>.

The one regional trail is:

Plymouth Wishbone Walking Trail. This approximately 15-mile-long trail originates in the parking lot at the Myles Standish State Forest headquarters and ends on Cape Cod Bay in Ellisville Harbor State Park. Along the way it passes through two Wildlands Trust preserves. The entire length of this trail is identified by markers.



Plymouth Wishbone Walking Trail signs identify the multiple partners involved in its creation. These signs may be seen at various points in Myles Standish State Forest. (See Appendix K for photo information.)

1.8. VISITOR SERVICES

The term “visitor services” refers to a suite of interactions intended to assist, inform, and inspire park visitors. This includes providing recreational programming; interpretation of natural, cultural, and historic resources; and environmental education to the public. It also includes informal interactions with visitors, which may include providing directions and answering their questions about park facilities, resources, and policies.

Visitor services personnel are based at Myles Standish, Pilgrim Memorial, and Scusset Beach. They provide services and programming to these parks and also to Standish Monument Reservation and Ellisville Harbor. Friends groups provide

additional programming at Myles Standish and Scusset Beach. Information on specific programming is presented by park.

1.9. MANAGEMENT RESOURCES

Administrative Structure

All parks in this RMP are part of the Myles Standish Complex. This Complex, the Nickerson Complex, and the Correllus Complex constitute the Cape Cod District; which is one of three districts in the DCR's South Region.

Staffing

Park management is a challenging task that requires expertise in a variety of disciplines. It is carried out by DCR staff, with supplemental support provided by state and municipal government employees, friends groups, and volunteers. Staffing varies among properties, among seasons, and among years with operational needs and available funding.

DCR Personnel

The operation and management of properties within the Complex requires the participation of regional and district personnel, as well as DCR staff from other bureaus and offices. Day to day management primarily involves DCR personnel at the region, district, and complex level.

Region. Administrative, clerical, and support functions are performed by personnel located in the regional office in Milton, and who serve the entire region including the Cape Cod District, South Coast District, and Islands District. The Regional Director performs a variety of administrative functions, including supervision of regional staff and District Managers. Office staff provide clerical and fiscal support (e.g., procurement, payroll, processing seasonal employee paperwork). A mechanic, who services and repairs the Complex's vehicles, is based in Carver.

District. The Cape Cod District Manager reports to the Regional Director, and is responsible for the management of all properties, and supervision of all Field Operations Team leaders, within the District. The Cape Cod District includes two complexes, the Myles Standish Complex and the Nickerson Complex.

Complex. Each complex has a Field Operations Team, comprised of all personnel from properties within that complex, and one Field Operations Team Leader (FOTL). The FOTL has the ability to allocate resources within the Complex in order to fulfill park operations. Resources may also be reallocated on a temporary basis to assist with special projects that require staffing, skill sets, or equipment unavailable at any one park.

Other DCR staff work closely with the Field Operations Team to advance the agency's mission and enhance the visitor experience. Park Rangers and visitor services positions are based at properties within the Complex. They interact regularly with park visitors and are often the public face of DCR. Bureau of Forest Fire Control and Forestry personnel work closely with field staff to detect and suppress wildfires, promote fire safety, and help maintain fire breaks and roads. The Bureau's Regional Management Forester is responsible for forest management on Complex properties and throughout the Bureau's Southeast Region.

Partnerships and Volunteers

There are no Complex-wide organized partnerships or volunteer programs. There are two park-specific friends groups; The Friends of Myles Standish and the Friends of Scusset Beach Reservation. Both are part of the Massachusetts Forest and Park Friends Network. Regional non-profits (e.g., Wildlands Trust, Southeastern Massachusetts Pine Barrens Alliance) have specific interests in some, but not all, properties in the Complex.

Public Safety

The Massachusetts State Police and Massachusetts Environmental Police have law enforcement authority on state-owned lands. The Environmental Police provide primary enforcement of hunting, fishing, boating, OHV, and snow vehicle regulations. Local police provide additional law enforcement within their respective jurisdictions.

Fire suppression is provided by local fire departments with assistance from DCR's Forest Fire Control Districts 1 and 2. Municipalities also provide emergency medical response. Rangers, lifeguards, and other trained DCR personnel may provide first aid.

Park Operations

DCR personnel perform a variety of activities related to the operation and maintenance of the Complex's resources and facilities. These activities differ among parks and, within each park, differ from day to day and among seasons. However, general routines are followed.

Buildings and grounds related activities include: cleaning, painting, minor carpentry, electrical and plumbing tasks, mowing grass, removing leaves, picking up litter, emptying trash barrels, and graffiti removal.

Visitor services related activities include: providing interpretive programming, responding to visitor questions, ensuring public safety, and promoting awareness of park regulations and enforcing those regulations.

Conservation-related activities, such as mowing fire breaks, maintaining fire access roads, control of invasive plants, and restoration of rare species habitat are performed by a variety of DCR personnel including park operations, Management Forestry, Forest Fire Control and Forestry, and the Ecology Program. Contractors, volunteers, and partner agencies (e.g., MassWildlife) may also provide support.

Administrative activities include: employee scheduling and supervision, report preparation, revenue processing, coordinating volunteer activities and special events, and budget preparation.

General Budgetary Information

Typical Funding

Three major types of funds support the operations, maintenance, and capital improvement of DCR facilities. They are:

Operating Budget. The annual operating budget supports daily operations and maintenance including utilities, supplies, equipment leases, administration, and the maintenance and minor repair of facilities, vehicles, and equipment.

Capital Budget. This supports projects (e.g., construction, repair) and items (i.e., equipment) with a per-unit cost of at least \$5,000 and an expected lifespan of at least seven years. They are identified and funded through a five-year capital plan. These

plans identify proposed capital projects, their costs, and the year in which they are to be funded. Examples within the Complex include construction of two new comfort stations at Myles Standish campgrounds (2013 and 2017), repairs to the Myles Standish paved multi-use path (2015, 2018, and 2020), over four million dollars in road and parking lot paving at Myles Standish (2014 and 2015), one million dollars in paving at Scusset Beach (2018), and over \$3M invested in the Quadricentennial rehabilitation of Pilgrim Memorial State Park (2019).

Deferred Maintenance. These funds are used for infrastructure repair that exceed typical maintenance, but do not rise to the level of a capital project. They may also be used to address emergency capital projects for which funds have not been programmed. Each region is allotted deferred maintenance funds on an annual basis; the Regional Director determines how these funds are to be expended. An example within the Complex is the installation of epoxy floors in comfort stations at Charge and Fearing Pond campgrounds in Myles Standish.

Supplemental Funding

In addition to operations, capital, and deferred maintenance funds, DCR facilities may receive funding through other sources including grants, the Conservation Trust Fund, dedicated funds associated with individual properties (e.g., telecommunication tower fees), retained revenues (e.g., parking fees), and in-kind contributions. One property, Scusset Beach, has a legislatively-established dedicated trust fund and entrance surcharge.

1.10. MANAGEMENT PRACTICES

Management of the Complex's natural, cultural, and recreation resources is complicated and subject to a variety of laws, regulations, policies, and agreements. It is also subject to available resources and staffing. This section describes current management practices and identifies relevant regulations, other legal considerations, and policies that guide this management. Select Massachusetts regulations are presented in Appendix F.

Natural Resources

Best Management Practices

The Bureau of Resource Protection has developed a series of Best Management Practices (BMPs) for guiding common park activities with the potential to affect natural or cultural resources. Natural resources BMPs are available on topics such as Compliance with MESA and managing invasive plants. They are available at <https://www.mass.gov/service-details/best-management-practices-dcr>.

Research Permits

Research Permits are required for all ecological research on DCR properties. Additional state and federal permits may be required, depending on the nature and location of research. Research within wetland and river jurisdictional areas may also require regulatory review and approval from the local conservation commission.

Water Resources

Drinking Water. Water supply systems that provide water to 25 or more persons daily or operate 60 or more days per year are considered public water systems and must comply with the Massachusetts Drinking Water Regulations (310 CMR 22). Within the Complex, only Myles Standish State Forest operates a public water supply.

Sanitary Waste. The sub-surface disposal of sanitary wastes is regulated by a variety of regulations, including Title 5 of the State Environmental Code (310 CMR 15:00), Underground Injection Control regulations (310 CMR 27:00), and groundwater discharge permits (314 CMR 5.00). These regulations apply to all septic systems in the Complex.

Storm Water Management. Activities on DCR properties that affect the quantity or quality of storm water are regulated by a National Pollutant Discharge Elimination System (NPDES) storm water management plan (DCR 2007a). This plan describes control measures that the DCR uses to satisfy NPDES Phase II permit requirements for transportation and non-traditional Municipal Separate Storm Sewer Systems (MS4s). Although emphasis is placed on parks in the Greater Boston area, the plan is applicable to the entire DCR park system. For additional information see

<https://www.mass.gov/service-details/dcr-stormwater-management>.

Outstanding Resource Water (ORWs). ORWs are designated based on their “outstanding socio-economic, recreational, ecological and/or aesthetic values.” Discharges to these waters are regulated by Massachusetts Surface Water Quality Standards. (314 CMR 4:04(3); Appendix F) ORWs are only associated with one of the Complex’s parks.

Wetlands. Activities within a wetland resource area or buffer are regulated by the Massachusetts Wetland Protection Act. (310 CMR 10:00; Appendix F) A BMP is available to help field operations personnel comply with these requirements (DCR n.d.a).

Vernal Pools. Certified vernal pools are protected under a variety of state laws, including the Wetlands Protection Act, Title 5 of the State Environmental Code, and the Massachusetts Forest Cutting Practices Act. A BMP on vernal pool certification on DCR lands is available (DCR n.d.b).

Rare Species

MESA protects rare species and their habitats by prohibiting the “take” of any plant or animal listed as Endangered, Threatened, or Special Concern (<https://www.mass.gov/service-details/mesa-endangered-species-act-mesa-overview>). Projects within identified Priority Habitat of rare species must undergo review by the NHESP, unless otherwise exempted under the law. (See 321 CMR 10:00 for the full definition of “Project.”) Many staff and volunteer activities that take place within the Complex (e.g., invasive species removal, trail work) meet the definition of Project and must go through regulatory review if they are to occur in Priority Habitat.

State agencies have the following special obligations under MESA:

- Use their authorities in furtherance of the purposes of MESA and “use all practicable means and measures to avoid or minimize damage.”
- Submit draft management plans, such as RMPs, to the NHESP for review.
- State-owned lands “that provide habitat for state-listed species shall be managed for the benefit of such listed species;” agencies “shall

give management priority to the protection, conservation, and restoration of” state-listed species on state-owned lands. 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.”

These requirements guide operations activities in, and planning activities for, Priority Habitat in the Complex.

When federally listed species are present, such as occurs at several of the Complex’s parks, DCR’s actions may also be subject to the U.S. Endangered Species Act (ESA). This Act prohibits activities that “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect” listed species. The term “harm” includes significant habitat modification or degradation. Actions with the potential to take federally listed species are prohibited, even if they are intended to promote those very same species. Processes exist within the ESA to move such projects forward. Informal consultation with the U.S. Fish & Wildlife Service is the first step to ensuring compliance.

Vegetation

There is no single management plan for the Complex’s vegetation. The *de facto* management policy is to permit populations of most species of plants to increase or decrease without human intervention. Exceptions include the maintenance of lawns, recreation fields, and other turf areas; fire break maintenance and management; removal of hazardous trees; removal of plantations of non-native trees; timber harvests; road and trail maintenance; removal of non-native or invasive plants; and vegetation cutting associated with the management of plant or wildlife habitat.

Vegetation management also occurs in response to catastrophic weather events. When this occurs, priority is placed on cleaning up vegetation that impacts public safety and critical park operations infrastructure (e.g., access roads, utilities); often resulting in temporary closure of all or portions of parks. Affected parks are later reopened, when it is safe to do so. In March 2018 a series of nor’easters caused significant damage to vegetation at many of the Complex’s parks, requiring many months of

clean up by Complex and Forest Fire Control and Forestry personnel. Limited staffing and resources (e.g., wood chippers) lengthened the recovery process. Specific impacts of the March 2018 nor’easters are identified in individual park chapters.

Invasive Species. Continuous Forest Inventory (CFI) sampling protocols include the recording of invasive species observed within sampling plots (DCR 2014a). There are no other Complex-wide monitoring or eradication efforts.

Forests. A total of 84 CFI monitoring plots are located in three of the Complex’s parks (i.e., Myles Standish, Kingston State Forests, and Scusset Beach). A series of forestry related metrics, including the number of trees five or more inches in diameter, tree regeneration, amount of coarse woody debris, presence of invasive plants, and presence of tree diseases are collected at each plot. On average, each plot is visited, and data collected, once every ten years. DCR uses this information to “understand how forests change through time, both from an economic and an ecological perspective” (DCR 2014a).

Wildlife

There is no single wildlife management plan for the complex. The *de facto* management policy is to permit most wildlife populations to increase or decrease without human intervention. Exceptions include rare species management; fishing; and the hunting of game species. (See Recreation Activities: Hunting and Fishing, below.)

Cultural Resources

The DCR’s Office of Cultural Resources (OCR) provides technical assistance on issues relating to the preservation of the agency’s vast and diverse portfolio of cultural resources. A copy of the DCR Cultural Resources Policy has been included as Appendix G.

The OCR is also responsible for overseeing the historic preservation and regulatory compliance responsibilities of the agency. It assesses regulatory needs and, when applicable, notifies the MHC through the filing of a Project Notification Form or Environmental Notification Form for any proposed projects undertaken, funded, permitted, or licensed in whole or in part by the agency. This is done so that the MHC may make a Determination of Effect

of the project on archaeological and historic resources. Projects may be large or small and involve any level of impact on an above or below ground cultural resource. Finally, the OCR coordinates all archaeological survey, testing, and excavation with the State Archaeologist at the MHC through an archaeological permit.

OCR defines a cultural resource as 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. (See Section 1.5. for definitions of these resource types.) Cultural resources also include pre-Contact 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.

There are a number of different designations for individual cultural resources and districts in Massachusetts; including local designation, inclusion on the statewide inventory, listing in the State Register of Historic Places, listing in the National Register of Historic Places, and designation as a National Historic Landmark. Although these designations indicate different levels of significance and compliance, for the purposes of DCR's cultural resource policy and statutory requirements, projects involving any of these resources may require review and approval by, and/or consultation with, the MHC.

Best Management Practices

In order to provide technical support to field operations staff, OCR has developed a series of BMPs to guide the day-to-day management of common cultural resources in our state parks. Cultural resources BMPs are available on topics such as stewarding cemeteries and burial grounds and maintaining historic buildings. (See <https://www.mass.gov/service-details/best-management-practices-dcr> for these BMPs.) Although many of these practices may be performed without any level of statutory review or compliance, it is important for project managers to coordinate with OCR staff in order to determine whether any compliance is required. This is especially important with resources or districts that are designated at the local level, as these designations carry specific

guidelines that may differ from those at the state level. BMPs applicable to specific resources are identified under "Guidance" in Cultural Resources tables in Sections 2–7.

Archaeological Resources

Massachusetts law requires the review of all sub-surface disturbances on state property. The DCR's archaeologist holds a general archaeology permit from the MHC that allows them to provide initial review of activities that result in sub-surface disturbance. The DCR archaeologist is the primary reviewer of such projects and activities in the Complex.

Underwater resources are archaeological resources and are subject to their own regulations. The inspection, investigation, or removal of underwater archaeological resources is regulated under Massachusetts law (M.G.L. 6:179–180). No person may remove, displace, damage or destroy any underwater archaeological resource except in conformity with permits issued by the Massachusetts Board of Underwater Archaeological Resources (BUAR). This applies to both coastal and inland waters. Additional information is available at <https://www.mass.gov/orgs/board-of-underwater-archaeological-resources>.

Recreation Activities

Regulations guiding the recreational use of forests and parks may be found in 302 CMR 12.00. Key aspects of these and related regulations are identified below.

Activities Requiring Permits

Some recreational activities require either Special Use Permits or reservations. Special Use Permits are required for activities and events such as concerts, charity walks, weddings, and catered events. Reservations for group picnic area and pavilions may be made through Reserve America. Many athletic fields in Boston-area parks may be reserved by completing and submitting an Athletic Field Scheduling Request Form. Additional information is available on DCR's web page (<https://www.mass.gov/departments-of-conservation-and-recreation-permits>). Permits are also required for commercial activities (e.g., concessions, professional dog walking), film production, and commercial photography.

Swimming and Beach Use

Swimming is restricted to designated swimming areas. People, pets, and domesticated animals are prohibited from entering sensitive beach habitat posted as restricted. Pets and domesticated animals are not allowed on coastal beaches or in designated swimming areas of inland beaches between May 1 and September 15. Restrictions may be enacted earlier, on April 1, to protect rare species such as the Piping Plover. Additional rules of conduct may be found in 302 CMR 12.06.

Boating

Boating is regulated through a variety of Massachusetts Regulations (i.e., 323 CMR 2.00, 323 CMR 4.00, and 312 CMR 12; Appendix F). Allowed uses vary among parks and watercraft type; specific restrictions are identified in 302 CMR 12.07. Specific restrictions may apply. See Sections 2–7 for park-specific information.

Camping

There are two DCR campgrounds within the Complex; Myles Standish and Scusset Beach. Information on these campgrounds is included in their respective chapters.

Hunting and Fishing

Hunting, fishing, and trapping are regulated through Massachusetts Regulations (321 CMR 3.00 and 321 CMR 4.00), DCR Parks and Recreation Rules (302 CMR 12.11), official Massachusetts Hunting, Freshwater Fishing, and Trapping Regulations that are promulgated annually. Summaries of these and other applicable regulations are presented in Appendix F. Officers from the Executive Office of Energy and Environmental Affairs' Office of Law Enforcement (i.e., Massachusetts Environmental Police officers) enforce hunting, fishing, and OHV regulations.

All DCR properties are presumed to be open to hunting, fishing, and trapping unless otherwise specified in the Parks and Recreation Rules (302 CMR 12.11). Within the Complex, hunting and trapping are specifically prohibited by DCR regulations at one park (Standish Monument) and restricted by hunting regulations (i.e., distance to dwelling, building, or hard surface highway) at one

additional park (Pilgrim Memorial). Park-specific information is provided in Sections 2–7.

Special hunting rights may exist for Native Americans. Most Native American tribes and indigenous groups have the inherent right to be self-governing, including regulating their landscapes and resources. The right to hunt and fish was guaranteed to many tribes in their treaties with the United States and it is presumed to exist even if not mentioned in the treaty.

The rights to hunt, fish, and gather include the use of modern techniques for obtaining wildlife. A tribe is limited only by two rules, other than those it creates for itself. First, the tribe cannot take so much wildlife that it endangers propagation (continuation) of the species in violation of state or federal conservation laws. Second, the tribe cannot take any wildlife that Congress has prohibited it from taking.

Trail Use

General trail use is regulated through 302 CMR 12.00. The same regulations govern the use of horses and non-motorized vehicles on trails. Dogs may accompany trail users provided the animals are restrained on a leash and do not interfere with any other park patron's enjoyment of DCR property. (302 CMR 12.13; Appendix F) Exceptions apply for service, hunting, and sled dogs.

With the exception of DCR, public safety, and utility company vehicles, motor vehicles are generally not permitted on trails in the Complex. There is no authorized OHV use in the Complex; illegal use is common in the Complex's two forests.

No trails within the Complex have been assessed for their compatibility with power-driven mobility devices.

Geocaching

There is no Massachusetts regulation or agency policy on the placement of geocaches on DCR property. If and where geocaches are placed is at the discretion of individual property managers.

Infrastructure

Property Boundary

The Management Forester attempts to locate and mark property boundaries every 15 years. They also mark the boundaries of new properties as they are

acquired. Boundary marking typically involves locating and painting cement bounds or pipes, and the posting of boundary signs.

Buildings and Structures

The management of DCR-owned buildings is performed by DCR employees or contractors. Minor maintenance and repair are performed by on-site staff. More technical repairs (e.g., plumbing, electrical) are performed by DCR in-house trades staff or by trade or engineering contractors whose activities are coordinated through DCR's Park Support Operations (PSO) Program. Major repairs are performed by licensed contractors.

Roads

The DCR maintains and repairs park roads and parkways. Management of traffic and related systems is supervised by the Parkways Section of the DCR's Design & Engineering Division, and guided by American Association of State Highway and Transportation Officials standards; the Manual on Uniform Traffic Control Devices (MUTCD; FHA 2012); and the *Historic Parkway Preservation Treatment Guidelines* (DCR 2007b), if applicable. Public roads adjacent to DCR properties are maintained and repaired by either local municipalities or MassDOT.

Snow removal is performed by the DCR, MassDOT, and local municipalities. In general, municipalities or MassDOT plow public roads adjacent to parks; DCR is responsible for plowing internal park roads.

Parking

The DCR is responsible for maintaining and repairing its parking areas. Generally, snow removal is performed by the DCR.

Multi-Use Paths

Ongoing maintenance and repair of paved and unpaved multi-use trails may be subject to review under a variety of environmental regulations (e.g., MESA, Wetlands Protection Act).

Trails

A variety of regulations and policies guide the management of trails. The design, management, and marking of trails are guided by the DCR's *Trails Guidelines and Best Practices Manual* (DCR 2019). In addition, BMPs address the closing and restoring

of trails and trail maintenance (DCR n.d.c, n.d.d). Trail work is subject to both 950 CMR 70 (Appendix F) and the DCR Cultural Resource Policy (Appendix G).

Many trails in the Complex are located within Priority Habitat; all work on these trails must be reviewed and pre-approved by the NHESP. In order to avoid individual filings for every trail maintenance project, the DCR and NHESP produced a statewide assessment of areas of conflict between rare species and their habitats, and recreational trail maintenance activities (NHESP 2015a). This assessment identifies specific maintenance activities that may take place on specific trail segments without additional NHESP review, and combinations of activities and locations that require full review. All maintenance activities must be performed in accordance with the guidance and restrictions contained in this assessment (NHESP 2015a).

Additional regulations, such as the Massachusetts Wetlands Protection Act may also apply, depending on location. These regulations and policies apply to DCR employee, partner, and volunteer activities. If work is to be performed by volunteers it must also be consistent with DCR volunteer guidelines (DCR 2014b).

Kiosks and Signs

The format and placement of regulatory and informational signs are governed by the MUTCD (FHA 2012) and guided by the DCR *Graphics Standards Manual* (DCR n.d.e). The design and construction of kiosks are governed by the graphics manual.

Informational kiosks are managed by park staff as new information becomes available; they also perform kiosk installation and repair.

Memorials and Markers

The placement or removal of memorials and plaques is prohibited unless authorized by the DCR. (302 CMR 12.04(26); Appendix F). Notable markers in the Complex, such as those identifying properties on the National Register of Historic Places, are identified in the individual chapters. Other markers, such as remembrance benches or gardens, are not identified.

Land and Water Conservation Fund

Park lands acquired or developed with funding from the Land and Water Conservation Fund, a federal program administered by the National Park Service (NPS), must comply with a variety of requirements. This includes keeping the property boundary intact, using the property for outdoor recreation purposes, inspections by the NPS at least once every five years, and the posting of signs acknowledging the financial support of the Land and Water Conservation Fund. A full listing of program requirements is provided in NPS (2008). Properties acquired or developed with LWCF funds are identified in Table 1.10.1.

Table 1.10.1. Parks and facilities within the Myles Standish Complex funded through the Land and Water Conservation Fund.

Park or Facility	Year	Amount (\$)
Scusset Beach	1971	472,450.97
Ellisville Harbor	1992	122,660.00

Management Resources

Volunteers

Volunteer activities in parks must be consistent with DCR guidelines (DCR 2014b), including completion of a Volunteer/Stewardship Agreement. Additional information may be found at: <http://www.mass.gov/eea/docs/dcr/volunteer/volunteer-guide-2014.pdf>

Landscape Designations

The types of activities that may take place on DCR parks are guided by DCR's landscape designations. Lands are designated as Reserve, Parkland, or Woodland; each "has its own set of ecosystem services and management priorities" These designations influence such things as forestry practices and the types and level of allowable recreation. Readers are directed to *Landscape Designations for DCR Parks & Forests: Selection Criteria and Management Guidelines* (DCR 2012a) for details on how these designations affect park use and management, and for maps. The number of acres of Reserve, Parkland, and Woodland in each park is presented in DCR (2012b).

Land Stewardship Zoning

At the property scale, management guidance is developed and applied through the resource management planning process. All areas within a park are placed into one of three Land Stewardship Zones (LSZs). These zones ensure resource protection based on site-specific field data and provide guidance for current and future management based upon resource significance and sensitivities. These zones may be briefly categorized as follows:

- Zone 1 encompasses areas with highly sensitive natural and cultural resources that require special management approaches and practices to protect and preserve their special values.
- Zone 2 encompasses stable yet important natural and cultural resources. Within this zone, public recreation may typically be managed at sustainable levels.
- Zone 3 encompasses already developed landscapes or areas that may be suitable for future development as intensive use areas.

Land Stewardship Zoning is applied in a manner consistent with a property's Landscape Designation(s). A summary of the relationships between Landscape Designations and Land Stewardship Zoning is presented in Appendix H. Detailed information on these relationships may be found in Appendix 4 of DCR (2012a).

LSZs may be supplemented with Significant Feature Overlays that identify resources with specialized management needs. Every major property within the Complex (i.e., Sections 2–13) has been zoned; only about half of the properties have a Significant Feature Overlay.

1.11. RECOMMENDATIONS

Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.

- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Two priority management recommendations were developed for the entire Myles Standish Complex. Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

All recommendations are of equal priority.

Table 1.11.1. Priority management recommendations for the Myles Standish Complex.

Category	Recommendation	Implementation ^a
Natural Resources	Implement general recommendations contained in the Invasive Plant Management Plan: South Region (BSC Group 2017).	ECO, FOP , PRT, VOL
Management Practices	Explore opportunities for increased partnerships, including friends groups, to increase public use and enjoyment of DCR parks.	FOP , PRT

- a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.



Myles Standish State Forest

Myles Standish State Forest is one of the state's largest and most important protected areas. For over 100 years, the forest has provided people with access to historic resources, nature, and recreation. It is home to the third-largest pine barrens in the world; a fire-dependent ecosystem that includes one of the most important and globally significant concentrations of natural resources in Massachusetts. DCR actively manages these barrens through controlled burns and forest management, while providing for nature-based recreation. The Civilian Conservation Corps shaped much of the forest's recreational landscape during the 1930's. They built campgrounds and day-use areas that are still enjoyed by thousands of visitors every year. Visitors may camp at one of the four camping areas, swim at College and Fearing Ponds, bicycle along 14 miles of paved multi-use paths, hike one of the many forest trails, or ride miles of equestrian-friendly trails.

Top Activities

- Bicycling, mountain
- Bicycling, road
- Camping
- Canoeing/kayaking
- Dog walking, on leash
- Fishing, fin fish
- Hiking/walking
- Horseback riding
- Hunting
- Nature study/photography
- Picnicking
- Snowmobiling
- Snowshoeing
- Swimming

Friends Group

- Friends of the Myles Standish State Forest
<http://www.friendsmssf.com/>

Partners & Permittees

- Massachusetts Division of Fisheries & Wildlife
- University of Massachusetts
- Massachusetts Department of Corrections
- Southeastern Massachusetts Pine Barrens Alliance

Park Inventory

Date Established: 1916

Landscape Designation

Parkland, Reserve

Features

- Eleven camping areas with 372 campsites
- Six freshwater beaches for swimming and sunbathing
- Trails through rare pine barrens habitat
- Picnic areas

Park Size (acres)

Total Area:	12,437
Forest:	11,361
Lakes and Ponds:	283
Wetlands:	87

Threatened & Endangered Species

Massachusetts:	37
Priority Habitat (acres):	11,955
Federal:	1

Cultural Resources

Archaeological:	7
Buildings:	46
Cemeteries:	0
Historic Districts:	0
Landscapes:	11
Objects:	2
Structures:	15
National Register:	0
National Historic Landmark:	0

Roads (miles)

Unpaved:	2
Paved:	34

Trails (miles)

Unpaved (Hiking):	19
Paved (Multi-use):	14

Contact Info:

(508) 866-2580 • 194 Cranberry Road, South Carver, MA 02366
<https://www.mass.gov/locations/myles-standish-state-forest>



The Frost Pocket Loop passes through the heart of Myles Standish's pine barrens. (See Appendix K for photo information.)

SECTION 2. MYLES STANDISH STATE FOREST

2.1. INTRODUCTION

Myles Standish State Forest (Myles Standish) exemplifies DCR's dual mission of conservation and recreation. (Figure 2.1.1) The forest is located within one of "Earth's largest remaining pine barrens" (TNC 2009); a fire-dependent ecosystem that includes one of the most important and globally significant concentrations of natural resources entrusted to the Commonwealth's care (French 2018). Also within the forest are extensive recreation facilities, including the third largest campground in the DCR system. Thousands of visitors come to Myles Standish to spend part of their summer, camping in a tent, trailer, or yurt under the pines. Day use areas, trails, and a paved multi-use path attract swimmers, picnickers, hikers, equestrians, and cyclists. The forest is actively managed to enhance the barrens while providing camping and other nature-based recreation.

The forest was established in 1916 as part of a statewide effort to restore lumber producing forests (State Forest Commission (SFC) 1916). Recreation development soon followed. Since the beginning, Myles Standish has balanced forest management, first for timber production and now for ecosystem management, with public enjoyment of its woods

and ponds. This dual emphasis is reflected in the forest's Landscape Designations: areas around campgrounds have been designated Parkland; other parts of the forest have been designated Reserve.

The park's physical, political, and regulatory attributes are summarized in Table 2.1.1.

Table 2.1.1. Physical, political, and regulatory settings of Myles Standish State Forest.

Setting	Name or Metric
Location:	Carver, Plymouth
Area (acres)^a:	12,437.19
Perimeter (miles)^a:	46.52
Landscape Designation^b:	Parkland, Reserve
Legislative Districts:	
House	1 st Plymouth 2 nd Plymouth
Senate	Plymouth & Barnstable 1 st Plymouth & Bristol
Regulatory Designations:	Great Pond - College Pond Outstanding Resource Waters Priority Habitat

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Large portions of the forest (collectively 2,230 acres; 17.93%) are not managed by DCR. MassWildlife manages two wildlife management areas and the Department of Corrections manages the Massachusetts Alcohol and Substance Abuse Center (MASAC) and adjacent forest. (Figure 2.1.1)

Park Identity. Myles Standish is defined by its pine barrens, camping opportunities, and rustic park architecture. Globally rare pine barrens provide habitat for plants and animals uncommon elsewhere. These barrens require active management to sustain them. Encircling the shores of four kettle-hole ponds are over 370 campsites in five different camping areas. These facilities permit visitors to immerse themselves in the forest's natural and cultural landscapes. The forest's built environment creates a unique sense of place, with rustic buildings and facilities constructed first by the CCC and later by the DCR's predecessor agencies.

Location. Myles Standish is located in Plymouth County, in the towns of Carver and Plymouth. The forest headquarters is located approximately 8.4 miles south of downtown Plymouth. There are two official park entrances. The first (i.e., East Entrance) is located off Long Pond Road in Plymouth; the second (i.e., West Entrance) is located off Cranberry Road, Carver.

Associated Properties. Myles Standish personnel manage, as time and resources permit, Bay Farm (Section 1), Mulliken's Landing (Section 1), Kingston State Forest (Section 3) and Ellisville Harbor State Park (Section 4). They also manage the OFBA facility on Long Pond and Little Long Pond. (Section 1).

Relationship to Previous RMP. This Section updates, rather than replaces, the previous Myles Standish RMP (DCR 2011). Information is presented in the standard format and level of detail currently used for resource management planning. More detailed information on the park's history and resources was included in the previous RMP and should be considered supplemental to this chapter. Applicable recommendations contained in the previous RMP remain valid unless otherwise indicated. (See Section 2.9 for additional information.)

2.2. NATURAL RESOURCES

Physical Features

Myles Standish is located in an area characterized by a relatively flat glacial outwash plain with kettle holes and kettle ponds. Below ground is the Plymouth-Carver Aquifer, a 140-square-mile area of water saturated glacial sand and gravel (Hansen and Lapham 1992).

The forest is divided north to south, by a valley that extends from Massasoit National Wildlife Refuge to East Head Reservoir. This valley is lined with a string of freshwater ponds and wetlands. To the south and east of the valley the topography is largely flat, punctuated by the occasional kettle hole. To the north and west the topography is hillier. Elevation ranges from approximately 240 feet at a hilltop near the intersection of Howland and Wayont roads, to 66 feet at the surface of Charge Pond. There is a general trend of decreasing elevation from north to south.

Water Resources

The forest has abundant groundwater but scant surface waters. (Table 2.2.1) It is an important recharge area for the Plymouth-Carver Aquifer, the region's main source of drinking water. Over 98% of the forest is located over a medium or high yield aquifer. (See Fuss & O'Neill (2007) for additional information on the Plymouth-Carver Aquifer.) Since 1985, the USGS has monitored a groundwater well (415217070393102-MA-PWW 494 Plymouth, MA) near the intersection of Cranford and Lower College Pond roads. The average depth to groundwater is approximately 32 feet.

Table 2.2.1. Water resources of Myles Standish State Forest.

Water Resource	Name or Metric
Watershed:	Buzzards Bay South Coastal
Aquifer:	
Medium Yield (acres)	249.28
High Yield (acres)	11,940.43
Rivers and Streams (miles)	0.67
Vernal Pools	
Certified (#)	10
Potential (#)	81
Wetlands (acres)	87.51
Lakes and Ponds (acres)	283.11

Place holder for Front of Figure 2.1.1.

Place holder for Back of Figure 2.1.1.

In contrast to the abundant groundwater resources, only 2.98% of the forest's surface is covered by wetlands, lakes, or ponds. Despite their limited abundance, these surface waters are important for biological diversity, rare species habitat, and recreation.

There are more than twenty named ponds in the forest; ten are larger than 10 acres in area. (Table 2.2.2). Only one, College Pond, is on the DEP list of Great Ponds (DEP 2019). All of the forest's campgrounds, day-use areas, and privately-owned cottages are located on the shores of large ponds. DCR's Bureau of Forest Fire Control and Forestry has designated access points to five ponds as drafting areas; locations where fire engines may replenish water when fighting fires. Types of shoreline development are identified in Table 2.2.2. East Head Reservoir, which is used by many forest visitors, is not part of the forest.

Table 2.2.2. Physical and recreational characteristics of the ten largest ponds at Myles Standish State Forest.

Pond Name	Area (Acres)	Depth (Feet) ^a	Recreation ^b	Private Cottages ^c
College ^{d,e,f}	47.3	24	Beach	Yes
Curlew ^e	45.0	31	Camp	Yes
Fearing ^d	25.5	20	Beach, Camp	Yes
Widgeon	24.5	-	None	Yes
Rocky ^{e,g}	22.4	-	None	Yes
New Long ^e	21.3	-	None	No
Charge ^d	19.3	17	Beach, Camp	No
Bumps ^h	17.2	-	None	No
Three-Cornered	13.5	-	None	No
Barrett ^e	11.6	19	Beach, Camp	No

- Maximum depth, as reported by MassWildlife in their series of pond maps. <http://www.mass.gov/eea/agencies/dfg/dfw/maps-destinations/state-pond-maps.html>
- Recreation types include: Beach = designated swim area; Camp = DCR Campground; and None = there are no developed recreation facilities on this pond.
- Cottages are privately owned but located on public land. They are not available for use by the general public.
- A day-use area is located on this pond.
- A designated fire drafting area is located on this pond.
- Although any pond with an area of 10 or more acres in its natural state may be considered a Great Pond, only College Pond is listed as such by the DEP (2019).
- Cranberry growing occurs along the southwest shore of this pond.
- The Massachusetts Alcohol and Substance Abuse Center is located on this pond; the general public is not allowed in this area.



Coastal plain pondshore vegetation is closely tied to changing water levels. High water kills encroaching woody vegetation and receding waters expose the shore creating habitat for a variety of specially adapted grasses, sedges, and flowers. (See Appendix K for photo information.)

Less than 1% of the forest is subject to flooding. (Table 2.2.3) Affected areas include the shores of Curlew and Rocky ponds, and wetlands along Southwest Line Road. There is no critical infrastructure within these flood zones. There are no predicted impacts of Hurricane Inundation or Sea Level Rise. Only the Carver fire tower is likely to be directly impacted by hurricane force winds.

Table 2.2.3. Potential impacts of flooding to Myles Standish State Forest.

Type of Impact	Acres	%
Flooding:		
100-year Storm	15.03	0.12
500-year Storm ^a	86.30	0.69

- Cumulative value; includes 100-year storm impacts.

Rare Species

State-listed Species

Thirty-seven state-listed species are known to inhabit the forest. (Table 2.2.4) Most are associated with two habitat types; pine barrens and coastal plain ponds. Pine barrens include a variety of natural community types with droughty mineral-poor soils and variable canopy closure. These communities are characterized by pitch pine and/or scrub oak. They are globally rare, and provide habitat for a variety of rare species, such as the buck moth. Coastal plain ponds “are shallow, highly acidic, low-nutrient groundwater ponds in sandy glacial outwash” (NHESP 2016a). Fluctuations in water levels expose the shoreline, which provides habitat for rare plants and animals. At Myles Standish, Plymouth gentian, pine barrens bluet, and scarlet bluet are associated with these pondshores.



New England blazing star, a Species of Special Concern, inhabits open, dry, nutrient-poor soils (NHESP 2015b). At Myles Standish, its showy flowers may be seen along mowed road shoulders during the late summer and early fall. (See Appendix K for photo information.)

Table 2.2.4. State-listed species of Myles Standish State Forest, as identified by the NHESP.^{a, b}

Species ^{a, b}	Type ^c	MESA ^d
Acadian quillwort	P	E
Attenuated bluet	I	T
Barrens daggermoth	I	T
Buchholz's gray	I	E
Buck moth	I	SC
Data Sensitive Animal 1 ^e	-	E
Data Sensitive Animal 2 ^e	-	E
Dwarf bulrush	P	T
Eastern hog-nosed snake	R	SC
Eastern whip-poor-will	B	SC
Frosted elfin	I	SC
Heath <i>Metarranthis</i>	I	SC
Herodias underwing	I	SC
Long-beaked beaksedge	P	SC
Melsheimer's sack bearer	I	T
New England blazing star	P	SC
New England boneset	P	E
Northern red-bellied cooter ^f	R	E
Papillose nut-sedge	P	E
Pickering's bentgrass	P	E
Pine barrens bluet	I	T
Pine barrens <i>Speranza</i>	I	SC
Pine barrens <i>Zale</i>	I	SC
Pine barrens <i>Zanclognatha</i>	I	SC
Pink sallow moth	I	SC
Plymouth gentian	P	SC
Pondshore smartweed	P	SC
Precious underwing	I	E
Purple tiger beetle	I	SC
Resupinate bladderwort	P	T
Scarlet bluet	I	T
Short-beaked beaksedge	P	T
Slender clearwing sphinx	I	SC
Slender bladderwort	P	SC
Terete arrowhead	P	SC
Walter's sedge	P	E
Water willow stem borer	I	T

a. Presented alphabetically, by common name.

b. Fact sheets are available at:

<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/mesa-list/list-of-rare-species-in-massachusetts.html>

c. Types of state-listed species include: A = Amphibian; B = Bird; I = Insect; P = Plant; and R = Reptile.

d. Status of species listed under the Massachusetts Endangered Species Act (MESA): E = Endangered, SC = Special Concern; and T = Threatened.

e. The NHESP limits information on the identity of rare species susceptible to collection. They refer to these species as “data sensitive.”

f. This species is also listed as Endangered under the Endangered Species Act.

Federally Listed Species

The northern red-bellied cooter is a federally endangered turtle that in Massachusetts “is currently confined to ponds and rivers within Plymouth County and eastern Bristol County” (NHESP 2016b). In Myles Standish, this species is associated with coastal plain ponds. A population is also present in nearby East Head Reservoir. Portions of the forest adjacent to Sly Pond WMA are included in the federally designated Critical Habitat for this species (Federal Register Vol. 44, No. 179, Pages 5342–5344). One or more federally listed species of bats may be also present in the forest.



The northern red-bellied cooter (left) is a federally endangered turtle that may be found in many of the forest’s ponds. (See Appendix K for photo information.)

Acoustic surveys conducted in 2016 indicated the presence of bats within the genus *Myotis*; but did not identify them to species (Melinchuk 2018). All four *Myotis* bats known from Massachusetts are state-listed and two are also federally listed. Of the Massachusetts *Myotis*, only two (the little brown bat and the northern long-eared *Myotis*) are known from eastern Massachusetts; one or more of these occurs in the forest. Additional research is needed to identify and conserve the species present.

Priority Habitat

Over 96% of the forest (11,955.39 acres) has been designated Priority Habitat. The remainder is patchily distributed, primarily in the southwest and northwest corners of the forest. The Operations Yard and most, but not all, of the Forest Headquarters Complex are excluded from Priority Habitat. However, as of August 2021, all of the forest’s intensively developed recreation areas were

designated Priority Habitat. This includes all campgrounds, waterfront areas, cottages, day use areas, and the dump station. The entire MASAC facility and both Wildlife Management Areas within the forest are also entirely within designated Priority Habitat.

Vegetation

A checklist of the forest’s plants identifies 600 species, of which 169 are non-native (Salicicola 2018).

Invasive Species

The checklist of forest plants (Salicicola 2018) includes 24 species identified by MIPAG (2005) as invasive, likely invasive, or potentially invasive. (Table 2.2.5) An additional 11 species are identified by Salicicola (2018) as being invasive but are not recognized by MIPAG (2005).

Table 2.2.5. Known invasive plants of Myles Standish State Forest.

Species ^a	Status ^b
Autumn olive ^c	I
Bell’s honeysuckle	I
Black locust ^c	I
Black swallowwort	I
Border privet	L
Carolina fanwort	I
Coltsfoot	L
Common buckthorn	I
Common reed	I
Cypress spurge	L
Garlic mustard	I
Glossy buckthorn	I
Hair fescue	L
Morrow’s honeysuckle	I
Multiflora rose ^c	I
Norway maple	I
Norway spruce	I
Oriental bittersweet	I
Pale swallowwort	L
Purple loosestrife	I
Reed canarygrass	I
Rusty willow/large gray willow complex	I
Spotted knapweed	L
Tree of Heaven ^c	I

a. Presented alphabetically, by common name.

b. Plants are classified as Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).

c. Between 1956 and 1970 these species were included in plantings in the wildlife management areas (Burrell and Turner 1971).

Natural Communities

Thirteen natural communities have been identified. (Table 2.2.6)

Table 2.2.6. Known natural communities of Myles Standish State Forest.

Community Type ^a	System ^b	State Rank ^c	Source ^d
Black Oak-Scarlet Oak Woodland	T	3/4	1
Coastal Plain Pondshore	P	3	2
Cultural Grassland	T	N/A	1
Deep Emergent Marsh	P	4	3
Mixed Oak Forest/Woodland	T	5	4
Pitch Pine-Oak Forest/Woodland	T	4	1, 4
Pitch Pine-Scrub Oak	T	2	2, 4
Red Maple Swamp	P	4	3
Sandplain Heathland	T	1	2, 4
Scrub Oak Shrubland	T	2	2, 4
Shallow Emergent Marsh	P	5	3
Shrub Swamp	P	5	3
White Pine-Oak Forest	T	5	4

a. Classified according to Swain (2020).

b. E = Estuarine, P = Palustrine, T = Terrestrial.

c. The NHESP ranks communities from most rare (S1) to the most common (S5).

d. Information contained in this table was obtained from the following sources:

1. Observed by RMP Planner; identification should be considered preliminary.
2. Harper (2017).
3. MassGIS; DEP Wetlands (2005).
4. Epsilon Associates, Inc. (2001).

Cultural grasslands are restricted to managed fields in the forest's two Wildlife Management Areas. Epsilon Associates, Inc. (2001) indicated the presence of the Sandplain Grassland community type. However, there are no known extant examples of this community.

Several of the forest's natural communities are associated with pine barrens. These barrens represent a variety of natural community types "distinguished from each other by their relative proportions of...pitch pine and scrub oak" (TNC 2009). They are globally rare, and support species that are uncommon in, or absent from, other vegetative associations.



Multiple natural community types may occur in a single frost pocket. At the bottom of this photo is a Sandplain Heathland community. As elevation increases, it transitions to Scrub Oak Shrubland and then to Pitch Pine-Scrub Oak. (See Appendix K for photo information.)

Forests

Nearly the entire park (11,361.56 acres, 91.35%) is covered in upland forest. This forest has been significantly influenced by historic management practices. An overview of these practices was presented in the Myles Standish GOALS Plan (Department of Environmental Management (DEM) 1984). Non-forested areas are largely restricted to wetlands, ponds, roadways, utility corridors, and fire breaks.

The establishment of Myles Standish was part of a statewide effort to "put into operation a practical effort for the restoration of lumber-producing forests" (SFC 1916). In 1915 the State Forest Commission made "a careful study of the woodlands of the state, and has determined upon a general method of acquisition and care of waste lands in various parts of the state" (SFC 1916). The first "waste land" acquired was Otter River State Forest; the second was Myles Standish.

When acquired, Myles Standish "and many thousand acres adjoining it and farther down the Cape" were considered "without value of any sort" (SFC 1916). The forest was "uniformly covered with scant growth of scrub oak and occasional clumps of jack (sic) pine and white pine." This describes a large expanse of pine barrens. The perspective that the barrens were a wasteland without value reflects the societal values of the time. For a country soon to enter World War I, timber production and not ecological value, was the priority. Fire suppression and the planting of white, red, and Scots pines soon

followed (SFC 1919). It would be several decades before forest management at Myles Standish shifted emphasis from timber production to ecological management.

There are 82 CFI plots. They are laid out in a grid across the forest, with approximately one-half mile between plots. Information on forest composition comes from surveys of these plots.

The Oak forest type is dominated by scarlet oak, with low numbers of pitch pine, white oak, and basswood present. Understory species include lowbush blueberry, black huckleberry, teaberry, and young white oak and pitch pine.

The White Pine-Red Pine forest type is typically dominated by either white or red pine and associated with pine plantations. Pitch pine commonly occurs in these plots. Quaking aspen, red spruce, white oak, and black oak occur in very low numbers. The most common understory species is regenerating white pine. Teaberry, lowbush blueberries, black huckleberry, and scrub oak are also common. Other understory species are present in very low numbers and include brackenfern, black oak, highbush blueberry, sheep laurel, moss, and maleberry. The age of White Pine-Red Pine stands in a sample of six CFI plots ranged from 60 to 104 years when last surveyed, and Site Index Values ranged from 37 to 59.

The Pitch Pine-Scrub oak forest type is dominated by pitch pine. White pine is the second most common canopy species in most plots. Black oak and red pine occur in only a few plots but are common when present. Quaking aspen, black cherry, red maple, and white oak occur in low numbers in some of the plots. One plot includes several larch in the canopy, remnants of past reforestation activities. Common understory species include black huckleberry, lowbush blueberries, teaberry, scrub oak, regenerating white pine, sheep laurel, and brackenfern. Pitch pine, mosses, lichen, and grasses are also present in low number. The age of Pitch Pine-Scrub Oak stands in a sample of 23 CFI plots ranged from 36 to 82 years when last surveyed, and Site Index Values ranged from 34 to 52.

Wildlife

Information on the forest's wildlife is comprehensive, but mostly out of date. The forest's Trails and Resource Management Plan included lists of mammals, birds, and reptiles and amphibians known to occur, or likely to occur, within the forest (Tables 2-6, 2-7, and 2-8, respectively; Epsilon Associates, Inc. 2001). These lists were incorporated into the previous RMP with minimal updating (i.e., Appendices D–F; DCR 2011). Only information on the forest's birds is more recent than that contained in the trails plan. Lists of wildlife species verified on the adjacent Massasoit National Wildlife Refuge are provided in the Comprehensive Conservation Plan and Environmental Assessment for that refuge (U.S. Fish and Wildlife Service (USFWS) 2017).

Myles Standish is a birding hotspot, and as of January 2021, birders had reported 157 species (eBird 2012) in the forest. This low avian diversity reflects Myles Standish's low diversity of habitats. Although the forest's oak and pine dominated community types support fewer species, they support a number of species in decline (e.g., the prairie warbler, or state-listed eastern whip-poor-will), conifer-associated species (e.g., pine warbler, red crossbill, brown creeper), and cavity nesters (e.g., northern flicker, black-capped chickadee). The forest's ponds provide habitat for migratory waterfowl and shorebirds.



Myles Standish's pine barrens provide abundant scrub habitat for eastern towhees. Their familiar call ("drink your tea") is a common sound in the barrens. (See Appendix K for photo information.)

2.3. CULTURAL RESOURCES

Myles Standish has high archaeological potential and is rich in recreation themed cultural resources

that reflect the history of the DCR and its predecessor agencies. This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An overview of significant events in the history of Myles Standish State Forest is presented in Table 2.3.1. Cultural Resources are identified in Table 2.3.2.

Archaeological Resources

Pre-Contact Resources

There are five pre-contact archaeological sites recorded within Myles Standish, but artifact collectors discovered them, so little is known about them. For most sites there is little more than location information, but nothing is known of the site's functions, age, size, seasonal use, integrity or significance.

Only one, located near East Head Reservoir, has any information other than location. Diagnostic artifacts indicate that the site was first occupied during the early Archaic Period between 9,500 to 8,000 years ago, and again during the Middle Archaic Period between 8,000 to 6,000, and then in the Late Archaic and possibly Early Woodland periods anywhere from 6,000 to 2,200 years ago.

A short distance north of Myles Standish, a site with a similar occupation range was discovered around Great South Pond. Similarly, Micajah and Little Micajah ponds are considered a single large site, only a small portion of which lies within the forest itself. These are best thought of as collecting territories, having been identified by artifact collectors, who frequently returned to an area over a number of years, but seldom precisely recorded where their finds were made. A short distance to the north, the Billington Sea has 18 sites recorded around its margins. These huge sites clearly reflect the presence of a favorable habitat in the past, and thus, the area's high archaeological sensitivity.

The lack of more sites within Myles Standish is surely because as one of the oldest state forests in Massachusetts, there has been little development, and therefore few collecting opportunities have presented themselves to the artifact hunter.

Massachusetts Historical Commission files reveal a high frequency of pre-Contact archaeological sites in

the Plymouth/Carver region and indicate that this area was more or less continuously inhabited by Native Americans for over 10,000 years. One of the sites within Myles Standish documents the presence of Native Americans at East Head Reservoir possibly from as early as 9,500 years ago, and more or less continuously through the Late Archaic/Early Woodland periods to about 2,200 years ago.

The lower frequency of documented sites within Myles Standish as compared with the surrounding landscape does not necessarily indicate less intensive occupation. To the contrary, the environmental setting and natural resources within the forest are virtually identical to those that exist around it, except for the coastal and estuarine zones. Native Americans of course knew no such boundaries, so there is every reason to speculate that similar site densities exist within the forest as outside of it.

Significantly, the existing archaeological record suggests that archaeological resources located in areas protected from development and most extensive disturbances are likely to survive intact below ground. Therefore, it would be predicted that Myles Standish would have good potential for the survival of undisturbed pre-Contact sites at strategically favorable locations. Inland sites in this region are concentrated around mid to large size ponds, and Myles Standish abounds with kettle ponds. These ponds are significant not only for the natural resources they support, but also for their long-standing associations with human use. As a state park for over 100 years, Myles Standish has protected the archaeological record intact, resulting in a high potential for undiscovered archaeological resources. Potentially, a systematic archaeological survey could determine the size, type, integrity and significance of ancient sites going back 12,000 years. Historically, archaeological data recovered from these ponds could contribute important information on cranberry cultivation and public recreational use. Important cultural sites may also be found in other locations, depending on the proximity to fresh water, degree of slope and presence of well drained soils. Combined, these criteria help determine the suitability of any given location for pre-Contact habitation.

Table 2.3.1. Significant events in the history of Myles Standish State Forest.

Year	Events
1915	State Forest Commission identifies lands in Plymouth and Carver for the establishment of the Commonwealth's second state forest. (SFC 1916)
1916	Myles Standish State Forest is established through the taking of approximately 7,000 acres. Vegetation clearing begins, with "many roads cleared of brush" and 22 miles of forest boundary cleared 16.5 feet in width. (SFC 1917)
1917	Boundaries are defined by Order of Taking of August 15, 1917 (Book 1288, Pages 589–595).
1917	State Forest Commission requests that the Fish and Game Commission patrol the forest "against hunting during the autumn months." (SFC 1918)
1918	State Forest Commission advertises the availability of 250 campsites around six ponds in the forest.
1919	Two hundred and fifty campsites, with 100 feet of pond frontage, are laid out for Curlew, Widgeon, Rocky, College, Fearing, and Charge ponds. Seventy families participate in a program allowing the construction and ownership of private cottages on state-owned land.
1919	Four hundred and fifty acres are added to the forest; initial takings are complete, with all claims having been settled (SFC 1920).
1921	Fire burns around Curlew, Rocky, and Widgeon ponds (Epsilon Associates, Inc. 2001).
1922	Forest expands by approximately 293 acres in Carver. (Book 1402, Page 141 and Book 1418, Page 320).
1923	Additional Order of Taking, dated December 28, 1923, expands forest.
1932	Public campgrounds constructed at New Long and Charge ponds.
1933–36	Civilian Conservation Corps (CCC) active in forest, establish Camp SD-56. Among their activities are the construction of day-use areas at College and Fearing ponds, and five log cabins for rent.
1941–1945	World War II causes decreased visitation due to gas rationing and a lack of personnel resulting in the deterioration of facilities and the closure of the College Pond and Charge Pond recreation areas (DEM 1984).
1951	Legislature approves the establishment of "prison camps" in state forests for the employment of prisoners in reforestation, maintenance, and development. (Chapter 755 of the Acts of 1951)
1952	A location is granted to Algonquin Gas for the construction of a pipeline through the forest.
1953	Commissioner of Conservation recommends acquiring the forest's "privately-owned cottages...as they go on the market" so that they may be "demolished and the land used for camp sites" (Gillett 1953).
1955	The State Prison Camp at Plymouth is officially renamed Massachusetts Correctional Institute (MCI), Plymouth. (Chapter 770 of the Acts of 1955.)
1955–1956	Buckwheat, soybeans, oats, and rye are planted in CCC-created openings (Burrell and Turner 1971).
1956–1957	Twenty-two acres are cleared and planted in grass, annual grains, and lespedezas.
1957	Three fires along the forest's southwest boundary merge and spread northeastward to Plymouth Bay, burning an estimated 15,000 acres both on and off the forest.
1959	Twenty-one additional acres cleared and planted in wildlife forage plants (Burrell and Turner 1971).
1959	Legislature modifies Chapter 738 of the Acts of 1955 to allow "for the enlargement, by new construction and remodeling, of the Massachusetts Correctional Institution in Plymouth." (Chapter 613 of the Acts of 1959)
1964	Fifty more acres cleared and planted for wildlife (Burrell and Turner 1971).
1964	Fire burns approximately 6,300 acres of southern forest and adjacent private lands. Majority of private cottages (23 of 35) at Charge Pond are lost in this fire.
1965	Eighty-one campsites open at Curlew Pond.
1965	Land (42.29 acres) west of Rocky Pond is acquired through a taking, which also acquires the formerly reserved rights to the south bog. This gives the Commonwealth ownership and control of the Rocky Pond cranberry bogs.
1966	An easement is granted for construction and maintenance of electric powerlines through the forest.
1966	UMass Cranberry Experiment Station is issued permission to "use the Rocky Pond cranberry bog."
1970–72	New campground is constructed at Charge Pond; it contains 250 sites, eight comfort stations, roads, and utilities. As part of this development, the remaining 12 private cottages are removed.
1966	Seventy-five acres are cleared and planted for wildlife to create the quail management area (Burrell and Turner 1971).
1990	Rocky Pond cranberry bogs receive major repairs and upgrades including installation of irrigation system and planting of new vines. Interpretive panel and booklet are developed.
1997	Privately-owned East Head Pond Dam breaches; it is quickly rebuilt, but the road across the dam crest is not reopened.
2007	Friends of Myles Standish State Forest is established.
2016	MCI Plymouth closes; the Massachusetts Alcohol and Substance Abuse Center opens the following year at the Bumps Pond facility.

Table 2.3.2. Cultural resources of Myles Standish State Forest.

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
FOREST-WIDE								
CCC Water Holes (6)	ST	ca. 1933–1936	3–4	M	-	-	-	1
Interior Parkways	ST	-	-	-	-	-	-	2
CURLEW POND								
DCR-owned Cottages (3)	BU	1922–1940	4–5	M	N	-	-	3, 4
Private Cottages (14)	BU	1922–1960 ⁱ	-	-	-	-	-	-
WIDGEON POND								
DCR-owned Cottages (5)	BU	1927–1940	4	M	N	-	-	3, 4
Private Cottages (27)	BU	1924–1974 ⁱ	-	-	-	-	-	-
ROCKY POND								
Private Cottages (15)	BU	1910–1954 ⁱ	-	-	-	-	-	-
COLLEGE POND								
Day Use Area	LA	ca. 1930–1965	-	M	-	-	PLY.BA	5
Bathroom	BU	1965	3	M	S	E, S, W	-	3
Concession building	BU	-	4	H	S	E	-	3
CCC fire pits (12)	ST	ca. 1936	4	M	-	-	PLY.988	5
CCC Drainage features	ST	1930s	3	M	-	-	-	5
CCC Retaining Wall	ST	ca. 1936	3	M	-	-	PLY.987	5
DCR-owned Cottages (5)	BU	1920–1940	5–6	M	N	-	-	3, 4
Private Cottages (42)	BU	1920–1989 ⁱ	-	-	-	-	-	-
NEW LONG POND								
CCC Camp S-56	LA	ca. 1933–1936	-	M	-	-	PLY.AZ	5
Raised concrete platforms	AR	ca. 1933–1936	3–4	M	-	-	-	6
Foundations (4) – Main camp	AR	ca. 1933–1936	-	M	-	-	PLY.985	6
Foundations (1) – Officer camp	AR	ca. 1933–1936	-	M	-	-	PLY.986	6
Cellar holes	AR	ca. 1933–1936	3	M	-	-	-	6
Steps	ST	ca. 1933–1936	4	M	-	-	-	2
Drainage feature	ST	ca. 1933–1936	4	H	-	-	-	2
Circulation features	ST	ca. 1933–1936	4	M	-	-	-	2
Former ballfield	ST	ca. 1933–1936	-	L	-	-	-	2
Camp Rockne	LA	-	-	L	-	-	-	5
Cellar hole	AR	-	-	L	-	-	-	5
Circulation features	ST	-	5	M	-	-	-	5
BARRETT POND								
Former Camping Area 1	LA	-	-	L	-	-	-	5
Slab foundations	AR	-	4	M	-	-	-	6
Circulation features	ST	-	3	M	-	-	-	5
“The Homestead”	LA	-	-	M	-	-	-	5
Cellar hole	ST	-	-	M	-	-	-	5
Dump site	AR	-	-	L	-	-	-	6
Pet headstones (2)	OB	-	-	H	-	-	-	5

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
ADMINISTRATION & OPERATIONS								
Fire Tower landscape	LA	-	-	L	-	-	-	5
Tower footings (4)	AR	-	3	M	-	-	-	6
Ornamental plantings	LA	-	-	M	-	-	-	7
Perry House	LA	1960–1962	-	M	-	-	-	-
Perry House	BU	1960	4	M	N	E, H, S, W	-	3
Garage	BU	1962	6	M	Y	E	-	3
Forest Headquarters Complex	LA	1916–1990	-	H	-	-	-	5
Forest headquarters	BU	1950, 1965, 1990	3	M	Y	E, H, I, S, T, W	-	3
Loop drive	ST	-	3	M	-	-	-	5
Stone wall	ST	-	3	H	-	-	-	5
Dedication plaque and marker	OB	1916	2	H	-	-	-	5
Operations Yard	LA	-	-	M	-	-	-	-
Maintenance Building	BU	1958	3	M	Y	E, H, I, S, T, W	-	3
Fire Station/6-bay garage	BU	-	4	M	Y	E, H, I, S, T, W	-	3
Barn	BU	1945	3	M	Y	E, H, I, S, T, W	-	3
FEARING POND								
Day Use Area	LA	1937–ca. 1950	-	M	-	-	-	5
CCC bathhouse	BU	1937	5	H	N	-	-	3
CCC fire pits	ST	1937	4	M	-	-	-	5
Concession Stand	BU	ca. 1950	3	H	N	E	-	3
DCR-owned Cottages (3)	BU	1940	5–6	M	N	-	-	3
Private Cottages (25)	BU	1925–1940 ⁱ	-	-	-	-	-	-
CHARGE POND								
South bathhouse	BU	-	6	H	S	E, W	-	3, 4
Cottage remains	AR	-	4	M	-	-	-	6
ADDITIONAL RESOURCES								
<i>Historic roads^j (11)</i>	ST	-	-	-	-	-	-	-

a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.

b. Date of construction provided, when known.

c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.

d. Integrity is a relative assessment of the condition of a resource's retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.

e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.

f. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.

g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.

h. The following guidance is offered for the ongoing maintenance of these cultural resources:

1. Refer to *Water Holes* BMP (DCR n.d.f).
2. Refer to *Historic Parkway Preservation Guidelines* (DCR 2007b).
3. Refer to *Historic Building Maintenance* BMP (DCR n.d.g).
4. Refer to *Mothballing Historic Buildings* BMP (DCR n.d.h).
5. Refer to *Historic Landscapes – Built Features* BMP (DCR n.d.i).
6. Refer to *Archaeological Features* BMP (DCR n.d.j).
7. Refer to *Vegetation in Historic Landscapes* BMP (DCR n.d.k).

i. Private cottage construction dates from Town of Plymouth Assessor's database.

j. Documented through the 1984/1985 Cultural Resources Evaluation Project but not yet field verified or confirmed.

Despite the fact that many sites have been recorded regionally, precious little is really known about these sites (i.e., size, age, resource use patterns or significance). This paradox exists because most of the sites were discovered by vocational archaeologists and collected from disturbed contexts in an uncontrolled manner. Importantly, the potentially undisturbed sites in Myles Standish sites would add immeasurably to our understanding of Native American adaptations, social organization, and land-use of this important inland habitat.

Although the Pre-Contact overview provides context for the resources within Myles Standish, little more than the locations of these resources are known. With this veil of uncertainty, it is incumbent upon the agency to take a cautious and conservative approach to project planning, design and implementation. A systematic archaeological study is critical to understanding Native American adaptation, social organization, and land-use at what is now Myles Standish.

Post-Contact Resources

The principal resources are trails and roads that crisscross the forest and appear to date to Contact and or Colonial times. In some cases, the trails undoubtedly date to pre-Contact times. The DCR Cultural Resource Inventory identifies 11 “colonial” or “historic” roads and trails throughout the forest, largely identified through documentary analysis of historic maps and atlases, and not field surveys. It is difficult to verify most of their temporal associations. Because it is unknown whether any of these routes retain historic features or are archaeologically significant, they should be treated as potential cultural resources. In some cases, additional fieldwork or archaeological testing may be required to determine whether below ground resources are present.

One of the forest’s roads is reportedly associated with former U.S. Secretary of State Daniel Webster (1782–1852). Webster reportedly fished the headwaters for the Wankinco River. The spring that fed the headwaters became known as Webster’s Spring, and the road leading to this spring from the Town of Sandwich became known as Webster Springs Road (Nelson 2007).

A few cellar holes and trash dumps of unknown ownership, age, or function have been recorded, and

undoubtedly there are more. Within an area of approximately 12,400 acres this low number may reflect the extremely low population density that the interior portion of Plymouth County experienced historically. Not only was the area somewhat marginal to settlement, industrial activities were also limited. Two locations where slag mounds were dumped as the waste from the nearby bog iron furnace(s) are located along the western edge of the forest. These are apparently associated with the Federal Furnace, and/or the Charlotte Furnace, both of which date to the early 19th century and were located in Carver. It is interesting to note the lack of stone walls in the forest, due to the absence of tillage in the history of the area and the lack of large rocks in the sandy outwash that dominates the southern two thirds of Myles Standish. Nelson (2011a) provides photos of charcoal kilns and iron furnaces near Charge Pond. These resources have not been formally documented. It is unknown how many similar undocumented resources are present.

Additional post-Contact resources are associated with former camping areas; including a Civilian Conservation Corps (CCC) camp, a former public campground, and privately owned pondshore cottages.

Historic Resources

The historic resources of Myles Standish represent, or otherwise document, several important historic periods in Plymouth County. Although some date from before the state forest was established, most are associated with its development. Day use areas constructed by the CCC, private cottages (i.e., camps) constructed along the park’s pondshores between the First and Second World Wars, and park administration and operations facilities all tell the story of the development of public land for recreation. Less obvious, but also extant are waterholes, red pine plantations, and remnants of a fire observation tower associated with early forestry activities. Historic resources from before the forest was established are uncommon and less well documented.

Historic Landscapes

College Pond Day Use Area. This day-use area contains a guarded waterfront, CCC era fire pits, parking lot, and bathhouse. It is set among rolling drumlins in a wooded area on the north shore of the

pond. The public beach is crowded into a short section of shoreline, with private cottages taking up the rest of the shoreline. Picnic tables and modern grills are dispersed throughout, as are several CCC era fire pits. These fire pits, made of large stones arranged in a “u” formation, are significant historic features and provide a rustic character to the facility. The sandy beach is severely eroded, and foot paths are compacted. High water has flooded some planted areas, creating an overall appearance of a worn-out beach. A 1960s concession building sits in the woods near the beach; a similar era bathhouse is located near the parking lot.

Although the parking area, bathhouse, and circulation of the day-use area have been altered since the CCC construction, the College Pond Day Use Area retains enough of the character of the early recreation design to reflect its history. The bathhouse, with its windowless facade and stark light grey clapboards, is the most intrusive feature on the landscape. The current parking lot seems to have obliterated the original CCC layout, save for a few stone drainage features.



This drainage feature at the College Pond Day Use Area was constructed by the CCC. The bathhouse is visible in the upper left corner of this photo. (See Appendix K for photo information.)

CCC Camp S-56. Between 1933 and 1937, the Civilian Conservation Corps was primarily responsible for road construction, forestry, and fire suppression. Their camp was located along the south side of New Long Pond. Remaining resources at this site include circulation features, stone steps, raised concrete platforms, foundations, and a cleared area where a parking lot and baseball field were once located. This camp is well-documented. A mortar and stone wall along a portion of the south shore of

New Long Pond may be associated with the CCC Camp’s use of that pond.



Elevated foundation at the site of the former CCC Camp near New Long Pond. (See Appendix K for photo information.)

A second CCC Camp was located at Bumps Pond, at the location of MASAC. The last description of the Camp’s resources was in Hastings (ca. 1967). It is unknown what, if any, resources remain fifty years later.

Camp Rockne. A youth summer camp affiliated with the Rockne Association of Brockton was formerly located on the eastern shore of New Long Pond. This association promoted “girls’ sports and pioneer camping and building lasting friendships” (<http://newagenda-northeast.org/member/profiles/profile-doris-brooks-ma-1997.html>). Although the inclusive dates of operation are unknown, the camp is believed to have operated at Myles Standish from the at least the early 1940s through the mid-1960s, when the camp moved to Dublin, New Hampshire. All that remains are circulation paths and excavations into hillsides where buildings once stood.

The Homestead. The area off Jessup Road northwest of Barrett Pond is known to park staff as the “Homestead” It includes a foundation, dump site, two headstones (pets), and a pine plantation. This area roughly corresponds with the site identified as #11 in a 1985 survey which was noted to have a cranberry bog, cellar hole and dump site. Although this is probably not a historic “homestead,” it is a historic archaeological site that may relate to several historic periods, such as cranberry harvesting and forest management. More research is needed to determine its significance.

This area is threatened by both OHV use and bottle hunting. OHV riders have created an elaborate single track through the pine plantation, with elevated berms and cuts throughout. The dump site has also been systematically dug out, with bottles and debris strewn about.

Barrett Pond - Former Camping Area 1. The public camping area at Barret Pond was once located on the south side of the pond, at the bend in Upper College Pond Road. At that time, the current Barrett Pond campground was occupied by a Girl Scout camp. When the scout camp closed, a new Barrett Pond public campground was constructed in its place. All that remains of the original Barret Pond campground are some concrete slab foundations and circulation features.

Fire Tower. The Carver fire observation tower once stood along Lower College Pond Road, just uphill from both the Forest Headquarters and the Operations Yard. Unverified information indicates that the tower was built in 1930, taken out of service in 1986, and dismantled in 2002 (www.firelookout.org). Four concrete footings, one with a U.S. Geological Survey Bench Mark bearing the date of 1933, mark the site. Rhododendrons, remnants of ornamental plantings, grow around what was once the base of the tower. A small paved parking area is located just south of the tower, on the shoulder of Lower College Pond Road.

Perry House. Located on Lower College Pond Road to the northwest of the Headquarters, the Perry House is a ca.1960 Cape Cod style building with a detached two-car garage. Four large Norway spruce line the south side of the driveway, and a variety of non-native plants (e.g., Norway maple, yucca, Lombardi poplar, and Scotch broom) occur throughout the grounds. Although this site may have been occupied by an earlier building, the existing house is about 60 years old. It should be considered potentially historic. The best preservation strategy is to find a new use that requires little alteration to the property and provides for appropriate maintenance. Due to its proximity to the headquarters and amphitheater, a visitor services function such as an interpretive center may be appropriate. The DCR Archaeologist should be consulted when any ground disturbing activities are proposed, because the foundations of previous Easthead Game Farm buildings may be present at the site (Nelson, 2011b).



The Perry House; the garage is located behind the house on the left side of the photo. (See Appendix K for photo information.)

Forest Headquarters Complex. This complex includes the main headquarters building, several sheds, a combination comfort station/interpretive center, parking lots, dump station, amphitheater, and landscaped areas. A large boulder with a bronze dedication plaque noting the creation of the state forest in 1916 is located in front of the forest headquarters building. The main entrance loop, stone walls and eastern parking lot appear to be a part of the original building period, roughly in the late 1950s. The headquarters building was subsequently expanded several times, resulting in the current T-shaped building and its warren of interior spaces. This building is not universally accessible. Equipped to receive visitors and house offices for personnel, this complex is reflective of the increased visitation to state parks experienced after WWII and through economic downturn of the 1970s. The front of the building and its relationship to the horseshoe drive and side parking lot should be preserved as should the stone walls, dedication plaque and marker, and plantings. The dump station, amphitheater, comfort station/interpretive center, and recycling shed are recent additions and are not historic elements of this landscape.



Forest Headquarters Complex; the headquarters building, loop drive, stone wall, and stone marker with dedication plaque are all visible in this photo. (See Appendix K for photo information.)

Operations Yard. This landscape includes two potentially historic buildings: the Fire Station/6-bay garage (i.e., 10 stall building); and the maintenance building. More research is needed to determine their origins, but they seem to have appeared after the 1940s, according to historic maps of the forest. It is likely that the park experienced a significant build-out following WWII when demand for recreation increased. The historic Operations Yard buildings and the current Forest Headquarters are probably part of this historic episode in the 1950s. Workshops, sheds, and pole barns have been added over time, greatly expanding this facility.



The Fire Station/6-bay garage is one of two historic buildings in the operations yard. (See Appendix K for photo information.)

The barn straddles the line between the Operations Yard and Forest Headquarters Complex, with entrances in each. It is located in the approximate location of the former forest headquarters, as shown in the 1937 park map by F. Gilbert Hills and in a 1945 Massachusetts Department of Conservation

“General Plan for Improvements.” The building was used as a wood shop and then its interior was radically transformed for office and meeting space. The exterior, however, retains features such as the loft doors at the gable end that may date to the historic period. It is likely that this building served as the headquarters until the construction of the current headquarters in the 1950s.

Fearing Pond Day Use Area. This landscape has a large capacity for parking, picnicking, and swimming, but the restrooms and changing facilities are no longer useable. Originally developed by the CCC in the mid-1930s, this day-use area retains the character of a CCC-era landscape, with the rustic cedar log bathhouse at its center and wooded picnic areas clustered around a sandy swimming beach. Several CCC fire pits are extant. Views toward the opposite shoreline enhance the recreational character of this landscape. A 1950s concession building is unobtrusive and compatible with the rustic style of the bathhouse. A similar day-use area was constructed by the CCC along the north shore of Charge Pond; it was destroyed by a fire in 1964. The surviving day-use area at Fearing Pond is a testament to the development of recreational facilities in Massachusetts, including improvements by the Civilian Conservation Corps and later by DCR’s predecessor agencies (i.e., Department of Natural Resources and Department of Environmental Management).



This photo of the Fearing Pond bathhouse and parking area was taken following a 1944 hurricane; storm debris is visible in the foreground. (See Appendix K for photo information.)

The Fearing Pond Bathhouse is in poor condition, but as the only surviving CCC log bathhouse in the DCR system it should be preserved. In 2017, a rehabilitation plan was prepared for this building, along with cost estimates for its implementation. This plan would restore the building's historic use as a changing room. As of this writing, there are no funds available for implementation of this plan.

Buildings

Cottages. Shortly after Massachusetts established its first state forests, the possibility of camping was raised.

"It is quite possible that in most of the newly created State forests camping sites can be let each year, without injury to the forest lands, in a manner similar to that adopted by the National Forest Commission, and from which appreciable revenue may be derived." (SFC 1917)

Three years later, the State Forest Commission noted that at Myles Standish:

"There has been a great demand for camp sites; and, therefore, surveys were made of College, Fearings, Widgeon, Clew (sic) and Rocky ponds, and on these ponds, two hundred and fifty camp sites, with 100 feet shore frontage and 200 feet in depth, have been laid off. Charge Pond has been reserved for the Boy Scouts, and Barretts Pond for the Girl Scouts. Fifty-six allotments have been made on College Pond, seven on Fearings Pond, and seven on Widgeon Pond. The amount received therefor is \$623." (SFC1920)

This program included sites for cottages and sites for tents. Cottage permits were issued for five years and tent permits for not more than four weeks. Fees were associated with both permit types, and both could be revoked without notice. Today, permits are issued on an annual basis and may be cancelled with 30-days-notice. The seasonal cottage program may be terminated with a minimum of three years notice to permittees.

The development of cottages and cottage communities soon followed establishment of the program, centered on the forest's larger ponds. A series of 1922 plans indicate a total of 195 pond campsites, including; Curlew (20 sites); Widgeon (25 sites); Rocky (13 sites); College (55 sites); Fearings (42 sites); and Charge (40 sites). These maps also indicate only three camps present in the forest at this time. A brief but intense period of cottage construction occurred during the pre-war period. Cottages from this period reflect 1920s and 1930s construction including wide clapboard, shingle and bead board siding, two over two double hung windows, and textured concrete block (foundations and outbuildings).

Records indicate 139 cottages remain in the forest as of June 2020. (Table 2.3.3) Of these, 16 are identified as owned by DCR, due to the buildings being abandoned or turned over to DCR from private owners. In October 2017, site inspections were performed on all identified DCR-owned cottages. Two had been previously demolished; minimal archaeological resources remain at these sites. A set of concrete and native stone steps were all that remained at the Curlew Pond parcel (56R Curlew Pond Road), and a small section of concrete slab (circa two feet by three feet) were all that remained at the College Pond parcel (42 West Cranford Road). Construction dates of extant DCR-owned cottages range from 1920 to 1950. One or more sheds and a privy are typically associated with DCR-owned cottages. Three of the DCR controlled cottages were demolished in 2018. All 16 cottages owned by DCR are classified as being in Fair, Poor, or Fail condition and are not suitable for use.

Table 2.3.3. Number and ownership of cottages at Myles Standish State Forest.^a

Pond	# Private	# DCR	Total
Curlew	14	3	18
Widgeon	27	5 ^c	32
Rocky	15	0	15
College	42	5	50
Fearing	25	3	28
Total:	123	16	139

a. Based on June 2020 Town of Plymouth Assessor data, updated June 2021.



Example of DCR-owned cottage. This camp was located on the shore of College Pond, adjacent to the day-use area, until its demolition in 2018. (See Appendix K for photo information.)

Structures

CCC Water Holes. A 1933 map (*Management Plan of the Myles Standish State Forest, Plymouth and Carver, Mass. showing blocs, planted areas, and fire lines. Jan. 1, 1933*) identifies 18 water holes in the forest. These water holes were used as water sources for fighting forest fires. They include 12 natural water bodies (e.g., Hog Pond) and six constructed water holes. Constructed features, which are believed to have been built by the CCC, are referred to as either stone or tile wells. Four of the six constructed wells have been located by the Management Forester; two have not.

Interior Parkways. There are two types of historic parkways located within the forest, and they reflect two very different design aesthetics. Alden and Upper College Pond roads are nearly straight entrance roads originating at the northeast corner of the park and terminating at Fearing Pond Road. These wide, paved roads are flanked on both sides by a broad grassy shoulder. Both a road and a fire break, Alden and Upper College Pond roads reflect the Commonwealth's management for fire protection.

Lower College Pond Road is also a historic parkway, but it is laid out to take advantage of scenic opportunities. Lower College Pond Road begins just north of College Pond where Alden Road splits into Upper and Lower College Pond Road. Lower College Pond Road follows a winding route past five ponds, accessing some of the major attractions of the forest: College Pond; Barrett Pond; the headquarters; and East Head Reservoir. A

narrow paved road, Lower College Pond Road skirts the edges of Three Cornered Pond and New Long Pond, sometimes with only a small retaining wall separating the roadway from the water. Set among the wooded forest land, the road provides stunning views toward the ponds as the tree line gives way to the broad expanses of water. The road ends at the forest headquarters where it becomes Fearing Pond Road.

Because the historic parkways are integral to the function of the state forest, they are well maintained. Alden Road especially is recently paved, and the broad fire breaks are mowed frequently. Lower College Pond Road is in satisfactory condition, but its surface is worn and potholed. In some areas the drainage appears to be poor.

Objects

Myles Standish's historic landscapes include all known historic objects in the forest. (See *Historic Landscapes*, above.)

2.4. RECREATION ACTIVITIES

The following authorized recreation activities take place at Myles Standish:

- Basketball; full court at Charge Pond, individual nets in Curlew Pond and Barrett Pond parking lots.
- Bicycling, mountain
- Bicycling, road
- Boating, row and power
- Canoeing/kayaking
- Dog walking, on leash
- Fishing, fin fish
- Hiking/walking
- Horseback riding
- Hunting
- Nature study/photography
- Picnicking
- Running/jogging
- Skiing, cross-country
- Snowmobiling
- Snowshoeing
- Swimming

- Volleyball; Fearing Pond Area H

Geocaching, an activity that is neither authorized nor prohibited, is popular in the forest. As of January, 2021, there were 49 caches; mostly along the forest's multi-use trail.

A number of large-scale recreation events happen annually or near-annually during non-pandemic years. They are identified in Table 2.4.1. Smaller recreation events also take place. Annual interpretive and recreational programming events are identified in Section 2.6. Visitor Services.

Table 2.4.1. Major annual recreation events at Myles Standish State Forest.

Month	Event	# of People ^a
April	Run Through the Pines Half Marathon & 5K	1,300 & 400
May	Amazing Grace Equine Benefit Trail Ride	60
May	Reebok Ragnar, Cape Cod	
June	Best Buddies Challenge	650
June	A. D. Makepeace Harvest Triathlon	500
June	Pan Mass Challenge Kids Ride	225
June	Bike MS Cape Cod Getaway	2,000
Nov.	Myles Standish 16.20 and Team Relay	-

a. From Special Use Permit applications and event web sites, includes both participants and spectators.



Cross-country ski tracks wind through the forest after a snowstorm. (See Appendix K for photo information.)

Campers obtain information on the park's resources, recreation opportunities, and regulations at the headquarters during check-in. Day visitors may obtain information at the headquarters or at one of the many kiosks located at parking areas.

Information on the forest's developed recreation infrastructure is provided below.

Camping

Most of the park's recreation infrastructure is dedicated to camping. There are 372 campsites; arranged into 11 camping areas. (Table 2.4.2; Figure 2.1.1) There are no electric or water hook-ups for RVs. Campsites are open daily from Memorial Day through Labor Day. Not all sites are available for the entire camping season; some sites remain closed during periods of reduced demand.

Table 2.4.2. Summary of camping resources at Myles Standish State Forest.^a

Camping Resource	Total
Campsites (total)	372
Group	13
Horse	35
Host	5
Pop-up tent	89
RV/Trailer non-electric	50
Standard non-electric	177
Yurts	3
Bathrooms	4
Comfort Stations^b	13
Pavilions	1

a. Does not include day-use area resources.

b. Includes the closed comfort station on the south shore of Charge Pond.

A recent assessment of DCR campground assets (i.e., buildings, roads, and campsites) rated most at Myles Standish as Fair (Arcadis 2015). Fifteen assets, mostly comfort stations and bathrooms, were assessed as Poor or Very Poor. In many cases, these ratings were assigned due to a lack of mechanical ventilation systems. Since the assessment (Arcadis 2015), improvements have been made to most of these assets. Six bathrooms at Charge Pond need minor repairs such as painting, shingle replacement, new partitions, the addition of dishwashing sinks, and replacement of utility room doors.

Only the yurts are accessible; DCR continues to work to meet the 5% accessibility minimum required under the Massachusetts Architectural Access Code (CMR 19.5.1). Although the Comprehensive Campground Assessment indicated that there was at least one ADA compliant bathroom or comfort station at each camping area, this is not the case. Only recently constructed bathrooms and comfort stations are fully ADA compliant.

Use levels are moderate, with an overall occupancy rate of approximately 47 percent in 2019. (Table 2.4.3) Periods of greatest occupancy were associated with holiday weekends and the Fourth of July. That year, the Charge Pond pavilion was reserved 16.56% of available days.

Table 2.4.3. Campsite occupancy rates, by type, at Myles Standish State Forest.^a

Campsite Type	Occupancy Rate (%)
Group	24.15
Horse	15.19
Pop-up tent	61.57
RV/Trailer non-electric	57.61
Standard non-electric	47.47
Yurts	83.66
All Sites Combined	46.69

a. Based on 2019 data.

In 2019, campers came from 41 states and the District of Columbia, four Canadian provinces, Germany, and Hungary. Most were from southern New England. (Table 2.4.4)

Table 2.4.4. Common geographic origins of campers staying at Myles Standish State Forest.^a

Geographic Origin	Percent ^b
Massachusetts	91.10
Rhode Island	3.13
Connecticut	1.23
Total	95.46

a. Only states and provinces with one or more percent of total camping registrations are included. Based on 2019 data.

One camping area (Charge Pond C) is for equestrians only. Campers' horses, trailers, and tow vehicles can also be accommodated at the equestrian parking area adjacent to the Barrett Pond camping area.

The park's dump station is located behind headquarters. It is used for dumping waste from self-contained campers (i.e., RVs) into a tight tank. Dumpsters are located in all camping areas. There is no recycling facility for campers.

Day Use Areas

There are two day-use areas: College Pond and Fearing Pond. The College Pond area includes a picnic area, comfort station, paddle board/kayak rental concession, and a guarded beach. There is a fee for parking. The Fearing Pond day-use area is located on the southeast shore of that pond. It

includes an unguarded beach, picnic area, and portable toilets. There is a pay and display machine to collect fees and issue passes. Both day-use areas are open from Memorial Day to Labor Day.

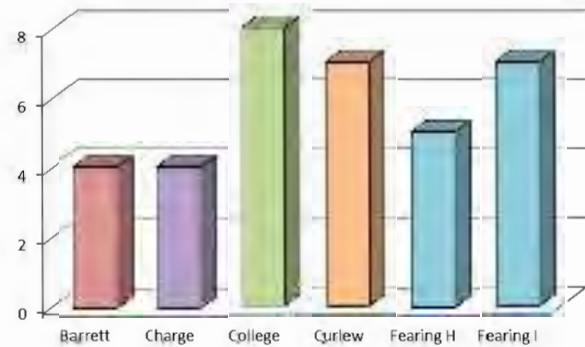
Beaches

There are six designated swimming areas; they are at the following locations:

- Curlew Pond; camping area
- College Pond; day-use area
- Barrett Pond; camping area
- Fearing Pond H; camping area
- Fearing Pond I; camping area and day-use area
- Charge Pond North; camping area

Only the College Pond day-use area beach is guarded. All are open from Memorial Day to Labor Day. Water quality at all beaches is considered appropriate for both Primary (e.g., swimming) and Secondary (e.g., boating) Contact Recreation (MassDEP 2017). Between 2010 and 2019, there were 35 exceedances of *Enterococcus* bacteria standards. The number and distribution of these exceedances are identified in Figure 2.4.1.

Figure 2.4.1. Exceedances of water quality standards at beaches in Myles Standish State Forest, 2010–2019.



Boating

Boating is allowed on the park's ponds. However, there are no boat ramps. As a result, boating is limited to kayaks, canoes, and other small boats that may be hand carried to the water. Canoes, kayaks, and stand-up paddle boards are available to rent from a concession in the College Pond day-use area.



Kayakers ply the waters of Charge Pond on a warm spring day. (See Appendix K for photo information.)

Picnic Sites

Picnic sites are available at the forest headquarters area, northern entrance on Long Pond Road, and at both day-use areas. The first two sites are available at no cost; there is a fee for use of the day-use areas. All are first come first served. There is one picnic pavilion; it is located in the Charge Pond Campground. It has a large grill and electricity, and may be reserved through Reserve America.

Trails-based Recreation

There is an internal paved multi-use path, forest roads, and trails for recreational use. See Trails, below, for additional information.

2.5. INFRASTRUCTURE

Property Boundary

The forest is irregularly shaped. It lies within an area roughly defined by Route 3 and Long Pond Road to the north, Agawam and Mast roads to the east, the Wareham town line to the south, and Tremont Street and Federal Furnace Road to the west. (See Figure 2.1.1) Adjacent land use is primarily active agricultural land (i.e., cranberry bogs) to the south and west, and a mixture of protected and unprotected open space to the north and east. High and medium density residential development abuts portions of the forest to the northeast, north, and northwest.

The forest is part of a broad conservation landscape. Over 6,800 acres of protected open space are contiguous with the forest. The U.S. Fish and Wildlife Service, MassWildlife, Wildlands Trust, and local municipalities have all worked to protect

open space in the region in order to protect pine barrens communities, rare plants and animals that occur in these communities, coastal plain ponds, and the Plymouth-Carver aquifer. The USFWS included the area immediately north of the forest in its Plymouth Focus Area for the newly established Great Thicket National Wildlife Refuge (USFWS 2016). They hope to acquire and protect 500 acres in this area, further expanding the conservation landscape in which the forest is located.

Inholdings. Five inholdings were associated with the initial Order of Taking, dated August 15, 1917, that established the forest. Only one has been added to the forest in the intervening years. These inholdings are:

1. Dunham property; along Cranberry Road. This property has been subdivided and now consists of seven residential lots with houses (110–124 Cranberry Road) and two cranberry bogs.
2. Dunham property; along Cranberry Road. This property (138 Cranberry Road) has a residence and cranberry bog.
3. Dunham property; along Cranberry Road. This parcel is located northwest of the Operations Yard; it contains an active cranberry bog.
4. Russell property. This includes East Head Reservoir “together with a strip of land 6 rods [99 feet] wide extending around the reservoir from high water level.” There is one cottage on this parcel.
5. Jessup property. Located northwest of Barrett Pond. This property was acquired by the Commonwealth and incorporated into the forest in 2007.

An approximately 76.7 acre inholding, located on the Southwest Shore of Curlew Pond is associated with a later acquisition. There are 10 contiguous inholdings, totaling 3.6 acres, on the north shore of Widgeon Pond. Title to a 69.0 acre parcel on the western shore of Little Widgeon Pond has been challenged. Additional review is needed to clarify the title. If the parcel ultimately does not belong to the Commonwealth, it represents an additional inholding.

Other State Agencies. Two state agencies control portions of the forest owned by DCR. MassWildlife manages two Cooperative Wildlife Management Areas (WMAs) “for habitat management and upland

game bird liberation associated with the upland game bird program” (DCR and MassWildlife 2016). This includes the approximately 1,171 acre Pheasant Management Area, located in the center of the forest and the approximately 684 acre Quail Management Area in the southeast corner of the forest. The pheasant area was established in 1953 and the quail area in 1966. (See Section 2.8 Management Practices, for information on the management of these WMAs.) The Department of Corrections controls approximately 375 acres around Bumps Pond, the location of MASAC. This facility opened in May 2017 in the former Massachusetts Correctional Institution, Plymouth. All acreages are reported as approximate, as no formally agreed upon boundaries were identified during the planning process.



Example of MassWildlife managed field in the Quail Management Area. (See Appendix K for photo information.)

Easements. The DCR holds a 100-foot-wide Right of Way across Town of Plymouth Water Department Land at 454 Federal Furnace Road, Plymouth. (Book 3869, Page 53).

A 20-foot-wide Right of Way crosses the forest to access residences at 389, 387, and 381 Federal Furnace Road. (Book 2481, Page 15; Plan Book 2482, Page 106) All previous deeded access for these parcels was released following creation of the Right of Way (Book 2482, Page 106). Deeded access to adjacent parcels on Big West Pond remains governed by either Brewster to the Commonwealth of Massachusetts (Book 1456, Page 307) or Brewster to Curtin et ux (Book 1886, Page 243).

Two utility companies have transmission corridors in the forest. In 1952, Algonquin Gas Transmission Company was issued a “Location” in order to

construct and maintain a gas pipeline through the forest (Book 2200, page 382–385). Terms of this Location were modified in 1961 (Book 2919, Pages 251–252) and again in 1971 (Book 3650, Pages 21–25). In 1966, the New Bedford Gas and Edison Light Company, now NStar, was issued a “perpetual and exclusive right and easement” for “the transmission of electric power and intelligence” (Book 3343, Pages 652–653).



Utility corridors are prominent features on the forest’s landscape. Recent utility upgrades brought with them a host of mitigation measures, including efforts to reduce illegal OHV use. (See Appendix K for photo information.)

A four-rod-wide (i.e., 22-foot-wide) right of way extends from Charge Pond to the exterior boundary line of the state forest. It was reserved by the United Cape Cod Cranberry Company in 1917 for the purpose of conveying water from the pond to their bogs (Book 1276 Page 272). This feature is referred to as Harlow Brook, and has not been used in recent decades.

Encroachment. In 2018, the forest’s boundary along Blanchard Road and Adams Street was surveyed and a plan of land prepared; multiple encroachments were identified. As of this writing, a strategy for addressing these encroachments is being developed. Likely encroachments were identified along South Pond and Little Micajah’s roads in Plymouth.

Buildings and Structures

There are several non-historic buildings and structures in the forest. (Table 2.5.1) Most are owned by DCR and are associated with the forest’s campgrounds, headquarters, or operations yard. Campground related buildings include comfort stations, a water supply shed, and a pavilion. Recent

Table 2.5.1. Non-historic buildings and structures of Myles Standish State Forest.

Location and Infrastructure	Date ^a	Condition ^b	In Use ^c	Utilities ^d
CURLEW POND				
Campground				
Comfort Station - East	2017	1	S	E, S, W
Comfort Station - Central	ca. 2013	2	S	E, S, W
Comfort Station - West	ca. 2000	3	S	E, S, W
ROCKY POND				
Cranberry Bogs				
Bog pump house ^e	1990	-	-	-
Water control structures ^e	-	-	-	-
BARE HILL				
Fire Tower				
Observation tower and cabin	1997	2	S	E, T
Generator shed	1997	2	Y	E
BUMPS POND				
Massachusetts Alcohol and Substance Abuse Center^e	-	-	-	-
Buildings (19) ^e	-	-	-	-
BARRETT POND				
Campground				
Comfort station 1	-	3	S	E, S, W
Comfort station 2	-	3	S	E, S, W
Water supply shed	-	3	S	E, W
Bog pump house^e	-	-	-	-
ADMINISTRATION & OPERATIONS				
Perry House				
Animal housing	-	6	N	-
Headquarters Landscape				
Storage shed	-	3	Y	-
Interpretive Center/Bathrooms	1998	2	S	E, H, S, W
Recycling Center	-	3	N	-
Recycling Center shed	-	3	-	-
CCC Amphitheater	2008	2	-	-
Operations Yard				
Wood Shop	-	3	Y	E
Garage (2-bay)	-	2	Y	E
Prisoner tool shed	ca. 2006	3	Y	E
Vehicle storage 1 (6-bay)	-	5	Y	E
Vehicle storage 2 (5-bay)	-	3	Y	E
Former HQ generator shed	-	3	Y	E
Fuel pump and tanks	2016	1	Y	E
Metal 2-bay garage (Morton)	2010	2	Y	-
Pole barn – Forest Fire Control	2017	1	Y	-
Salt and sand storage structure	2016	1	Y	-
FEARING POND				
Campground				
Area H - Comfort Station 1	ca. 1969	4	S	E, S, W
Area H - Comfort Station 2	ca. 1969	3	S	E, S, W
Area I - Comfort Station	ca. 1969	2	S	E, S, W

Location and Infrastructure	Date ^a	Condition ^b	In Use ^c	Utilities ^d
CHARGE POND				
Pond Area				
North Beach - Comfort station	ca. 1972	2	S	E, S, W
North Beach - Pavilion	-	2	S	E
South Beach - Comfort station	ca. 1972	5	N	E, S, W
Campground				
Area A - Comfort station	ca. 1972	3	S	E, S, W
Area B - North - Comfort station	ca. 1972	3	S	E, S, W
Area B - South - Comfort station	ca. 1972	3	S	E, S, W
Area C - Comfort station	ca. 1972	3	S	E, S, W
Area D - Comfort station	ca. 1972	3	S	E, S, W
Area E - Comfort station	ca. 1972	3	S	E, S, W
Area F - Comfort station	ca. 1972	3	S	E, S, W

a. Date of construction provided, when known.

b. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset Management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.

c. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.

d. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.

e. These structures are located on DCR property but are not owned by the DCR.

f. Based on 2007 trails assessment; the most recent year for which data are available.

buildings and structures at both the headquarters and operations yards are primarily sheds and other outbuildings. There are some exceptions, such as the Interpretive Center/Bathrooms at headquarters and the wood shop in the operations yard. In general, the recent buildings and structures are in adequate or better condition. Non-DCR buildings and structures are either associated with cranberry bogs or MASAC.

Since the previous RMP (DCR 2011), the east comfort station at Curlew Pond campground has been demolished and a new, accessible building constructed. Other campground bathrooms have been upgraded, including the installation of epoxy floors at Charge and Fearing Pond campgrounds, and the installation of new partitions at the Charge and Barret Pond campgrounds.

Water to the park's buildings is provided by a 10-well Public Water Supply system (#4052022). (Table 2.5.2) An additional Public Water Supply (#4239010) is located at MASAC; it is solely for that facility's use. Private cottages at Curlew, Widgeon, Rocky, and College ponds have individual seasonal water systems that pump from groundwater. Water for irrigating the Rocky Pond cranberry bogs comes from that pond.

Table 2.5.2. Location and status of DCR water supply wells at Myles Standish State Forest.^a

Well Name	Well #	Town	Status ^b
Charge Pond – North	01G	Plymouth	Active
Charge Pond - South	02G	Plymouth	Active
Barrett Pond – Area 1	03G	Carver	Inactive
Barrett Pond – Area 2	04G	Carver	Active
Operations Yard	05G	Carver	Abandoned
Headquarters	06G	Carver	Abandoned
College Pond – Day use	07G	Plymouth	Active
Fearing Pond – Day use	08G	Plymouth	Inactive
Fearing Pond – Area 1	09G	Plymouth	Active
Fearing Pond – Area 2	10G	Plymouth	Active
Curlew Pond 1	11G	Plymouth	Inactive
Curlew Pond 2	12G	Plymouth	Active
Curlew Pond 3	13G	Plymouth	Active
Curlew Pond 4	14G	Plymouth	Active
Curlew Pond 5	15G	Plymouth	Abandoned
Headquarters ^c	16G	Carver	Active

a. Based on DEP (2015).

b. Abandoned wells may not be brought back into use.

c. This replaced wells 05G and 06G.

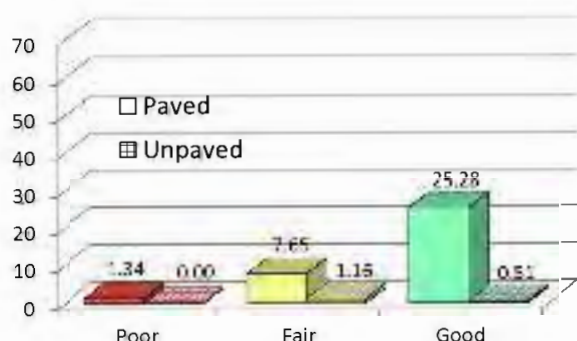
There are 22 active septic systems; they discharge to groundwater. These are associated with campgrounds, the College Pond day-use area, Perry House, Headquarters, Operations Yard, and barn. There is no collective Groundwater Discharge Permit for these septic systems. Waste from recreational vehicles is discharged into a “tight tank” at the dumping station behind Headquarters. Private

cottages at Curlew, Widgeon, Rocky, and College, and Fearing ponds have individual privies that discharge to groundwater. Some cottage owners rent portable toilets for the camping season. The number of septic systems at MASAC was not identified.

Roads

There are 35.94 miles of roads in the forest; 95.4% of which are paved. (Figure 2.5.1) Three public roads (i.e., Rocky Pond, College Pond, and Alden) connect from the north; one (i.e., Cranberry Road) connects from the south. The main points of access are Alden Road to the north and Cranberry Road to the south; these two roads are associated with the forest's two formal entrances. Other roads within the forest provide access to DCR campgrounds, private cottages, MASAC, or scout camps.

Figure 2.5.1. Condition and length (in miles) of roads at Myles Standish State Forest.



Since the previous RMP (DCR 2011), over \$4 million in paving has taken place, primarily along Alden, Upper College Pond, Lower College Pond, Halfway Pond, Cranberry, and Fearing Pond roads.

There is no information on the volume, timing, or destination of vehicles on forest roads. Year-round traffic volume suggests weekday commuter traffic not associated with park visitation. Noticeable increases in volume occur in the morning and afternoon at times commonly associated with commuter traffic. Commuters are believed to use forest roads for travel between Routes 3 and 495. Commercial vehicles are common, despite being prohibited by park regulations. (See Section 2.8. Roads, for information on commercial vehicle restrictions.)

The forest's roads are the only way to access MASAC and two scout camps. The substance abuse center is accessed from Upper College Pond Road.

Camps Cachalot and Squanto about the western edge of the forest; both are accessed via Fearing Pond Road.

Parking

Myles Standish has several public parking lots and nearly 800 parking spaces. (Table 2.5.3) These lots may be broadly thought of as falling into two categories; lots for campers or lots for day use visitors. Lots for campers are located in or around the campgrounds. Vehicles passes, issued to campers at the time of check in, are needed to use these lots during the camping season. They are closed the rest of the year. Lots available for use by day visitors include designated day-use areas at College and Fearing ponds, the parking area at the forest headquarters, and lots associated with trail heads. Day use area lots are only open during the summer season. Parking at headquarters and most lots associated with trails may be accessed year-round. The Charge Pond multi-use trail lot is located within the Charge Pond camping area's gate and may only be accessed during the camping season.



The Headquarters Area parking lot fills quickly on Fridays during the summer, as campers check in for the weekend. (See Appendix K for photo information.)

Since the previous RMP (DCR 2011), the Fearing Pond day-use area parking lot has been paved, as have parking areas within the Fearing Pond H camping area.

Table 2.5.3. Number of public parking spaces, by location and type, at Myles Standish State Forest.^a

Location ^b	HP	Restricted ^c	Other	Total
Curlew Pond				
Remote parking	0	14	0	14
Roadside - Comfort station 1	0	31	0	31
Parking Lot - Comfort station 2	0	32	0	32
Rocky Pond Lot (P7) - Bare Hill Road	0	0	5	5
East Entrance (P4) - Long Pond Road	0	11	0	11
College Pond Day Use Area - Lower College Pond Road	4	0	154	158
Bentley Trail Lot (P2) - Upper College Pond Road	0	60	0	60
Fire Tower Lot (P6) - Bare Hill Road	0	0	16	16
Barrett Pond				
Paved lot	0	74	0	74
Equestrian Parking (P3)	0	0	12	12
Operations Yard				
Barn – two lots	2	0	9	11
Headquarters Area (P1)	2	0	26	28
Fearing Pond				
Area H - Opposite comfort station	0	4	0	4
Area H - Paved Lot	0	37	0	37
Day Use Lot	2	0	60	62
Area I - Paved Lot	0	30	0	30
Cutter Field Road^d				
Lot A	0	0	11	11
Lot B	0	0	11	11
Lot C	0	0	11	11
Lot D	0	0	20	20
Lot E	0	0	11	11
Charge Pond				
Bike Trail Lot (P5)	0	0	34	34
Area A - Comfort station	0	20	0	20
Area B North - Comfort station	0	22	0	22
Area B South - Comfort station	0	12	0	12
Area C - Comfort station	0	16	0	16
Area D - Comfort station	0	16	0	16
Area E - Comfort station	0	47	0	47
Area F - Comfort station	0	21	0	21
Total	10	447	380	837

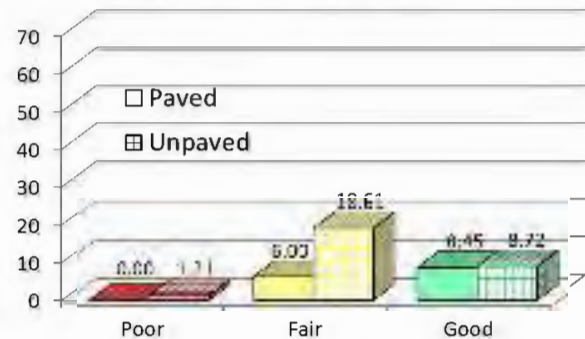
- a. The number of spaces is determined by pavement markings, when present. If the lot is unstriped, the number of spaces is based on the potential number of 9-foot-wide spaces that can fit in the lot.
- b. Alphanumeric code in brackets (e.g., P1) corresponds to parking lot designations on 2016 forest map.
- c. Most parking lots in campgrounds are restricted to use by registered campers.
- d. Sequence of lots from west to east.

Trails

There are over 118 miles of trails in the forest. This includes approximately 43 miles of Official Trails and 75 miles of Forest Roads/Trails.

Official Trails include nearly 14.5 miles of paved multi-use trail, as well as 28.54 miles of traditional hiking trails. (Figure 2.5.2) Among the traditional trails are six named trails (i.e., Friends Loop, Frost Pocket Loop/Path, Bentley Loop, Camping Pond Loops, Charge Pond Loop, and Pine Barrens Path) and hunter access trails through the WMAs. During the preparation of this RMP, no agreement was located for the placement of this trail on private land.

Figure 2.5.2. Condition and length (in miles) of official trails at Myles Standish State Forest.



The forest's trails were assessed in 2015, and nine recommendations made (DCR 2015a). Significant progress has been made on implementing many of these recommendations. Improvements include closing unauthorized trails, establishing new loop trail opportunities around campgrounds and connecting destinations, development of a new trails system map, the installation of new trail signs, and improved cooperation with the Friends of Myles Standish and Wildlands Trust in the maintenance and development of trails.

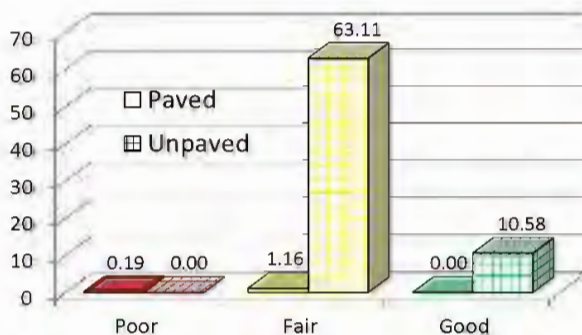
The forest's paved multi-use path has been the focus of many recent improvements. When last surveyed, approximately 46% of the trails were found to be in Fair or Poor condition. Condition issues included pavement heaving from tree roots under the path, cracks and breaks in the pavement, and holes in the pavement. These problems resulted in many road bicyclists avoiding the paved paths in favor of the forest's paved roads. Since 2015, approximately \$359,000 in pavement repairs has been made to the multi-use paths.



This trail segment is part of the forest's multi-use path. (See Appendix K for photo information.)

The majority of the forest's trails network is based around a series of forest roads. (Figure 2.5.3) These roads are typically oriented east-west or north-south, divide the forest into compartments, and provide access for firefighting equipment. They are popular with equestrians, hikers, and mountain bikers.

Figure 2.5.3. Condition and length (in miles) of forest roads at Myles Standish State Forest.



Kiosks and Signs

There are 12 standard wooden DCR kiosks. Their locations and messaging are as follows:

- Curlew Pond camping area (1); Welcome Wayside panel
- Rocky Pond parking lot (1); empty
- East entrance (1); interpretive panel
- College Pond Day Use Area (2); Welcome Wayside panels
- Bentley Trail Lot (2); one interpretive panel and one with postings
- Barrett Pond camping area (1); Welcome Wayside panel

- Forest Headquarters parking lot (1); Welcome Wayside panel
- Fearing Pond H camping area (1); Welcome Wayside panel
- Fearing Pond I camping area (1); Welcome Wayside panel
- Charge Pond comfort station, north beach (1); postings

An oversized kiosk is located on the east lawn of the forest headquarters. An approximately 8 foot by 8 interpretation of the forest map is featured on this kiosk.



This hand-painted map of Myles Standish is located adjacent to the forest headquarters. (See Appendix K for photo information.)

Lexan covered bulletin boards are located on comfort stations at the following locations:

- Curlew Pond; Central Comfort Station
- Barret Pond; Comfort Station 1
- Fearing Pond H; comfort station
- Fearing Pond I
- Charge Pond; Area A
- Charge Pond; Area B - North
- Charge Pond; Area D
- Charge Pond - Area E
- Charge Pond - Area F

A free-standing Lexan covered bulletin board is also located along the path to the waterfront area at College Pond.

The forest has two main identification signs; one at each major entrance. The northern sign is located at the East Entrance, at the intersection of Alden and

Long Pond roads in Plymouth. The second sign is located at the West Entrance, along Cranberry Road in Carver. Also at the East and West entrances are signs indicating that the forest's roads are closed to commercial traffic. A large wooden sign, identifying the property as Myles Standish State Forest is located in front of the forest headquarters. A sign at the District 2 Forest Fire Control headquarters and Myles Standish operations yard is located at the joint entrance to these facilities.

Trails are identified with standard DCR trails markers (DCR 2015a). Non-standard signs are used to identify the Friends of Myles Standish's self-guided nature trail and the Plymouth Wishbone Walking Trail. The latter extends from Myles Standish to Ellisville Harbor State Park.

District 2 Forest Fire Control has installed reflective, red metal road signs along fire breaks and signs at designated drafting areas (i.e., places for fire engines to obtain water) in order to facilitate fire response.

Donation Box

There is one cylindrical metal donation box (i.e., "iron ranger"); it is located adjacent to the Interpretive Center at the forest headquarters.

Memorials and Markers

The following two authorized memorials or markers were identified during the preparation of this RMP.

- Metal plaque attached to a rock; front of the forest headquarters. This plaque bears the following inscription: *Commonwealth of Massachusetts, Myles Standish State Forest, Established 1916. State Forest Commission Harold Parker, Harvey N. Shepard, Frank W. Rane, Charles O. Bailey, Sec.*
- Wooden sign with white lettering; north shoulder of Fearing Pond Road. This marker bears the following inscription: *The Fearing Pond World War II Memorial in memory of the camp boys who gave their lives in World War II. Dedicated in 1946 by the Fearing Pond Cottage Owners Assoc.* A metal flag holder, bearing the inscription *U.S. Veteran* and a United States flag are adjacent to the memorial. Beneath the sign is a stone with adhesive and drill holes, indicating that a plaque was once attached.

- Two unauthorized memorials, erected in memory of individuals that died in vehicle accidents within the forest, are also present. Additional memorials and markers may be present but may have gone undetected during the planning process.



Stone marker with metal plaque commemorating the establishment of the forest in 1916. (See Appendix K for photo information.)

2.6. VISITOR SERVICES

Myles Standish has a dedicated visitor center and strong interpretive programming. In 2019, the regional Visitor Services Supervisor and seasonal Park Interpreter had 14,367 visitor contacts. (Table 2.6.1)

Table 2.6.1. Number of visitors reached through interpretive programming and other visitor services contacts at Myles Standish State Forest in 2019.

Type of Contact	Number of Visitors Reached
Formal Programs^a (total)	1,010
Children	433
Adults	577
Informal and Roving Programs	4,096
Visitor Services	2,581
Nature Center	6,680

Based on 97 programs.

The following formal programs were offered by DCR in 2019:

- Amazing maize
- Animal detectives
- Bird songs for beginners
- Cannonballs and cranberries
- CCC bike/hike
- College Pond creature feature
- Cutter Field bird watch
- Eastern bluebirds
- East Head Reservoir ramble
- Explore nature series: Butterfly effect; Dragonflies and damselflies; Forest floor frolic; Who's that singing
- Family bike/hike
- First peoples of Plymouth
- Fishing clinic
- Here comes eastern cotton tail!
- Intro to nature photography
- Murder most fowl: the American crow
- Night hike
- Off the beaten path
- Owl prow!l
- Pine barrens hike
- Pond shore foray
- Tale of two presidents
- Talking trees
- Terrific trees
- The pine barrens: A stroll of fire and ice
- Turtle tromp
- What's in a bog?
- White-tailed deer: To the brink and back

Many nighttime programs were cancelled during the summer due to the incidence of Eastern Equine Encephalitis ("Triple E") in the region.

The Friends of Myles Standish (Friends), Appalachian Mountain Club (AMC), and MassWildlife, in association with DCR, offered the following programs and special events in 2019:

- Bird walks (Friends), including:

- Flight of the woodcock
- Hikes, including:
 - Cheery Pond Valley Hike
 - Federal Pond Walkabout
 - First Day Hike (DCR and Friends)
 - Sunday Dog Hike (Friends)
- Park Serve Day and cookout (DCR and Friends)
- Pine Barrens restoration tour (DCR and Friends)
- Telescoping the Winter Sky (Friends)
- Take me fishin' event (DCR, Friends, MassWildlife)

There are three different types of interpretive panels at a total of three locations. These panels include:

- Pine Barrens: A forest at risk. Two signs, located on kiosks at the following parking lots:
 - East Entrance Lot (P4)
 - Bentley Trail Lot (P2)
- Pine Barrens Restoration Timber Harvest. One sign, along Rocky Pond multi-use path to the east of Bare Hill Road.
- A globally rare local treasure: The Atlantic Coast Pine Barrens. Three signs at various locations around the pine barrens restoration area in southeast corner of the forest. These panels were provided to DCR by the Southeastern Mass Pine Barrens Alliance and funded with a U.S. Forest Service Landscape Scale Forestry Grant.

There are seven Welcome Wayside panels (i.e., Welcome to Myles Standish State Forest); one at each of the following locations:

- Curlew Pond Campground, opposite west comfort station
- College Pond Day Use Area, parking lot
- College Pond Day Use Area; east of bathhouse
- Barrett Pond Campground; overlooking pond
- Forest Headquarters Parking Lot (P1)
- Fearing H; near comfort station
- Fearing I; near comfort station

The Friends have established a nature trail just outside the forest, along the shore of East Head Reservoir. It is unknown if they have an agreement with the landowner for the public use of this trail, which connects to the forest's trails system.

2.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

Myles Standish is managed by a combination of year-round and seasonal park operations employees. This includes both park and regional personnel. In addition, several other DCR employees, such as administrative, Forest Fire Control, and engineering personnel are based at, and provide support for, Myles Standish. These employees' responsibilities are not limited to the forest or Complex.

Partnerships and Volunteers

There are several partners and volunteer organizations active in the forest. Since 1953, MassWildlife has managed two WMAs in Myles Standish. They are also a sponsor of the annual Fishing Fest. The UMass Cranberry station operates two bogs associated with Rocky Pond. The Friends of Myles Standish State Forest (the Friends) was established in May 2007 to help DCR "care for the Myles Standish State Forest" (<http://www.friendsmssf.com/meetings.html>). Its purposes are:

- Promote and conserve the natural, scenic, and historical resources of Myles Standish State Forest "and its Satellite Areas"
- Foster the use and enjoyment of Myles Standish State Forest by the public in a manner consistent with the protection and preservation of the environment
- Engage in educational, scientific, and charitable activities to assist in the operation of Myles Standish State Forest
- Assist and work in cooperation with the forest supervisor in general support and enrichment of Myles Standish State Forest

A list of the Friends initial priorities for the forest may be viewed at <http://www.friendsmssf.com/priority%20Setting%20Sept%2007.htm>. The Friends conduct a variety of activities such as organizing hikes, sponsoring events, helping maintain hiking trails, installing and monitoring bird nest boxes, promoting native vegetation, and enhancing the forest's East Entrance.

The mission of the Southeastern Massachusetts Pine Barrens Alliance (SEMPBA) is to "build a network of federal, state, tribal and municipal agencies, environmental organizations, businesses and individuals to further environmental understanding, conservation and sustainable living within the globally rare Massachusetts Coastal Pine Barrens" (<http://pinebarrensalliance.org/our-mission/>).

The use of prescribed fire at Myles Standish requires the involvement of numerous local, state, and federal agencies, as well as the participation of non-profit organizations. The composition of these multi-partner efforts varies among burns.

Public Safety

The Carver and Plymouth fire departments provide fire response and emergency services. Personnel from DCR's Forest Fire Control District 2, based at Myles Standish State Forest, provide supplemental assistance. The Massachusetts State Police (Station D-4, Middleboro for Carver and Station D-7, Bourne for Plymouth), Massachusetts Environmental Police (Region C-7), and local police (i.e., Carver and Plymouth) provide law enforcement. If a safety issue involves MASAC, Correctional Officers from that facility provide assistance.

Funding

Conservation Trust Fund

Financial contributions placed into the park's donation box are added to the Conservation Trust Fund and used at Myles Standish.

Retained Revenue

Parking fees are associated with the College Pond and Fearing Pond day-use areas. They are collected via pay and display machines. Revenue is also generated through camping fees, the cottage permit program, concessions, and rental fees (e.g., pavilions).

Other Revenues

Reserve America, DCR's online reservation provider, solicits donations to the park during the campground registration process. In 2019, these donations amounted to approximately \$3,000 and during the pandemic year of 2020 they amounted to approximately \$2,800.

The Friends raise money through membership fees, donations, and special events. Funds are used to purchase supplies and services that are donated to the park and further the Friends' mission. For example, the Friends purchased and donated benches that are located outside the forest headquarters. There is generally no direct transfer of revenues; the exception to this involves Partnership Grants. Organizations awarded a Partnership Grant deposit their cash match into the Conservation Environmental Trust.

2.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs (e.g., Table 2.3.2), legal agreements, and institutional knowledge. This section describes those practices unique to the management of Myles Standish State Forest. Legal agreements unique to the forest are identified in Table 2.8.1.

Table 2.8.1. Key legal agreements for Myles Standish State Forest.

Party and Subject of Agreement	Type ^a	Expiration Date ^b
University of Massachusetts Cranberry Experiment Station <i>Use of Rocky Pond Bogs for agricultural research purposes</i>	S	2005
Nemasket Kayak Center Permit Agreement	P	2026
Winterbottom Ice Cream, LLC <i>Mobile food concession at Myles Standish</i>	S	2022
New Bedford Gas and Electric (NStar) Perpetual and exclusive right and easement. (Book 3343, Page 652)	E	N/A
Commonwealth Electric Company License to "operate, inspect, and maintain" pole line, equipment and fixtures	LI	N/A
NStar Electric Company <i>Mitigation commitments associated with Lower SEMA 345kV Transmission Project</i>	A	N/A
Algonquin Gas Transmission Company Location for installing and maintaining a gas transmission pipeline. (Book 2200, Page 382)	LO	N/A
Algonquin Gas Transmission Company Location for installing and maintaining a second gas transmission pipeline. (Book 2919, Page 251)	LO	N/A

- Agreement types include: A = Memorandum of Agreement; E = Easement; LE = Lease; LI = License; LO = Location; P = Permit; S = Special Use Permit; U=Memorandum of Understanding.
- Year that agreement expires.

No friends agreement was located during the preparation of this document.

Key planning documents are identified in Table 2.8.2.

Table 2.8.2. Key management and guidance documents for Myles Standish State Forest.

Author and Document	Year
DEM Guidelines for Operations and Land Stewardship: Myles Standish State Forest	1984
Gannett Fleming, Inc. Clean State Audit: Myles Standish State Forest. South Carver, Massachusetts. February, 1999	1999
Epsilon Associates, Inc. Trails and Resource Management Plan: Myles Standish State Forest	2001
NHESP Biodiversity of Myles Standish State Forest	2007
Belote, A. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: East Tract, Unit 2 (<i>Unit D</i>)	2010a
Belote, A. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: 78 Cranford Road (<i>North Tract, Unit A</i>)	2010b
Belote, A. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: Three Cornered Pond 1-4	2010c
DCR Resource Management Plan: Myles Standish Planning Unit, including Myles Standish State Forest	2011
DCR Revised spotted knapweed management plan	2012c
Whiddon, A. J. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: East Tract, Unit A	2012a
Whiddon, A. J. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: East Tract, Units B and C	2012b
Whiddon, A. J. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: East Tract, Unit E	2012c
Whiddon, A. J. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: East Tract, Unit F	2012d

Author and Document	Year
Whiddon, A. J. Prescribed fire plan. Administrative Unit(s): Myles Standish State Forest. Prescribed Fire Name: Long Pond and Mast Road Buffer Zone	2012e
DCR Trail system/Habitat Management Plan: DCR Myles Standish State Forest	2015a
Demoranville, C. Nutrient management plan for Rocky Pond	2016

An overall fire management plan, Habitat Management Plan (HMP), Universal Access assessment, and Southeast District Forest Resource Management Plan (FRMP) are in preparation as of this writing.

Annual Maintenance

Ongoing management practices typically follow a regular schedule. Common activities, and the desired frequency with which they occur, are identified in Table 2.8.3.

Table 2.8.3. Annual cycle of management activities at Myles Standish State Forest.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Cleaning - Bathrooms	D2	D2	D2	N/A
Cleaning - Campsites	AN	AN	AN	AN
Cleaning - Catch basins, culverts, drains	AN	AN	AN	AN
Cleaning - Visitor center	D1	D1	D1	D1
Cleaning - Walkways	D1	D1	AN	N/A
Litter removal - Recreation areas	D1	D1	D1	N/A
Litter removal - Trails	E7	E7	AN	AN
Maintenance - Picnic sites, fences, etc.	AN	AN	AN	N/A
Mowing and trimming	AN	AN	AN	N/A
Mulching and fertilizing	N/A	A	N/A	N/A
Pruning - Trees and shrubs	M2	M2	N/A	N/A
Raking - Beach	D1	D1	N/A	N/A
Trash - Empty - Barrels	D1	D1	D1	N/A
Trash - Empty - Bathrooms	D1	D1	D1	AN
Weed - Flower beds	M1	M1	N/A	N/A
Weed - Paved areas	AN	AN	N/A	N/A

a. Frequency codes are: A = Annually; AN = As needed; D = Daily, # times; E = Every # days; M = Monthly, # times; N/A = Not applicable.

Natural Resources

Water Resources

Because College Pond is designated a Great Pond it is subject to the Massachusetts Public Waterfront Act (Chapter 91) and associated regulations (310 CMR 9.00). The land beneath its waters is subject to regulation by the Massachusetts Department of Environmental Protection (DEP 2003).

Surface and groundwater management activities are solely associated with cranberry growing. Water withdrawals from the Rocky Pond bogs are registered with the Department of Environmental Protection (Registration Number 42431020 issued to UMass) in accordance with the Water Management Act (310 CMR 36.00). Irrigation is performed via an underground sprinkler system with water originating in Rocky Pond. Water withdrawals at two other ponds, Barrett's and Charge, are associated with private bogs. Both ponds have trench systems to carry water to bogs outside the forest. Only one, Barrett's Pond, is actively used for irrigation.

Seasonal Cottage Campsite Permits have several requirements related to water resources; they are:

- No drains from sinks, showers, bathtubs, or septic tanks are allowed to drain or leach into a pond, body of water, shoreline...either above or below the surface (Section R, Permit Conditions and Terms).
- Privately owned cottages formally meet the definition of a Public Water Non-Community System and must comply with DEP drinking water requirements. (Section S, Permit Conditions and Terms.) The following procedures and testing are required for each well serving a privately-owned cottage. All analyses shall be conducted using analytical methods approved for the monitoring of drinking water supplies:
 - Annual MassDEP Seasonal Start-up procedure shall be performed and a certification form shall be submitted.
 - Routine quarterly testing is to be completed during the second calendar quarter for total coliform bacteria and during the third calendar quarter for total coliform bacteria and nitrate.

- Routine tri-annual testing is required during the second calendar quarter every three years for nitrite, sodium, and manganese.

If any test determines the presence of Total Coliform or exceedance of any other drinking water standard, use of the well must stop immediately and the proper authorities notified. If a well is found to be contaminated or otherwise in non-compliance with the law it may be subject to closure sealing and any other actions required by law.

Rare Species

In 2007, the NHESP conducted a biodiversity assessment of Myles Standish, divided the forest into three management units (i.e., Pine Barrens, Pond, and Rare Turtles), and made 23 management recommendations (NHESP 2007). The NHESP updated these recommendations in their comments on the internal review draft of this RMP, (Appendix C).

Since 2019, DCR and Mass Wildlife have been working to improve approximately 2,400 acres of pitch pine-scrub oak barrens on public and private lands in Plymouth and Wareham. This project involves reducing the density of canopy trees to promote environmental conditions favorable to scrub oak and other pine barrens plants, and to promote populations of state-listed Lepidoptera and other uncommon barrens species. Within the forest, this includes areas around Charge Pond. Outside the forest, it includes Camp Cachalot Wildlife Conservation Easement, and the Southeast Pine Barrens and Maple Springs Wildlife Management Areas.

Invasive Species

Specific guidance on managing invasive plants at Myles Standish is contained in the *Invasive Plant Management Plan: South Region* (BSC Group 2017). All management activities are to be performed in accordance with this document.

Vegetation

Vegetation is managed for a variety of purposes including: public safety; promoting native plant communities within the pine barrens; fire control; and keeping roads and recreation facilities safe, serviceable, and welcoming.

Roads. Traditionally, forest personnel maintained the forest's paved roads and Forest Fire Control District 2 personnel maintained the forest's dirt roads. Due to recent decreases in staffing, Forest Fire Control helps forest staff maintain vegetation along paved roads and multi-use paths, and in campgrounds.

There are two objectives to vegetation maintenance along paved roads: 1. control the growth of vegetation extending into the roadway; and 2. limit the growth of woody vegetation between the road edge and the existing tree line. An approximately four-foot-wide strip along the edge of main roads and campground roads is mown throughout the growing season on an as needed basis. The entire area between the road's edge and the existing tree line is cut once per year, between October 1 and March 1. During this annual mowing, branches extending into the maintained area, and within 10 feet of the ground, are cut off.

The objective of vegetation maintenance along dirt roads is to allow for emergency vehicle access and to create fire breaks. Normal maintenance involves mowing vegetation with 10–12 feet of the road's edge. This is performed outside the growing season, with the sequence of roads cut determined on an as needed basis. The height of the cutting deck varies. If the road is adjacent to an area to be burned, the shoulder is mown several times in the months leading up to the burn. Old drainage ditches along the road shoulder are flattened out in advance of mowing, in order to avoid cutting into the soil. Dead trees along the shoulder, or with the potential to fall into either the shoulder or road, are cut and chipped or cut and dispersed.

Multi-use Paths. The objective of vegetation maintenance is to keep it from encroaching into the path. The path shoulder is cut once per year, between March and May (i.e., after snow clears and before the camping season). Prior to cutting, downed branches and trees are removed from the path. Small branches are sectioned and dispersed into the woods;

larger limbs are chipped and spread on site. This preparation work may be performed by inmate crews, forest staff, or Forest Fire Control personnel, as available. Once limbs have been removed from the path, the shoulder is mown. The width of the cut is variable, typically extending 2–5 feet from the pavement. As with the maintenance of road shoulders, branches extending into the maintained area and within 10 feet of the ground are removed. Limited sections of the multi-use path are bordered by herbaceous vegetation; these are cut on an as needed basis throughout the growing season.

Campgrounds. The objective in campsites is to cut vegetation back to the existing tree line. This includes both herbaceous and woody vegetation. Mowing occurs once per year, between March and May, in preparation for the camping season. At this time, hazard trees are also removed from camp sites. Campsites with primarily herbaceous vegetation may receive a second cutting during the growing season, if sites are unoccupied.

Forestry. CFI plots are currently being monitored at an average rate of 11 per year within the forest, and 30 per year for the region. Surveys are performed by the Regional Forester and seasonal Forestry Assistant.

Information on file with DCR's Regional Forester identifies 39 commercial tree harvests since 1967. Information on these harvests is provided in Table 2.8.4.

Table 2.8.4. Summary of timber harvests at Myles Standish State Forest; 1967 to present.

Year	Harvest Type	Thousand			
		Acres	Board Feet	Cords	Tons
1967	Timber	45	145.0	N/A	N/A
1971	Timber	19	37.0	N/A	N/A
1981	Timber	33	154.0	N/A	N/A
1983	Timber	11	48.5	N/A	N/A
1984	Timber	10	30.5	N/A	N/A
1986	Salvage	10	15.7	N/A	N/A
1986	Timber & Pulp	40	85.7	N/A	507
1987	Pulp/Chip	40	N/A	N/A	1,200
1988	Pulp/Chip	85	N/A	N/A	4,029
1990	Pulp/Chip	74	N/A	N/A	2,603
1990	Pulp/Chip	58	N/A	N/A	3,046
1991	Pulp/Chip	52	N/A	N/A	2,100
1991	Timber	14	31.9	N/A	N/A
1991	Pulp/Chip	65	N/A	N/A	3,684
1992	Salvage	149	82.4	N/A	1,480
1993	Pulp/Chip	49	N/A	N/A	3,266
1994	Whole Tree	76	N/A	N/A	2,700
1995	Whole Tree	62	N/A	N/A	2,400
1995	Timber	14	31.4	N/A	N/A
1999	Timber	41	89	N/A	N/A
2000	Pulp/Chip	17	N/A	N/A	282
2000	Timber	29	95	95	N/A
2000	Timber	2	32.5	N/A	N/A
2001	Timber	32	90.4	69	N/A
2001	Timber	36	N/A	296	N/A
2002	Timber	10	34.9	13	N/A
2002	Timber	30	67.7	118	N/A
2002	Timber	26	89.0	80	N/A
2004	Timber	53	60.6	N/A	N/A
2004	Timber & Pulp	54	56.5	N/A	180
2004	Timber & Pulp	18	10.0	N/A	254
2005	Timber & Pulp	51	6.0	N/A	520
2005	Timber & Pulp	76	113	N/A	932
2005	Timber & Pulp	75	55.5	N/A	816
2006	Timber & Pulp	13	25.0	N/A	50
2006	Timber & Pulp	145	145.0	N/A	842
2008	Timber	38	N/A	320	N/A
2009	Pulp/Chip	55	N/A	N/A	2,000
2014	Pulp/Chip	430	N/A	N/A	16,786
2019	Pulp/Chip ^a	340	N/A	N/A	8,772
2019	Pulp/Chip ^a	24	N/A	N/A	147
Total		2,501	1,632.2	991	58,596

a. Chips mulched and left in place; no materials left the forest.



Example of timber harvest to remove CCC created red pine plantation. (See Appendix K for photo information.)

Prescribed burning is used to manage the structure and composition of the forest in order to reduce the potential for wildfire and to promote rare species habitats and uncommon natural communities. For logistic purposes, the forest has been divided into 22 distinct geographic areas to be burned. (Table 2.8.5) These areas, typically identified as sub-units, range from 14 to 217 acres in size. In total 1,347 acres (10.8% of the forest) are included in burn plans. These plans were identified in Table 2.8.2. All areas to be burned are located in the central and northeast sections of the forest, between the Pheasant Management Area and the East Entrance. This area reflects the predominant wind direction, path of historic fires that escaped the forest, and proximity of residential development. The goal of each prescribed burn is to burn an entire sub-unit. Weather, resource availability, fire break condition, and fuel load all contribute to determining the sequence of sub-units to be burned. Burns are organized and conducted by DCR Forest Fire Control, with the assistance of the Plymouth Fire Department, other municipal fire departments, and participants from non-profit organizations and state and federal agencies. After the fire is extinguished, the Regional Forester maps the burn area and calculates the number of acres burned.

Table 2.8.5. Prescribed burn units and sub-units at Myles Standish State Forest.^a

Tract	Unit	Sub-Unit	Acres
East	A	A	52
East	A	B	34
East	A	C	78
East	A	D	55
East	A	E	29
East	A	F	62
East	B	N/A	188
East	C	N/A	217
East	D	A	31
East	D	B	54
East	E	A	72
East	E	B	100
East	F	A	105
East	F	B	43
N/A	Buffer Zone	A	20
N/A	Buffer Zone	B	16
N/A	Buffer Zone	C	15
North	A	A	78
North	B	1	27
North	B	2	35
North	B	3	14
North	B	4	22
Total			1,347

a. See Table 2.8.2 for a list of prescribed fire plans for these units and sub-units.

Between April 2009 and January 2019, 20 prescribed burns took place on 740 acres of the forest. (Table 2.8.6) This is slightly more than one-half (54.9%) of the acreage to be burned on an ongoing basis. Burns did not occur in all years. Affected areas ranged from 4.4 to 109 acres per burn.

Table 2.8.6. Summary of prescribed burns at Myles Standish State Forest; 2009 to present.

Year	Number of Burns	Total acres burned ^a
2009	2	68
2010	2	59
2011	6	260
2012	3	136
2016	1	4
2017	5	206
2018	1	7
2019	0	0
2020	0	0
Total	20	740

a. Rounded to the nearest whole acre.



Prescribed burns are a key component of ecosystem management at Myles Standish. (See Appendix K for photo information.)

Wildlife Management Areas. MassWildlife maintains vegetation within its Wildlife Management Areas. This includes cutting fields, mowing trails, and maintaining around the edges of parking lots. They also monitor and control the spread of invasive plants. There is no finalized agreement between DCR and MassWildlife for the use or management of the WMAs, despite both parties' desire for such an agreement. Vegetation management practices for the WMAs were described in Burrell and Turner (1971). However, many of the past practices described in this plan (e.g., broad-scale application of herbicides, planting of multiflora rose and autumn olive) are no longer used. In 2016, MassWildlife personnel conducted a deer browse impact survey for the southern portion of Myles Standish and the adjacent Southeastern Pine Barrens WMA. The survey indicated a medium level of deer sign and no evidence of deer impacts (Fortier 2016).

Invasive Plants. In 2015, over 40 acres of glossy buckthorn was treated in the northwest corner of the forest. That same year, 13 sites with grey willow and two sites with tree of heaven were also treated. Some follow-up treatment has occurred. In 2016, 2.4 acres of glossy buckthorn were treated near the equestrian parking lot (Lot P3), and in 2017 patches of buckthorn were treated in the Barrett Pond campground.

Since 2011, the Friends have been working to control populations of spotted knapweed. Initially this was performed by members of the Friends hand-pulling plants. In 2012, with the approval of DCR and the NHESP, the Friends released populations of two weevils (the knapweed seed head weevil and the

knapweed root boring weevil) as biological control agents. Details on this project are available in DCR (2012c).

In accordance with the terms of their permits, cottage owners are prohibited from planting invasive species and are directed to report suspected invasive plants “to the Facility Supervisor or his designee” (Section G, Permit Conditions and Terms).

Cranberry Bogs. Under the terms of their most recent permit (i.e., 1995–2000, as renewed for 2001–2005), UMass is responsible for operating the Rocky Pond bogs “according to accepted practices in the cranberry industry,” with cranberry vines “maintained through the proper use of fertilizer, pesticides, periodic sanding and other necessary means.” They may apply pesticides “normally utilized by the cranberry industry and only those approved and registered for use on cranberries by the Massachusetts Pesticide Board.” UMass has expressed a desire for an updated permit.



One of the two cranberry bogs at Rocky Pond; these bogs are managed by the UMass Cranberry Station. (See Appendix K for photo information.)

Utility Corridors. Several agreements with utility companies allow for vegetation management. An easement issued to New Bedford Gas and Edison Light Company (and its successors) in 1966 allows broad latitude in the operation and maintenance of “electric power and intelligence” infrastructure and utility corridor (Book 3343, Page 652). This includes vegetation management within the easement. In 2001, a license was issued for Commonwealth Electric and Verizon New England, Inc., to maintain a “certain electric distribution line situated in the Towns of Plymouth and Carver.” This license specifically allows the companies to “trim, cut and

remove trees to the extent necessary to clear said wires and pole line.”

Wildlife

There is no prohibition on hunting or fishing (302 CMR 12.11(3)). MassWildlife annually stocks approximately 1,700 ring-necked pheasant and 1,700 bobwhite quail at its WMAs within the forest (Zimmer 2017). They also stock a mixture of approximately 2,000 brook, brown, rainbow, and tiger trout in Fearing Pond in the spring and fall (Zimmer 2017). MassWildlife also works with the Friends to place and monitor nest boxes for eastern bluebirds and American kestrels.

Cultural Resources

A design to stabilize and rehabilitate the Fearing Pond Bathhouse has been prepared, but its implementation has not yet been funded. Proposed work includes repairs to the roof, replacement of deteriorated sills and logs, construction of a new concrete foundation, window and door repair, regrading of the site and other drainage improvements, repairs or upgrades to electrical systems and lighting, and any other improvements necessary to meet required codes and provide universal access. Following this restoration, the bathhouse will be open to the public for use as a changing room facility. Restroom facilities will be provided elsewhere on site, in accordance with a variance issued October 9, 2018 by the Board of State Examiners of Plumbers and Gas Fitters.

Seasonal Cottage Campsite Permits place few restrictions on cottage owner activities in regard to the cottages’ cultural resource value. These restrictions are:

- No alterations, non-routine repairs, additions, new sheds or outbuildings of any kind shall be initiated without the prior written approval of the Commissioner of DCR and designated senior staff.
- No digging, excavation, or soil disturbance of any kind shall be allowed except by a pre-approved Special Use Permit, and conducted under the site supervision and approval of the DCR archaeologist.

Recreation Activities

All designated swimming areas are identified by ropes with buoys. These markers are anchored to the bottom of the pond with concrete filled 5-gallon buckets. Along the shore these ropes are dug into the beach. During the summer season, water quality is monitored on a weekly basis at all six beaches. Lifeguards rake the College Pond beach on a daily basis during the swim season; this is the only beach at which raking occurs.

Town of Plymouth General Bylaws (S.S. 134-6) “prohibit the use of internal combustion engines on any pond in Plymouth of 30 acres in area or smaller.”

Privately owned cottages within Myles Standish are primarily a recreation resource. An annual Seasonal Cottage Campsite Permit governs their use. The 2020–2025 version of the permit has been included as Appendix I. Information specific to the cottages’ relationship to the management of water resources, cultural resources, invasive plants, and parking and driveways are presented elsewhere in this section.

Myles Standish is the only park in the Complex to allow snowmobiles; their use is regulated by 302 CMR 12.14. Previous trails maps for the forest (e.g., 2010 map) identified specific trails and parking areas for snowmobile use. The following road segments were identified as open to snowmobiles:

- Bare Hills Road; north of Federal Pond Road
- Federal Pond Road; West Line Road to Wayont Road
- Three Corner Pond Road; West Line Road to East Line Road
- Dunham Road; between Three Cornered Pond Road and Halfway Pond Road
- Halfway Pond Road; between Dunham and Jessup roads
- Jessup Road; between Halfway Pond and Three Corned Pond roads
- Cobb Road
- Halfway Pond Road; between Cobb Road and Doctor’s Pond Road
- Doctor’s Pond Road; between Halfway Pond Road and Webster Springs Road

- Webster Springs Road; between Doctor’s Pond Road and East Line Road
- East Line Road; between Webster Springs Road and Priscilla Road
- Priscilla Road; between East Line Road and utility corridor
- Utility corridor; from Priscilla Road to Howland Road
- Howland Road
- Wayont Road

The following tow vehicle and trailer parking areas were identified as part of the designated snowmobile trail system:

- Bentley Trail Lot (P2)
- Barret Pond - Equestrian Parking Lot (P3)
- Fire Tower Lot (P6)

The current (i.e., 2016) trails map does not indicate designated snowmobile trails or associated parking, nor are there trail signs or markers to identify these areas.

The Town of Plymouth requires a Special Events Permit for activities such as walks, bike/road races, and fundraisers within the town, including within Myles Standish. Their fee, \$100–\$200, is waived for permits for activities within the forest. See https://www.plymouth-ma.gov/sites/g/files/vyhlf3691/f/uploads/2019_special_event_permit_14.pdf for additional information.

Infrastructure

Boundary

The Regional Forester maintains boundary markings.

Buildings

Campground and day-use area bathrooms and comfort stations are closed beginning in October. Park Support Operations (PSO) is responsible for winterizing these buildings. The College Pond bathroom is the last building winterized, so that the day-use area may be used for special events. There is no sequence for the closing and winterizing the other bathrooms and comfort stations. The FOTL works to ensure that all needed maintenance is performed prior to closing. In the spring, the College Pond bathroom is the first building opened, so that the

day-use area may be used for special events. All other bathrooms and comfort stations are opened prior to campgrounds opening.

Private cottages with wells are considered “a seasonal system and therefore must meet” the requirements of the Revised Total Coliform Rule of the U.S. EPA Safe Drinking Water Act (Hobill 2017). Because of this, cottage owners must “monitor and certify the completion of a state-approved start-up procedure.” Each year, cottage owners are required to sample twice for Total Coliform and once for nitrate; and every third year for nitrite, sodium, and manganese.

Roads

The majority of roads are maintained by forest staff or Forest Fire Control personnel. Roads “running through the pheasant and quail areas” are maintained by MassWildlife personnel (Burrell and Turner 1971).

Paved Roads. Many of the forest’s paved roads are opened or maintained seasonally. Entrance roads to the Curlew Pond, Barrett Pond, Fearing Pond, and Charge Pond camping areas are gated outside of the camping season. An exception to this is Massachusetts’ deer hunting season, when the access road to the Charge Pond campground remains open to allow hunter access. The College Pond day-use area remains gated outside of the summer beach season.

Only a subset of the forest’s paved roads is plowed during the winter. Emphasis is placed on maintaining the connection between the East and West entrances and providing access to MASAC, Camp Squanto, and Camp Cachalot; three facilities that may only be accessed through the forest’s road network. The following roads are considered high priority for snow removal:

- Alden Road
- Upper College Pond Road
- Circuit Drive
- Halfway Pond Road; from Circuit Drive to Cranberry Road
- Cranberry Road
- Fearing Pond Road; from Upper College Pond Road to the Camp Cachalot entrance, including the loop around Fearing Pond

- Cutter Field Road; from Fearing Road to the entrance to Camp Squanto

The remaining public roads are posted as *Warning: Roads not maintained for winter travel, pass at own risk*. Snow plowing is performed by multiple forest staff. Employees shovel snow at the forest headquarters, barn, maintenance building, and Forest Fire Control District 2 Headquarters.

Dirt Roads. Bureau of Forest Fire Control and Forestry personnel maintain the bed and shoulder of dirt roads on an as needed, and as resources are available, basis. They regrade roadbeds, install water bars, and repair washouts so that roads may be used by emergency vehicles, hikers, and equestrians. In order to facilitate navigation, they have installed metal road signs at all intersections where dirt roads meet paved roads. They replace these signs in response to frequent vandalism and theft.

Blanchard Road is located in the extreme northwest corner of the forest; partially within the forest and partially on private land. Two private residences are accessed via this road. In 2011 their owners entered into a “Private Maintenance Agreement” for normal maintenance...including but not limited to all snow plowing, brush removal and the like” (Book 40144, Page 21). The DCR is not a party to this agreement for the maintenance of a road on DCR property.

The Massachusetts Cranberry Station and forest staff jointly maintain the access road from Bare Hill Road to the south bog at Rocky Pond. The cranberry station is responsible for maintaining the roads around their bogs.

Cottage owners are responsible for the maintenance of the driveways to their cottages (Section G, Permit Terms and Conditions). Driveway barriers, gates, or similar devices are prohibited (Section V, Permit Terms and Conditions).

Parking Areas

As with roads, the availability of parking spaces varies seasonally. During the beach/camping season all public lots are open to the public. Parking lots associated with gated camping areas and the day-use area are closed outside of camping season. Once snow falls, only the following lots are maintained:

- East Entrance
- Upper College Pond

- Barn lot
- Lot opposite barn
- Forest Headquarters; both public and employee lots
- Operations yard employee parking areas

The Upper College Pond Lot and public lot at the forest headquarters are used by snowmobilers to park their vehicles and trailers.

Cottage owners are responsible for the maintenance of their parking areas (Section G, Permit Terms and Conditions). No more than five active vehicles may be parked at cottages after 8:00 pm; no vehicles may remain at cottages after the end of the camping season (Section W, Permit Terms and Conditions).

Trails

All trails work (both paved and unpaved) is to be performed in accordance with the forest's Trails System/Habitat Management Plan (DCR 2015).

Typical trail maintenance and repair activities are performed by the Friends, often as part of a Friends work day. More complex projects are performed during the summer by a Student Conservation Association Crew.

MassWildlife maintains trails in the WMAs for general recreation and hunter access.

Kiosks and Signs

There are no ongoing maintenance activities.

2.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Myles Standish State Forest. Applied Land Stewardship Zoning recommendations provide general guidance for managing these properties. Future activities and projects should be checked against the zoning map (Figure 2.9.1) for consistency. Management recommendations are all high-priority and should be addressed as soon as resources become available.

Applied Land Stewardship Zoning (Figure 2.9.1)

The following Land Stewardship Zoning is recommended to guide management and any future development.

Zone 1

The following areas of Myles Standish State Forest informed designation of Zone 1 areas.

- Occurrences of rare natural communities (i.e., S1-S3) that are also highly sensitive to trails-based recreation:
 - Coastal Plain Pondshore (S3);
 - Sandplain Heathland (S1); and
 - Scrub Oak Shrubland (S2).
- Large, contiguous areas of Pitch Pine-Scrub Oak (S2).
- Large, contiguous areas of Pitch Pine-Oak Forest (S4). Although considered secure and not sensitive to dispersed recreation, it is included here because of its role as the matrix for other pine barrens community types that are generally less resistant to recreation.
- Pine plantations located within pine barrens communities.
- Areas designated by the USFWS as Critical Habitat for the northern red-bellied cooter.
- Uplands adjacent to ponds with known breeding populations of the northern red-bellied cooter, outside of Critical Habitat.
- Sensitive pre-Contact and historic archaeological sites.

Zone 2

The following areas of Myles Standish State Forest informed designation of Zone 2 areas.

- Occurrences of the White Pine-Oak Forest (S5) community type. Examples of this community type are primarily located along the forest's western boundary, on the periphery of pine barrens communities and not as pockets within the barrens.
- All other portions of the forest not identified as Zones 1 or 3.

Zone 3

The following areas of Myles Standish State Forest are currently developed, appropriate for potential future development, or intensively used for recreation. They have been designated Zone 3.

- Forest entrance; both sides of Alden Road including parking lot, trailhead, picnic area, and landscaped area. This development existed prior to the Reserve designation.
- Curlew Pond; campground, beach, and cottages.
- Widgeon Pond cottages.
- Rocky Pond; cranberry bogs and associated uplands, and cottages.
- College Pond; day-use area and cottages.
- Plymouth Fire Tower; fenced-in yard and associated parking lot. This development existed prior to the Reserve designation.
- Massachusetts Alcohol and Substance Abuse Center; all existing, buildings, recreation facilities and fields, and landscaped grounds.
- Barrett Pond; including former and current campgrounds, associated parking areas, and beach.
- Administrative and operations facilities at the headquarters, operations yard, and Perry House areas.
- Fearing Pond; campgrounds, day-use area, other beaches, and cottages.
- Charge Pond; campgrounds, beach, and recreational facilities.

Significant Feature Overlay

The following three Significant Feature Overlays were developed:

- **Developed Coastal Plain Ponds.** This overlay applies to coastal plain ponds that have been altered to create existing recreation facilities such as swimming beaches, bathhouses, picnic areas, campgrounds, boat launches, and private cottages. Ponds and pondshores within this overlay are to be managed to enhance and protect remaining coastal plain pondshore habitat by limiting use of these areas and avoiding environmental damage. Recreational activities are to be concentrated in previously established recreation areas through

informational signs, appropriately located trails and paths to the water, and through the use of fencing when appropriate and warranted. Within this overlay, recreational use of pondshores with intact soil and vegetation is discouraged.

- **Wildlife Management Areas.** This overlay includes the pheasant and quail wildlife management areas under the management of MassWildlife. These areas are to be managed in accordance with a Memorandum of Agreement to be jointly developed and approved by DCR and MassWildlife.
- **Multi-Use Path.** This overlay includes the multi-use (i.e., bike) path and adjacent vegetation within 5-feet of the existing paved surface. Within this overlay the existing path is to be managed in a manner sensitive to and consistent with the surrounding area's designations as Priority Habitat and Reserve (DCR 2012a).

Recreation Guidance

The forest protects pine barrens communities and their associated rare species, while providing for nature-based recreation. Existing recreation facilities are currently restricted to campgrounds, day-use areas, or the forest headquarters area; these areas have a Landscape Designation of Parkland. Future recreation activities and facilities should remain within these areas. Emphasis should be placed on upgrading or replacing existing recreation facilities (e.g., camp sites, comfort stations, day use parking). Additional facilities for the benefit of campers or day use visitors (e.g., athletic courts, playgrounds) may be appropriate for these areas.

The Quail and Pheasant Wildlife Management Areas also have a Landscape Designation of Parkland. Recreation activities and facilities in these areas should be consistent with other Wildlife Management Areas in the Commonwealth.

The remainder of the forest has been classified as Reserve. Only recreation activities consistent with this designation are appropriate. An existing recreation facility, the multi-use path, is largely located within the Reserve. This path is to be managed in a context sensitive manner. See *Multi-Use Path Significant Feature Overlay*, above.

Place holder for front of Figure 2.9.1.

Place holder for Back of Figure 2.9.1.

Management Recommendations

Fifty-four priority management recommendations were developed for Myles Standish State Forest (Table 2.9.1).

Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.

- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

All recommendations are of equal priority.

Table 2.9.1. Priority recommendations for Myles Standish State Forest.

Category	Recommendation	Implementation^a
Natural Resources	Restore and maintain a mosaic of fire influenced natural communities for state-listed and uncommon plants and wildlife in consultation with NHESP and FRSAC. Removal of tree plantations, cutting, invasive species control, and controlled burning will be considered under the guidelines of forest management, fire management, and habitat management plans with the goal of achieving landscape level pine barrens restoration.	FOR, PRT
Natural Resources	Conduct both natural and cultural resource surveys to identify sensitive resources in areas scheduled for fuel reduction, controlled burn, or plantation removal operations.	FOR, OCR
Natural Resources	Avoid bulldozing, harrowing or other soil scarification activities in areas dominated by native shrubs or in areas of high archaeological sensitivity. In limited circumstances, following archaeological approval and with NHESP oversight, scarification may be an appropriate ecological restoration and management tool.	FOR, OCR, POP, PRT
Natural Resources	In consultation with NHESP, develop a mowing plan for the roadside firebreaks that is more patchy and less frequent, in order to protect rare species and to allow a more complex vegetation structure to develop. Mowing should be timed to promote rare species.	FOR, ORP, POP
Natural Resources	Create new turtle nesting areas and additional basking habitat for the northern red-bellied cooter according to the NHESP Guidelines for Creating Turtle Nesting Habitat (NHESP 2009) in consultation with NHESP Turtle Biologist.	ECO, FOR, POP
Natural Resources	Promote native plant propagation and reintroduction for food and shelter to benefit native wildlife using locally obtained stock of native genotype.	ECO, POP, PRT
Natural Resources	Post invasive species information signs at the East Head Reservoir, Rocky, Curlew, and Charge ponds' fisherman landings that warn boat owners of the need to avoid transporting invasive species from pond to pond on their boats.	L&P, POP
Natural Resources	Survey and monitor for introduced aquatic invasive plants in ponds with boat access and eliminate or control these species to the greatest extent feasible.	ECO, VOL
Natural Resources	Implement the terrestrial invasive plant management recommendations for Myles Standish State Forest, as identified in the Invasive Plant Management Plan: South Region (BSC Group 2017).	ECO, FOR, POP, PRT, VOL
Natural Resources	Restore compacted and eroded areas at Charge, Fearing, Barrett, College, and Curlew ponds using clean fill that is free of plant propagules.	FOR, POP
Natural Resources	Conduct field surveys to confirm identity of <i>Myotis</i> bat(s) in forest; consult with NHESP and USFWS, as appropriate, to develop and implement management guidance.	ECO, FOR
Natural Resources	Implement recommendations contained in the forthcoming fire management plan.	FOR, POP
Natural Resources	Implement recommendations contained in the forthcoming Habitat Management Plan, once approved by the NHESP.	ECO, POP
Natural Resources	Implement recommendations contained in the forthcoming South District Forest Resource Management Plan.	FOR
Natural Resources & Cultural Resources	Avoid alterations of undisturbed areas around ponds and wetlands; restore eroded and disturbed areas.	ENG, POP
Cultural Resources	Conduct an archaeological survey to evaluate the significance of known and potential archaeological (pre-contact) and historic sites, and record sites on MHC Archaeological Site Forms, where needed. Use inventory to develop a Cultural Resource Protection Plan to provide enhanced protection, interpretation, and management of these resources.	CTR, OCR

Category	Recommendation	Implementation ^a
Cultural Resources	Back fill the “Homestead” dump site to eliminate the OHV track and restore original topography.	POP, OCR
Cultural Resources	Manage the CCC Camp site in accordance with cultural resource best management practices. Park staff should monitor the area for illegal digging and impacts from vegetation and erosion.	POP, RGR
Cultural Resources	Rehabilitate the Fearing Pond Bathhouse, in accordance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties, to serve the Fearing Pond Day Use Area. Interim stabilization of the significant building may be needed in the short term.	CTR, OCR
Cultural Resources	Complete MHC Area forms for the Headquarters Complex and for the Operations Complex, to determine the history and significance of the Headquarters Building, the Ten Stall Building and the Parks Operations Barn. Manage resources in accordance with DCR Cultural Resource Policy.	OCR
Cultural Resources	Maintain Lower College Pond, Bare Hill, Fearing Pond, Alden, and Upper College Pond roads as historic parkways according to the Preservation Guidelines for Historic Parkway (DCR 2007b).	POP
Cultural Resources	Evaluate cottages under DCR’s control for historic significance and disposition.	CTR, OCR
Recreation	Upgrade camping sites and facilities in all of the forest’s campgrounds so that 5% or more are fully accessible.	CMP, POP, UAP
Recreation	Assess the appropriateness and demand for water and electric hookups in one or more camping area.	CMP, POP
Infrastructure	Acquire or protect in-holdings and adjacent properties containing significant pine barrens habitat.	LAQ, PRT
Infrastructure	Conduct deed research to clarify the title of the 69 acre parcel on the western shore of Little Widgeon Pond.	CTR, LGL
Infrastructure	Complete repairs to six Charge Pond camping area comfort stations.	POP, PSO
Infrastructure	Design and renovate forest headquarters for universal access and better use of existing space.	CTR, ENG
Infrastructure	Continue rehabilitation of the Perry House.	ENG, RFP
Infrastructure	Undertake a feasibility study for reopening Fearing Pond Road over East Head Pond Dam to public vehicles. Resolve right of way legal issues and develop design options and cost estimates.	CTR, ENG, POP, LGL
Infrastructure	Improve internal park road signage including mileage to key locations.	POP
Infrastructure	Using a multi-pronged approach to trail closure, close and naturalize unauthorized trails that are damaging to sensitive resources, in poor condition, redundant, confusing, or otherwise not desired by DCR.	POP, PRT, RFP
Infrastructure	Do not route trails along pond shores, including trails for bicycling, horseback riding, or hiking. Any existing trails along pondshores should be re-routed (NHESP 2007).	POP, RFP, VOL
Infrastructure	Create an ADA accessible trail from the headquarters parking lot with connections to the existing multi-use trail and a scenic overlook of East Head Reservoir. Provide trail wheelchairs at the Interpretive Center for use on the trail.	POP, RFP, UAP, VOL
Infrastructure	Continue multi-use path repairs to eliminate cracks, root heaves, and potholes.	CTR, RFP
Infrastructure	Continue efforts to establish a multi-use trail network that connects all campgrounds to each other, to the forest headquarters, to day-use areas, and to regional trails.	CTR, RFP

Category	Recommendation	Implementation ^a
Infrastructure	Install trail orientation signs and trail map dispensers at all trail head parking facilities. Install intersection directional signs, reassurance markers, and blazes along trails and forest roads.	POP
Infrastructure	Assess the potential benefits and liabilities associated with pursuing a trail easement on the nature trail around East Head Reservoir.	LAQ, POP, PRT
Infrastructure	Implement recommendations identified in DCR's Accessibility Assessment.	CTR, ENG, PSO, UAP
Infrastructure	Remove all existing and future unauthorized memorials.	POP
Visitor Services	Develop spring interpretive programs to support educational field trips related to the Massachusetts Science Curriculum Framework to provide opportunities for students to visit the forest.	OTH
Visitor Services	Develop a comprehensive interpretive plan that identifies appropriate means to assist visitors to better understand the natural and cultural resources of the forest. This plan should focus on the primary resources: the pine barrens and associated features such as frost pockets, kettle ponds, and the plants and animals that depend on these habitats.	POP, VSP
Visitor Services	Provide new interpretive kiosks at the Fearing Pond bathhouse, Charge Pond Road Parking Lot #5, and Fire Tower Parking Lot #6. These kiosks should include a map of the forest, forest rules, descriptions of facilities available in the forest, and a brochure holder for trail maps.	POP, VSP
Visitor Services	Install interpretive panels and trail map holders on the existing kiosks at the East Entrance Parking Lot #4 and the Upper College Pond Road Parking Lot #2, including a map of the forest, forest rules, and a description of facilities available in the forest. Provide a Fire Danger Sign at the East Entrance.	POP, RGR, VSP
Management Practices	Continue to exclude motorized off-highway vehicles (OHV) from Myles Standish and limit motorized vehicle traffic on unpaved forest service roads and utility corridors to minimal traffic for the purposes of maintenance, safety, habitat management and monitoring. Monitor and enforce OHV restriction using the Park Watch Program with law enforcement support.	PRT, RGR
Management Practices	All maintenance, repair, and improvement activities (e.g. grading, culverts, swales, shoulder work) of dirt roads in Priority Habitat are subject to regulatory review under MESA. The preferential use of washed stone over unwashed stone or pavement is recommended to lessen adverse environmental impacts within areas identified as Priority Habitat.	FOR, POP
Management Practices	Institute a Memorandum of Agreement with MassWildlife to define operational responsibilities for the Quail and Pheasant Wildlife Management Areas; include requirement for a management plan.	LGL, POP, PRT
Management Practices	Work with MassWildlife to prepare a management plan for the Pheasant and Quail Management Areas in order to control non-native species, restore and maintain a mosaic of fire-influenced natural communities, and reduce trail impacts.	ECO, POP, PRT, RFP
Management Practices	Concentrate recreational activities in previously established beach, boat launch, and camping areas using educational signs and gates.	POP, VSP
Management Practices	Develop a recreation master plan for all of the forest's developed ponds to assess opportunities for improved public amenities, such as overnight accommodations, for visitors, while protecting sensitive resources.	CTR, ORP
Management Practices	For the remaining privately-owned cottages, continue to manage in accordance with the terms and conditions set forth in the Seasonal Cottage Campsite Permit and applicable law.	LGL, POP
Management Practices	Increase enforcement of speed limit and commercial vehicle regulations.	OTH, RGR

Category	Recommendation	Implementation ^a
Management Practices	Establish a lease with UMass for the operation of the Rocky Pond Cranberry Bogs.	LGL, POP, PRT
Management Practices	Establish an agreement with the Friends of Myles Standish State Forest.	LGL, POP, PRT

- a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

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Kingston State Forest

Kingston State Forest is an integral part of nearly 900 contiguous acres of protected open space in the Towns of Kingston and Plymouth. It serves as the main link that connects a variety of municipal and private lands. Collectively, these lands protect coastal plain ponds, rare species habitat, and groundwater quality.

The forest is undeveloped, with forest roads and limited single-track trails for passive recreation.

Top Activities

- Bicycling, mountain
- Dog walking, on leash
- Hiking/walking
- Hunting
- Nature study/photography

Friends Group

- None

Partners & Permittees

- None

Park Inventory

Date Established: 1910

Landscape Designation

Woodland

Features

- Network of forest roads for hiking and mountain biking
- Coastal Plain Ponds
- Trail connections to the Town of Kingston's Camp Nekon conservation land

Park Size (acres)

Total Area:	205
Forest:	190
Lakes and Ponds:	8
Wetlands:	5

Threatened & Endangered Species

Massachusetts:	4
Priority Habitat (acres):	68
Federal:	0

Cultural Resources

Archaeological:	0
Buildings:	0
Cemeteries:	0
Historic Districts:	0
Landscapes:	0
Objects:	0
Structures:	1
National Register:	0
National Historic Landmark:	0

Roads (miles)

Unpaved:	0
Paved:	0

Trails (miles)

Unpaved (Hiking):	7
Paved:	0



The South District Management Forester monitors the boundaries of the Holmes lot at Kingston State Forest. (See Appendix K for photo information.)

SECTION 3. KINGSTON STATE FOREST

3.1. INTRODUCTION

Kingston State Forest consists of two parcels; the Holmes lot and the Pratts Pond parcel. (Figure 3.1.1) Recreation opportunities and visitor experiences vary greatly between parcels.

The Holmes lot is a small (14 acre), landlocked parcel that may only be accessed by crossing private property. It is characterized by rolling hills covered by a pine plantation. Old forest roads provide the only trails through the property, and the entire trails network may be hiked in less than 15 minutes. There are few recreation opportunities.

In contrast, the Pratts Pond parcel is larger (approximately 190 acres) and accessible to the public. It was twice divided by highway construction, and traffic noise is omnipresent. This parcel offers a more diverse environment and visitor experience than the Holmes lot. Its vegetation includes not only pine plantations, but also a variety of wetlands and ponds that support rare species. These resources provide opportunities for nature-based recreation and nature study. A network of forest roads and hiking trails link sections of the parcel and connect it to the Town of Kingston's 193 acre Camp Nekon and its trails. The combined state

and municipal trails provide hours of hiking and mountain biking opportunities. Unauthorized use by OHVs and four-wheel-drive vehicles is common and has created an extensive network of unauthorized trails through both the state forest and municipal conservation land.

Kingston State Forest was established in 1910. The Holmes lot was acquired in March and the Pratts Pond parcel in December. Both were acquired for forest improvement purposes. They have been planted, managed, and harvested for forest products throughout the forest's history. The forest's Woodland designation allows for continued commercial forestry.

In the late 1990s the Pratts Pond parcel was fragmented when 33.15 acres were taken for construction of Route 44. The Massachusetts Highway Department (MHD; now MassDOT) committed to mitigating the loss by acquiring 72.58 acres of land and transferring it to the DEM to reconnect pieces of the forest (MHD and DEM 1995). MHD acquired the land in 1994, and transferred it to DCR in 2006.

The park's physical, political, and regulatory attributes are summarized in Table 3.1.1.

Kingston State Forest

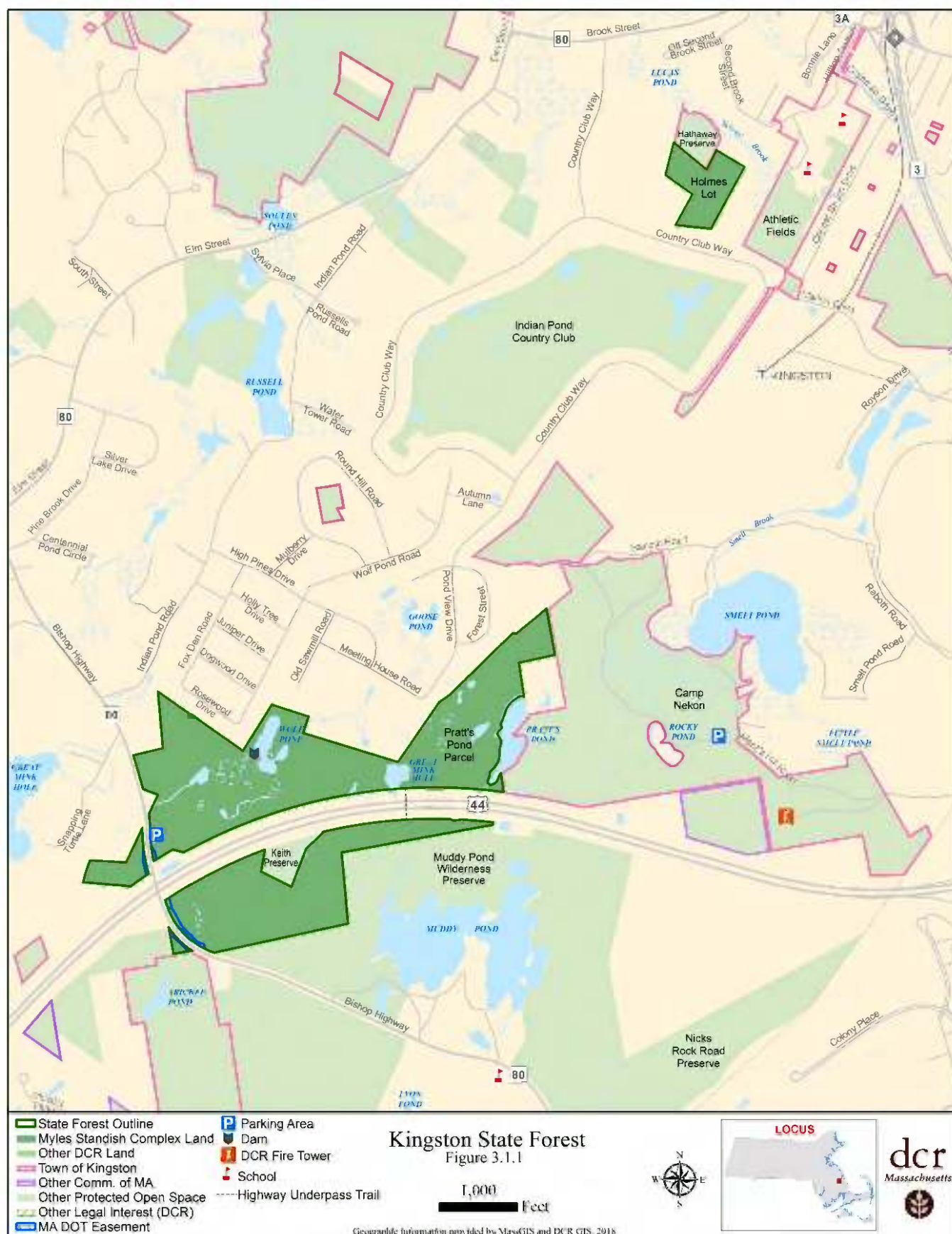


Table 3.1.1. Physical, political, and regulatory settings of Kingston State Forest.

Setting	Name or Metric
Location:	Kingston
Area (acres)^a:	205.16
Perimeter (miles)^a:	5.41
Landscape Designation^b:	Woodland
Legislative Districts:	
House	12 th Plymouth
Senate	Plymouth and Barnstable
Regulatory Designation:	Priority Habitat

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Park Identity. Kingston State Forest is defined by rolling forested hills, a forest road network for trail-based recreation, and its association with Town of Kingston open space.

Location. There are two sections of the forest; the Holmes lot and the Pratts Pond parcel. The Holmes lot is located in central Kingston. The Pratts Pond parcel is located in southwest Kingston, near that town's border with Carver and Plymouth.

Associated Properties. The forest is managed by staff from Myles Standish State Forest in Carver.

3.2. NATURAL RESOURCES

Physical Features

The Holmes lot ranges in elevations from 79 to 124 feet above sea level; there is a general trend of decreasing elevation from the southwest to northeast (i.e., toward Second Brook). The Pratts Pond parcel's landscape is a series of small hills and depressions, with elevations ranging from approximately 124 to 210 feet. There is no general directional trend to the topography.

Water Resources

Several small ponds and wetlands, including abandoned cranberry bogs, are present in the Pratts Pond parcel; they are absent from the Holmes parcel. (Table 3.2.1) A short stream segment passes through the Pratts Pond parcel, providing a hydrologic link between Wolf Pond and cranberry bogs west of Route 80. Hydrologic connections also exist between some of the small, unnamed wetlands on the Pratt's Pond parcel. Vernal pools, both certified

and potential, are restricted to the Pratts Pond parcel. Both parcels are located entirely above the Plymouth Carver Aquifer, a sole source aquifer of management concern. The general direction of groundwater flow is to the northeast. See Fuss & O'Neill (2007) for additional information on this aquifer.

Table 3.2.1. Water resources of Kingston State Forest.

Water Resource	Name or Metric
Watershed:	South Coastal Taunton River
Aquifer:	
Medium Yield (acres)	0.00
High Yield (acres)	205.16
Rivers and Streams (miles)	0.91
Vernal Pools	
Certified (#)	7
Potential (#)	9
Wetlands (acres)	5.86
Lakes and Ponds (acres)	8.21

The waters of Wolf Pond were once used for cranberry growing in what is now the state forest. An earthen dam and water control structures regulated the flow of water into the bogs adjacent to Wolf Pond, and beyond. It is unknown if these structures currently regulate the flow of water downstream into active, privately-owned bogs west of the forest.

Portions of the Pratts Pond parcel are subject to flooding. The shores of Great Mink, Pratts, and Wolf ponds and also the abandoned cranberry bogs are predicted to be minimally affected by 500-year storms. (Table 3.2.2) There are no predicted impacts of Hurricane Inundation or Sea Level Rise.

Table 3.2.2. Potential impacts of flooding to Kingston State Forest.

Type of Impact	Acres	%
Flooding:		
100-year Storm	0.00	0.00
500-year Storm ^a	12.41	6.05

a. Cumulative value; includes 100-year storm impacts.



Kingston State Forest, as viewed across Pratts Pond. (See Appendix K for photo information.)



The Plymouth gentian is a globally rare plant that inhabits the shores of coastal plain ponds. (See Appendix K for photo information.)

Rare Species

State-listed Species

Four state-listed species have been documented at Kingston State Forest. (Table 3.2.3) All four occur in the Pratts Pond parcel; only the eastern box turtle is known from the Holmes lot. The gentian and water willow borer moth are associated with the margins of wetlands and ponds. The Blanding's turtle uses a variety of wetland types and also adjacent uplands. Eastern box turtles are associated with dry and moist woodlands and a variety of wetlands (NHESP 2015c). Conservation of these species at Kingston State Forest requires protection of pond shores.

Table 3.2.3. State-listed species of Kingston State Forest, as identified by the NHESP.^{a, b}

Species ^{a, b}	Type ^c	MESA ^d
Blanding's turtle	R	T
Eastern box turtle	R	SC
Plymouth gentian	P	SC
Water willow stem borer	I	T

a. Presented alphabetically, by common name.

b. Fact sheets are available at:
<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/mesa-list/list-of-rare-species-in-massachusetts.html>.

c. Types of state-listed species include: A = Amphibian; B = Bird; I = Insect; P = Plant; and R = Reptile.

d. Status of species listed under the Massachusetts Endangered Species Act (MESA): E = Endangered, SC = Special Concern; and T = Threatened.

Priority Habitat

Nearly one-third of the forest (67.9 acres; 33.01%), including the entire Holmes Lot, has been designated Priority Habitat. Exceptions at the Pratts Pond parcel include some of the higher elevations to the east, south, and west of Wolf Pond, and nearly the entire forest south of Route 44.

Vegetation

There has been no floristic inventory of this forest; information on its plants comes from ongoing forest monitoring efforts. (See Forests, below.)

Invasive Species

There is no information on this forest's invasive plants.

Natural Communities

Five natural communities have been identified. (Table 3.2.4)

Table 3.2.4. Known natural communities of Kingston State Forest.

Community Type ^a	System ^b	State Rank ^c	Source ^d
Coastal Plain Pondshore	P	3	1
Red Maple Swamp	P	4	2
Shallow Emergent Marsh	P	5	2
Shrub Swamp	P	5	2
White Pine-Oak Forest	T	5	3

- Classified according to Swain (2016).
- E = Estuarine, P = Palustrine, T = Terrestrial.
- The NHESP ranks communities from most rare (S1) to the most common (S5).
- Information contained in this table was obtained from the following sources:
 - MassGIS; Priority Natural Vegetation Communities.
 - MassGIS; DEP Wetlands (2005).
 - Mason (n.d.); field verified by RMP Planner.



Uplands at the Pratts Pond parcel of Kingston State Forest are covered by the White Pine-Oak Forest natural community type. Its open structure makes it difficult to limit the travel of off-road vehicles. (See Appendix K for photo information.)

The Holmes lot is primarily former red and white pine plantations that are transitioning to White Pine-Oak Forest. Uplands at the Pratts Pond parcel are largely White Pine-Oak Forest, with a greater percentage of oaks north of Route 44 and more pines south of Route 44. (See NHESP (2016) for a description of this community type.)



Great Mink Hole is one of only two coastal plain ponds in the forest. Plants along its shore are adapted to fluctuating water levels. (See Appendix K for photo information.)

Forests

Nearly the entire park (190.00 acres, 92.61%) is covered in upland forest. Non-forested areas are largely restricted to wetlands, ponds, and highway shoulders at the Pratts Pond parcel.

There is one CFI plot; it is located in an old red pine plantation on the Pratts Pond parcel. The canopy is dominated by red pine, with some black oak present. Understory species include white pine, black oak, white oak, black huckleberry, lowbush blueberry, and moccasin flower. This stand was 72 years old in 2011 and had a site index of 60.

Timber stand management recommendations (Mason 1984) provide additional insight into forest composition. Stand types reflect a mixture of red and white pine plantations, timber harvests, and natural regeneration. Mason (1984) identified the following six stand types:

- Norway Spruce; with scattered white pine and oaks
- White Pine plantation
- White Pine; with oaks
- Red Pine Plantation; with oaks
- Red Pine Plantation; with regenerating white pine
- Oak-Mixed

Forest cover in the Holmes lot is primarily a red pine plantation transitioning to white pine forest. Forest cover at the Pratts Pond parcel is primarily the White Pine-Oak community type, with remnant red pine, white pine, and spruce plantations.



Red pine plantations (in background) at both parcels of Kingston State Forest are dying and are slowly being replaced by white pine. (See Appendix K for photo information.)

Wildlife

There is no information on the forest's wildlife.

3.3. CULTURAL RESOURCES

This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An overview of significant events in the history of Kingston State Forest is presented in Table 3.3.1. Cultural Resources are identified in Table 3.3.2.

Table 3.3.1. Significant events in the history of Kingston State Forest.

Year	Events
1910	The Commonwealth acquires the 14.02 acre Holmes parcel. (Book 1073, Page 87)
1910	Jones River Village Club acquires the Pratts Pond parcel with the possibility of conveying its title to "the Commonwealth of Massachusetts for the purpose of improving said land under the forestry acts of the Commonwealth." (Book 1065, Page 575–576)
1910	Jones River Village Club Trustees sell the approximately 116 acre Pratts Pond parcel to the Commonwealth. (Book 1077, Page 320–323)
1986	Final Environmental Impact Report issued for Section 1 of the Route 44 relocation project. (U.S. DOT and Mass DPW 1986) The Secretary of Environmental Affairs classifies it as inadequate.
1994	Mass Highway Department issues a Notice of Project Change for the Route 44 relocation project. (EOEA # 1027) The Secretary of Environmental Affairs issues a certificate that includes a requirement for Mass Highway to address project impacts on open space and park lands.
2000	The Mass Highway Department takes three parcels in fee (No. 6-6, 18.86 acres; No. 6-9, 13.79 acres; and No. 6-10, 0.50 acres) and four easements (6-TS-30, 0.89 acres; 6-TS-31, 0.19 acres; 6-TS-32, 0.19 acres; and 6-TS-33, 0.12 acres). <i>Kingston Layout No. 7476 and Order of Taking</i> .
2006	Construction of Route 44 through Kingston State Forest is completed.
2006	Mass Highway Department agrees to transfer two parcels (6-FL-1 and 6-FL-2) totaling 72.59 acres to DCR in exchange for land taken for highway construction.

Table 3.3.2. Cultural resources of Kingston State Forest.

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
CCC fire road	ST	ca. 1937	5	L	-	-	-	1
<p>a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.</p> <p>b. Date of construction provided, when known.</p> <p>c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.</p> <p>d. Integrity is a relative assessment of the condition of a resource's retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.</p> <p>e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.</p> <p>f. The following codes are used to identify utilities associated with buildings: E = Electric, H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.</p> <p>g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.</p> <p>h. The following guidance is offered for the ongoing maintenance of these cultural resources:</p> <p>1. Refer to Historic Landscapes - Built Features BMP (DCR n.d.i).</p>								

ARCHAEOLOGICAL RESOURCES

Pre-Contact Resources

There are no documented sites. However, the forest has not been archaeologically surveyed. A pre-Contact quartz boulder quarry (19-PL-339) is known from the vicinity of Muddy Pond, just south of the Pratts Pond parcel. A number of sites have also been recorded in the immediate vicinity of the Holmes lot. Archaeological investigations have revealed many small camp sites and lithic workshops (i.e., 19-PL-817, 19-PL-818, 19-PL-300, and 19-PL-850–19-PL-853), including one that dates from the Middle Archaic period. Most of these sites are located on flat areas by seasonal pools or water holes. They may represent the remains of small foraging camps, perhaps brief stop overs in the seasonal movements between the Jones River and the many ponds and brooks in the area. Due to the presence of pre-Contact sites just outside the forest, it is likely that such sites may also occur in the forest.

Post-Contact Resources

There are no known Post-Contact Resources.

HISTORIC RESOURCES

The Pratts Pond parcel and Holmes lot were not developed at the time of their acquisitions. Since then, improvements to Kingston State Forest have focused on forestry and not on development for visitation or recreation. As a result, there are no known historic resources. One historic structure is described below.

Historic Landscapes

There are no known historic landscapes.

Buildings

There are no historic buildings.

Structures

A forest road that passes through the Pratts Pond parcel is attributed to the Civilian Conservation Corps (CCC). Plantations of spruce, red pine, and white pine have also been attributed to the CCC; however, there is no documentation for these plantations. Because the CCC was present and active at nearby Myles Standish State Forest (Section 2) through 1940, and because red pine plantations at Kingston State Forest date to 1939, a link to the CCC is possible but unconfirmed.

Objects

There are no known historic objects.

3.4. RECREATION ACTIVITIES

Current recreation activities are limited, due to the lack of access to the property. The following authorized activities are known to take place:

- Bicycling, mountain
- Dog walking, on leash
- Hiking/walking
- Hunting
- Nature study/photography

Geocaching, which is neither authorized nor unauthorized on DCR property, takes place in the forest. As of February 2021, there was one cache.

The most common recreation activity at the Pratts Pond parcel is likely the unauthorized use of OHVs. This has damaged the forest's authorized trails and created an extensive unauthorized trails network. Several sections of fence and fence posts along Route 44 have been cut to allow OHV travel between the highway right of way and the state forest.



Braided trails at the Pratts Pond parcel caused by unauthorized use of OHVs. Quad tracks are evident in the left braid. (See Appendix K for photo information.)

Unauthorized OHV use is also common in the Town of Kingston's Camp Nekon, which abuts the east side of the Pratts Pond parcel. (See Figure 3.1.1.) This municipal conservation land has been heavily damaged by OHVs and four-wheel-drive vehicles. Fire rings, alcohol containers, and illegal dumping are common throughout. The forest's structure, with wide distances between mature trees and little shrub cover, allows for the passage of these vehicles throughout the forest. Gates and other barricades,

which are largely absent, are ineffective in such an open environment. At present, four-wheel-drive vehicles use is largely limited to Camp Nekon, but OHVs use both Camp Nekon and the Pratts Pond parcel.



Numerous unauthorized four-wheel-drive trails are present in the Town of Kingston's Camp Nekon conservation lands (shown). These and unauthorized OHV trails connect to forest roads in the Pratts Pond parcel of Kingston State Forest. (See Appendix K for photo information.)

3.5. INFRASTRUCTURE

Property Boundary

The Holmes lot is landlocked; no deeded access to this parcel was identified during the preparation of this RMP. It is bounded on the north by residential development and Town of Kingston open space, on the south by residential development, on the west by undeveloped private land, and on the east by a mostly undeveloped residential parcel. The Holmes lot may only be accessed by crossing private property; there is no easement or agreement to ensure DCR or public access. Its boundary was last monitored in 2008.

The Pratts Pond parcel was originally one lot but has been twice divided by state highways. It was first divided by Route 80 and more recently, and with greater impact, by Route 44. It is bounded on the north by residential development; on the east by Town of Kingston property; on the south by undeveloped private lands; and on the west by undeveloped private lands and commercial cranberry bogs. The parcel is accessed from its frontage on Route 80 or via trails from Town of Kingston property to the east. Its boundary was last monitored in 2008.

In 1995 the Massachusetts Highway Department (MHD) and Department of Environmental Management (DEM) entered into an agreement under which the DEM transferred approximately 33.16 acres of the forest to MHD for highway purposes (MHD & DEM 1995). As mitigation, MHD acquired and transferred approximately 72.58 acres of land to DEM.

MassDOT holds five easements on portions of the Pratts Pond parcel; all are associated with the shoulders of Route 80. Locations of these easements are indicated in Figure 3.1.1. The four linear easements were transferred to MHD as part of the land transfer for the construction of Route 44.

A preliminary review of deeds and plot plans did not identify any water rights to Wolf Pond associated with properties outside the forest. Although previous deeds for the Wolf Pond area (e.g., Book 4905, Page 178) contain general language about easements, a plot plan for an adjacent property in active production does not indicate any specific easements or rights (Plan Book 21, Plan 133).

Buildings and Structures

There are no non-historic buildings or structures.

Roads

There are no paved roads. All unpaved roads function primarily as trails and are identified in that section (below).

Parking

There are no designated parking areas at either parcel. Visitors to the Pratts Pond parcel may use the Camp Nekon parking area or park along the shoulder of Route 80.

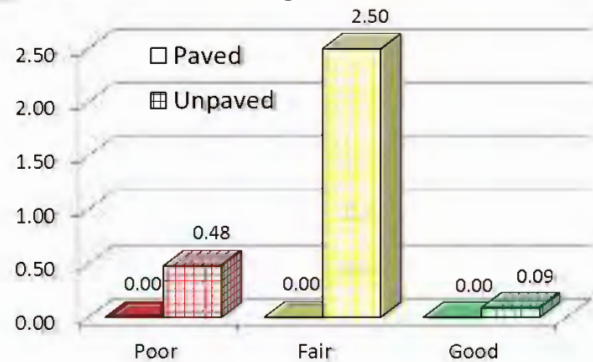


Parking area for the Town of Kingston's Camp Nekon conservation lands. This lot provides parking for visitors to the Pratts Pond parcel of Kingston State Forest. (See Appendix K for photo information.)

Trails

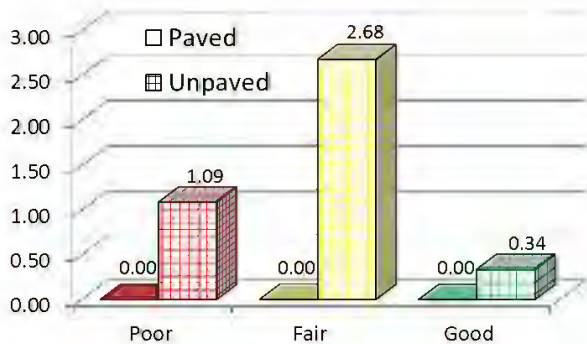
There are 3.07 miles of official trails. The length of these trails, by condition and surface type, is presented in Figure 3.5.1. There are also 0.51 miles of unofficial trails. It is likely that this figure underrepresents the actual extent of unauthorized trails, as new trails are added on an ongoing basis.

Figure 3.5.1. Condition and length (in miles) of official trails at Kingston State Forest.



There are 4.11 miles of forest roads that are used as trails. The length of these roads, by condition and surface type, is presented in Figure 3.5.2.

Figure 3.5.2. Condition and length (in miles) of forest roads at Kingston State Forest.



A 12.5-foot-wide by 11.3-foot-high box culvert was incorporated into the design of Route 44. It was installed in 2004, during highway construction. This culvert is entirely located on MassDOT property. It connects forest roads and trails on the south side of the Pratts Pond parcel to those on the north, allowing the movement of wildlife, pedestrians, cyclists, OHVs, and four-wheel-drive vehicles.



This underpass beneath Route 44 allows hikers, bicyclists, and some wildlife to safely reach portions of Kingston State Forest isolated by highway construction. It is also used by OHV and four-wheel-drive operators. (See Appendix K for photo information.)

A network of forest roads and unauthorized trails connects the Pratts Pond parcel to adjacent Town of Kingston conservation lands (e.g., Camp Nekon). The roads extend the forest's trails system and allow for greater hiking, hunting, and mountain biking access. They also allow for unauthorized access by OHVs and four-wheel-drive vehicles.



User created OHV trail along the edge of Pratts Pond. (See Appendix K for photo information.)

Kiosks and Signs

There are no kiosks, map boards, or main identification sign.

Donation Box

There is no donation box at this forest.

Memorials and Markers

There are no known memorials or markers.

3.6. VISITOR SERVICES

There is no regular interpretive or recreational programming. The Kingston Open Space Committee occasionally leads hikes through Camp Nekon and the Pratts Pond parcel.

3.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

The forest is managed by personnel based at Myles Standish State Forest. There are no employees based at this forest.

Partnerships and Volunteers

There are no partnerships or ongoing volunteer efforts.

Public Safety

The Kingston Fire Department provides fire response and emergency services. Personnel from DCR's Forest Fire Control District 2, based at Myles Standish State Forest, provide supplemental assistance. The Kingston Police Department, Massachusetts State Police (Station D-1, Norwell), and Massachusetts Environmental Police (Region M-2) provide law enforcement.

Funding

Conservation Trust Fund

There are no trust funds designated for this forest.

Retained Revenue

There are no parking fees. The forest does not generate or retain revenue.

Other Revenues

There are no other revenues.

3.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs), legal agreements, and institutional knowledge. This section describes those practices unique to the management of Kingston State Forest. Only one legal agreement unique to the forest was identified. It is listed in Table 3.8.1.

Table 3.8.1. Key legal agreements for Kingston State Forest.

<u>Party and Subject of Agreement</u>	<u>Type^a</u>	<u>Expiration Date^b</u>
Department of Highways and Department of Environmental Management. Memorandum of Understanding for land transfers associated with the construction of Route 44, May 2, 1995	U	N/A
<p>a. Agreement types include: C = Conservation Easement; E = Easement; L = Lease; P = Permit; S = Special Use Permit; U=Memorandum of Understanding.</p> <p>b. Year that agreement expires.</p>		

Only one key management and guidance document was identified (Table 3.8.2).

Table 3.8.2. Key management and guidance documents for Kingston State Forest.

<u>Author and Document</u>	<u>Year</u>
Gannett Fleming, Inc. Clean State Audit: Kingston State Forest. December 1998	1998 ^a

Annual Maintenance

There are no regular activities; all maintenance is performed on an as needed basis.

Natural Resources

Water Resources

The DCR does not perform any water management activities at this forest.

Rare Species

There are no rare species monitoring or management activities.

Invasive Species

There is no monitoring or management of invasive species.

Vegetation

There is one CFI plot; it was last monitored in 2011. MassDOT is responsible for maintaining the vegetation in its easements.

Information on file with DCR's Regional Forester identifies four commercial tree harvests. All took place in the Pratts Pond parcel. Information on these harvests is provided in Table 3.8.3.

Table 3.8.3. Summary of timber harvests at Kingston State Forest, 1981-2000.

<u>Year</u>	<u>Type</u>	<u>Acres</u>	<u>Board Feet</u>	<u>Cords</u>
1981	Timber sale	32.0	187,000	N/A
1986	Hurricane salvage	3.0	10,100	N/A
1998	Timber sale	11.0	43,600	16
2000	Timber sale ^a	25.0	164,400	135

a. This sale involved trees cut for the construction of Route 44.

Wildlife

Under DCR's Forest and Park Regulations (302 CMR 12.11(3)), fishing and hunting are allowed in the forest.

Cultural Resources

There are no ongoing cultural resource management activities unique to this forest.

Recreation Activities

Hunting is allowed.

Infrastructure

Boundary

The Regional Forester is responsible for maintaining boundary markers.

Buildings

There are no buildings to maintain.

Roads

There are no public or administrative roads to maintain.

Parking Areas

There is no parking lot to maintain.

Trails

Personnel based at Myles Standish State Forest provide minor trail repairs on an as needed basis.

Kiosks and Signs

There are no kiosks or map boards to update.

3.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Kingston State Forest. Applied Land Stewardship Zoning recommendations provide general guidance for managing these properties. Future activities and projects should be checked against the zoning map (Figure 3.9.1) for consistency. Management recommendations are all high-priority and should be addressed as soon as resources become available.

Applied Land Stewardship Zoning (Figure 3.9.1)

The following Land Stewardship Zoning is recommended to guide management and any future development.

Zone 1

- An area of wetlands and uplands at the Pratt's Pond parcel, extending from Route 80 eastward to the shore of Pratt's Pond. This is zoned to protect Coastal Plain Pond species and rare turtles. Great Mink Hole, Wolf Pond, abandoned cranberry bogs, and several unnamed wetlands are within this Zone 1.

Zone 2

- All portions of the forest, at both the Pratt's Pond and Holmes lot parcels, with the exception of areas identified as Zones 1 or 3.

Zone 3

The following portions of Kingston State Forest are currently developed, appropriate for potential future development, or intensively used for recreation. They have been designated Zone 3.

- All areas within MassDOT easements.
- Area west of Route 80 and north of Route 44, immediately south of, and adjacent to, an existing crosswalk. For the possible creation of a small parking area and trailhead.
- Area east of Route 80 and north of Route 44, immediately north of the existing crosswalk. For the possible creation of a small parking area (eight or fewer spaces) and trailhead.

Significant Feature Overlay

There is no Significant Feature Overlay.

Recreation Guidance

Soils at the Pratt's Pond parcel are highly erodible and considered Very Limited or Somewhat Limited for a variety of recreational uses, including camp areas, off-road motorcycles, paths and trails, picnic facilities, and playgrounds (USDA 2019). These soils put significant limitations on recreation. To the north of Route 44, the presence of Priority Habitat

and state-listed species place additional limitations on recreation.

Emphasis has been placed on improving and promoting the existing trails system for authorized uses and increasing protection of Great Mink Hole and Wolf Pond, the forest's Coastal Plain Ponds. Because recreation and vehicle access are known threats to Coastal Plain Pondshores and their rare species (NHESP 2016a), both the pondshore and adjacent buffer should remain free of recreational trails and activities. Visitors seeking to experience Coastal Plain Ponds will find easily accessible examples at nearby Myles Standish State Forest.

New recreation activities at the Pratt's Pond parcel must be consistent with easily erodible soils and the presence of state-listed species and Coastal Plain Ponds. In addition, recreation in this parcel should not negatively affect adjacent municipal and privately-owned conservation lands.

The Holmes lot has similar limitations due to highly erodible soils and the occurrence of Priority Habitat. However, its recreational use is currently limited by access. Emphasis is placed on securing an access agreement with abutters, which will increase opportunities for recreation.

Management Recommendations

Six priority management recommendations were developed for Kingston State Forest. (Table 3.9.1) Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

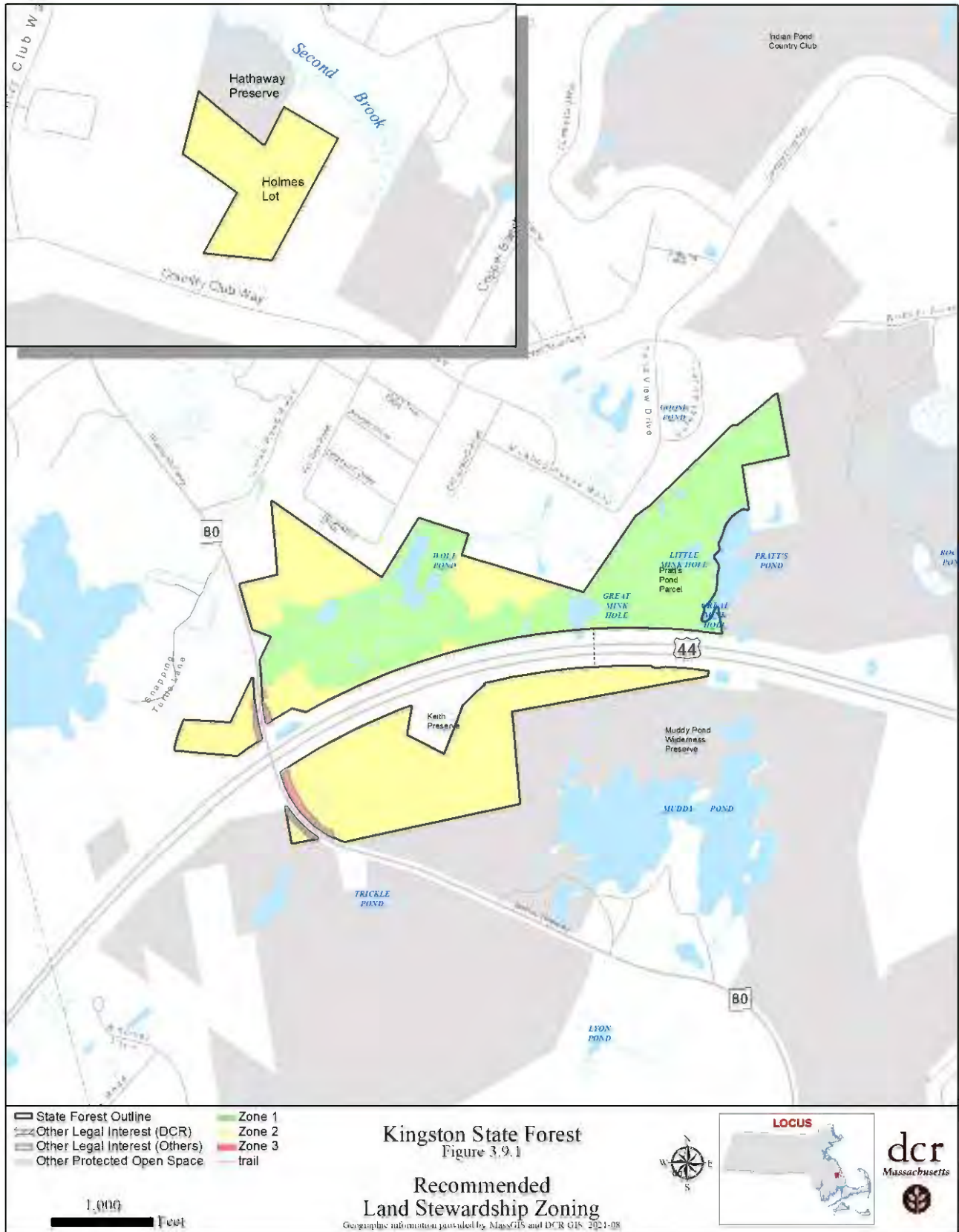
All recommendations are of equal priority.

Table 3.9.1. Priority recommendations for Kingston State Forest.

Category	Recommendation	Implementation ^a
Natural Resources	Protect the coastal plain pondshore community at Great Mink Hole and Wolf Pond through regulated access and informational signage.	ECO, POP, VSP
Recreation	Install standard DCR trail markings and signs at the Pratts Pond parcel.	POP, RFP
Recreation	Install gates along roads in the Pratts Pond parcel at the following locations, and elsewhere, to limit illegal OHV and four-wheel-drive vehicle access: <ul style="list-style-type: none"> • North entrance to Route 44 underpass • South entrance to Route 44 underpass • Existing trailhead east of Route 80 and north of Route 44 	OTH, POP, PSO
Recreation	Work with the Town of Kingston to limit vehicle access to portions of Camp Nekon that abut the state forest and connect to the forest's trails system.	POP, PRT
Infrastructure	Obtain an easement, right of way, or other legal instrument that permanently provides for crossing private property in order to access the Holmes Lot.	LAQ, LGL
Infrastructure	Establish a park gateway along Route 80 with vehicle parking, kiosk, and a connection to existing trails.	POP

a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

Kingston State Forest





Ellisville Harbor State Park

Located on the western shore of Cape Cod Bay, Ellisville Harbor State Park was a working farm from the early 1800s through the 1960s. With the Commonwealth's acquisition in 1991, the property was preserved as one of the few pieces of undeveloped coastline between Boston and Cape Cod. Among the most scenic spots on the south shore, this park features forested uplands, meadows, a sphagnum bog, a salt marsh, and a barrier beach. The harbor was historically important. In the past it was a summer home site to the Wampanoag, shelter for local fishing vessels, a loading site for firewood-laden boats bound for Boston, and a place to harvest seaweed which was a crucial fertilizer for local farmers. Elements of the historic Harlow farmstead remain, the most notably the Harlow House, a 1939 reconstruction of an 18th century structure, now under lease through DCR's Historic Curatorship Program. Today, the park is a natural gem. Rare shorebirds nest here each summer, ospreys raise their family on a nesting platform in the salt marsh, and in the winter harbor seals haul up on the exposed rocks during low tide.

Top Activities

- Dog walking, on leash
- Fishing, fin fishing
- Hiking/walking
- Nature study/photography
- Picnicking
- Running/jogging

Friends Group

- None

Partners & Permittees

- Friends of Ellisville Marsh
- Town of Plymouth
- Wildlands Trust

Park Inventory

Date Established: 1991

Landscape Designation

Parkland

Features

- Coastal access
- Secluded saltwater beach
- Scenic views of salt marsh and Cape Cod Bay
- Former agricultural landscape
- Harlow House (Historic Curatorship)
- Picnic tables

Park Size (acres)

Total Area:	99
Forest:	25
Lakes and Ponds:	3
Wetlands:	43

Threatened & Endangered Species

Massachusetts:	2
Priority Habitat (acres):	35
Federal:	1

Cultural Resources

Archaeological:	1
Buildings:	3
Cemeteries:	0
Historic Districts:	1
Landscapes:	2
Objects:	1
Structures:	1
National Register:	0
National Historic Landmark:	0

Roads (miles)

Unpaved:	1
Paved:	0

Trails (miles)

Unpaved (Hiking):	2
Paved:	0

Contact Info:

(508) 866-2580 • 1861 State Road, Plymouth, MA 02360
<https://www.mass.gov/locations/ellisville-harbor-state-park>



Looking eastward across Ellisville Harbor toward the park's barrier beach and Cape Cod Bay. (See Appendix K for photo information.)

SECTION 4. ELLISVILLE HARBOR STATE PARK

4.1. INTRODUCTION

Ellisville Harbor State Park is a uniquely scenic property, coupling the charm of an agrarian landscape with the striking beauty of the Massachusetts coast. The park was acquired in 1991 for its outstanding scenic characteristics, historic significance as a rare seaside agricultural landscape, and important natural resources (DEM n.d.). All remain evident today. Visitors entering the park pass by a historic farmhouse and antique agricultural implements, and are treated to panoramic ocean and salt marsh views. Wooded paths lead visitors to a beach shared by recreationists, seals, and shorebirds.

Between the early 1700s to the mid-1960s, the Ellis and Harlow families used lands encompassing and surrounding the park for a variety of agricultural uses including the production of vegetables, livestock, salt marsh hay, timber, and cranberries. Although convenient access to Route 3 has encouraged residential development throughout much of Plymouth, the park and its surroundings have managed to retain a distinctive and unique rural seaside character. Ellisville Harbor is the only state-owned coastal property with beachfront access between Nantasket Beach Reservation (located in

Hull) and Scusset Beach State Reservation (located in Bourne and Sandwich), an area that spans approximately 80 miles of coastline. It is used by visitors seeking a quiet and secluded recreational experience.

The park's physical, political, and regulatory attributes are summarized in Table 4.1.1. A map of the park may be found in Figure 4.1.1.

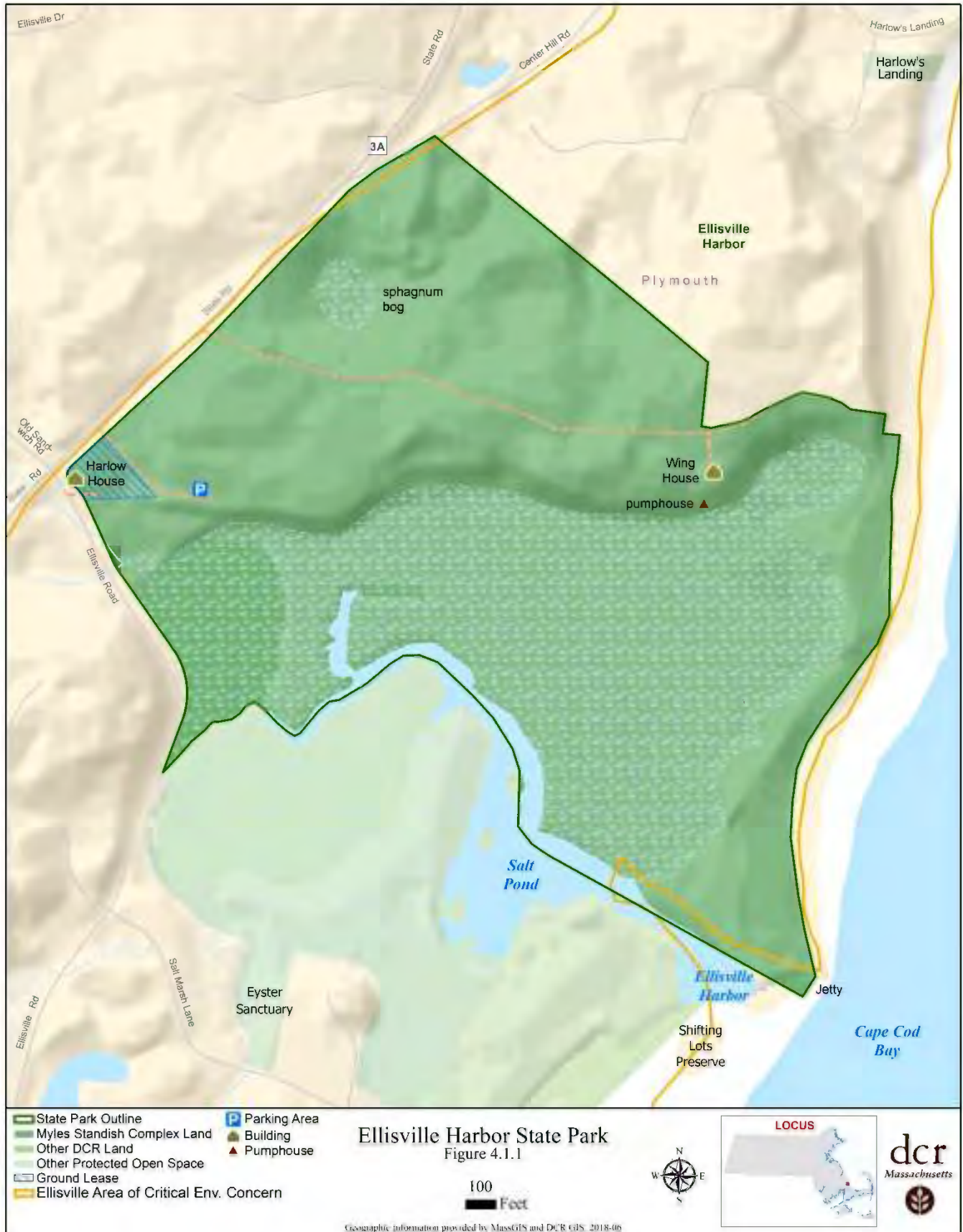
Table 4.1.1. Physical, political, and regulatory settings of Ellisville Harbor State Park.

Setting	Name or Metric
Location:	Plymouth
Area (acres)^a:	98.81
Perimeter (miles)^a:	1.89
Landscape Designation(s)^b:	Parkland
Legislative Districts:	
House	1 st Plymouth
Senate	Plymouth and Barnstable
Regulatory Designations:	Cape Cod Bay Ocean Sanctuary
	Ellisville Harbor ACEC
	Priority Habitat

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Ellisville Harbor State Park



Park Identity. Ellisville Harbor is characterized by its coastal resources (i.e., beach and salt marsh) and historic agricultural landscape. It provides habitat for coastal wildlife while allowing visitors to experience a little-developed section of the Massachusetts coast. The park provides an alternative visitor experience from the Complex's developed coastal properties (i.e., Pilgrim Memorial (Section 5) and Scusset Beach (Section 7)).

Location. The park is located in the Plymouth village of Cedarville, approximately 10.8 miles southeast of Plymouth Center and 4.8 miles north of the Cape Cod Canal.

Associated Properties. Ellisville Harbor is managed by staff from Myles Standish State Forest in Carver. (See Section 2.) Informal operational support is provided by personnel from Scusset Beach State Reservation.

4.2. NATURAL RESOURCES

Physical Features

The park is situated on a bluff that transitions from elevated uplands (approximately 60 feet at the highest point) to salt marsh (near or at sea level). The marsh, perhaps the park's most notable physical feature, was once the harbor in the park's name; there is no longer deep, open water. The transition in elevation between the upland and low-lying salt marsh is abrupt, with steep (20%–25%) slopes. Approximately half the park is located at or near sea level.

Water Resources

The park has a variety of surficial and groundwater resources. (Table 4.2.1) Most notable are the salt marsh located in the southern portion of the park and the Plymouth-Carver Sole Source Aquifer, which underlies the entire park. An isolated freshwater wetland is located in the park's northwest corner.

Table 4.2.1. Water resources of Ellisville Harbor State Park.

Water Resource	Name or Metric
Watershed:	South Coastal
Aquifer:	
Medium Yield (acres)	0.00
High Yield (acres)	43.77
Rivers and Streams (miles)	1.37
Vernal Pools	
Certified (#)	0
Potential (#)	0
Wetlands (acres)	43.18
Lakes and Ponds (acres)	2.62

Most water resources are associated with the marsh, which is only partially located within the park. It is bordered on the north and west by the park, on the south by salt marsh owned by Wildlands Trust, and on the east by a barrier beach. There are multiple tidal creeks. They connect the marsh to Cape Cod Bay via a single inlet in the barrier beach. Human intervention has traditionally been used to maintain a channel into the marsh (Applied Coastal Research and Engineering (ACRE) 2017). In recent years, the inlet has been dredged by a local non-profit organization in an effort to ensure tidal exchange in the marsh. Without this dredging, the location of the inlet shifts in response to currents, storms, and the presence of coastal structures, as has occurred in the past.

Ellisville Harbor has been identified as containing elevated levels of fecal coliform and accordingly is listed as being subject to a Total Maximum Daily Load (TMDL) for Category 5 waters (DEP 2013).

The marsh is hydrologically connected to Savery Pond, which is located approximately 2,600 feet west of the park. It connects to the marsh via a stream that passes through culverts under both State and Ellisville roads. Savery Pond's water quality is impaired, with elevated phosphorous levels, thermal layering in the water column, periods of anoxia, and cyanobacteria blooms (Eichner 2016). This impaired water discharges downstream into the park.

Approximately 1,000 feet of the park's 1,650 foot coastline has been identified as barrier beach. This same barrier beach (Pm-12) also extends approximately 970 feet southward onto Wildlands Trust property. In March, 2018, nor'easter driven surf washed over an approximately 130-foot-long stretch of this beach near the northeast corner of the salt marsh. The eastern margin of the marsh was buried under several feet of sand at this location.



Beach access point along barrier beach Pm-12, July 2017 (top); same location April, 2018 (bottom). (See Appendix K for photo information).

The northern portion of the Plymouth-Carver Sole Source Aquifer within the park has been classified as a high-yield aquifer. At least two groundwater monitoring wells are located in the fields above this aquifer; more wells may be present. A review of MassDEP data did not identify any 21E sites in or near the park that might impact this aquifer.

Low-lying areas adjacent to current mean high water are susceptible to the impacts of 100-year and 500-year storm events (Table 4.2.2). This includes the salt marsh and barrier beach. Predicted sea level rise will affect these same areas. Steep slopes associated

with uplands along the marsh's northern edge minimize impacts to these areas. The extent of salt marsh will likely decrease as sea level rises and topography (in the park) and existing infrastructure (outside the park) prevent salt marsh migration. Hurricane inundation and sea level rise are not predicted to affect park infrastructure, such as the Harlow House or trails. They are predicted to affect off-property infrastructure including Ellisville Road and Salt Marsh Lane. (Figure 4.2.1) It is important to note that data sources pertaining to storm surge and sea level rise are independent and do not assume an interactive effect. Combined impacts may be more severe than predicted by either model independently.

Table 4.2.2. Potential impacts of flooding, hurricane inundation, and sea level rise to Ellisville Harbor State Park.

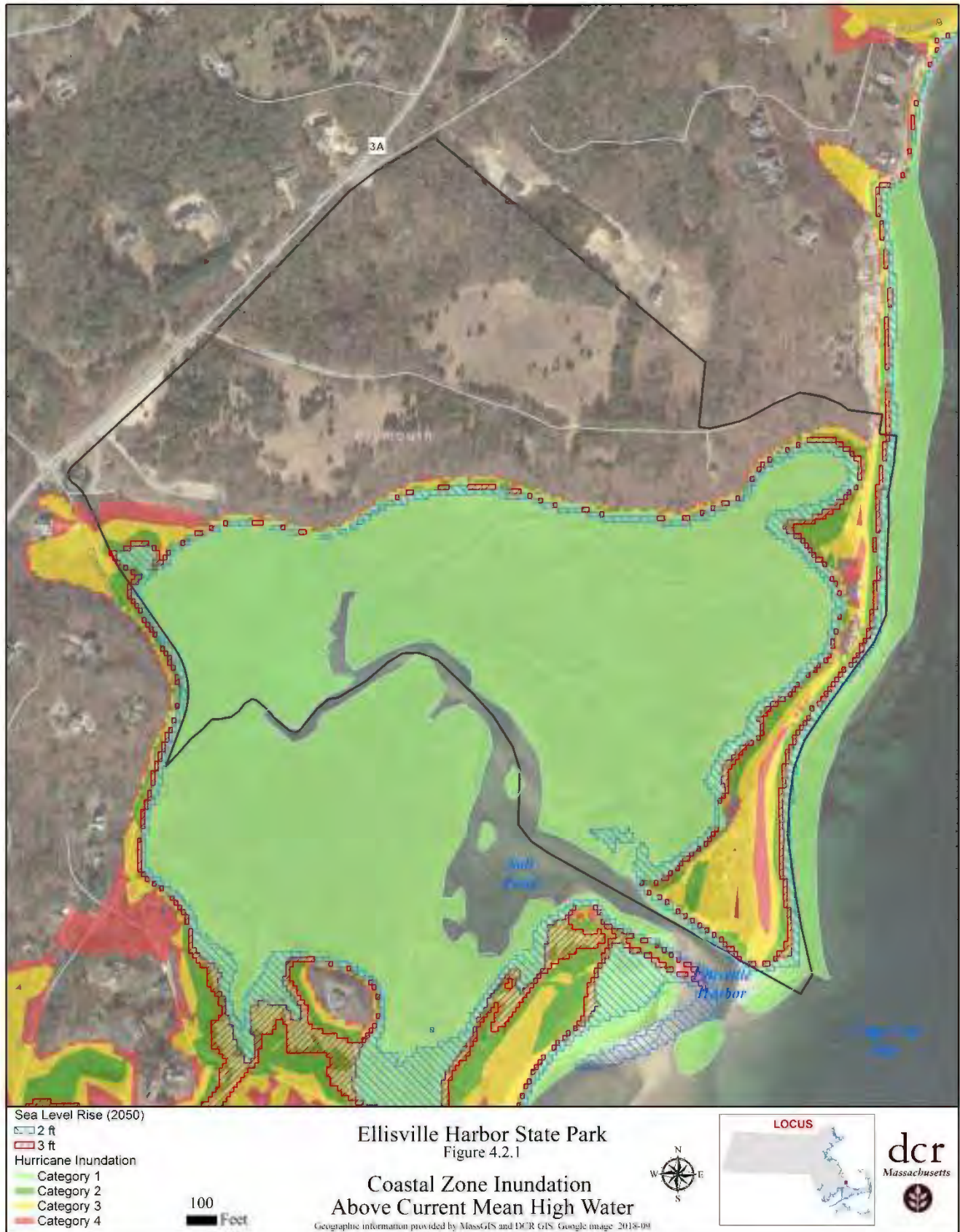
Type of Impact	Acres	%
Flooding:		
100-year Storm	55.07	55.73
500-year Storm ^a	56.06	56.74
Hurricane Inundation:		
Category 1 Storm	45.55	46.10
Category 2 Storm ^b	48.79	49.38
Category 3 Storm ^b	53.12	53.76
Category 4 Storm ^b	54.64	55.30
Sea Level Rise (2050):		
Intermediate and Intermediate-High scenarios	46.42	46.98
High and Extreme scenarios	47.93	48.51

a. Cumulative value; includes 100-year storm impacts.

b. Cumulative value; includes impacts of all lower category storms

c. As identified in Table 1 of DeConto and Kopp (2017).

During the March, 2018 nor'easters approximately six feet of coastal bluff were rapidly lost to erosion and, as noted previously, storm-driven waves and sand washed over the barrier beach. The hurricane inundation model identified the area washed over as subject to inundation by Category 3 or stronger hurricanes. Observed storm impacts in this area were caused by lower wind speeds, suggesting that the inundation model may underestimate actual impacts.



Rare Species

State-listed Species

There are two known state-listed species (Table 4.2.3). Both are birds that use coastal beaches to nest.

Table 4.2.3. State-listed species of Ellisville Harbor State Park, as identified by the NHESP.^{a, b}

Species ^{a, b}	Type ^c	MESA ^d
Least tern	B	SC
Piping plover ^e	B	T

a. Presented alphabetically, by common name.

b. Fact sheets are available at: <https://www.mass.gov/service-details/list-of-vertebrates>.

c. Types of state-listed species include: A = Amphibian; B = Bird; I = Insect; P = Plant; and R = Reptile.

d. Status of species listed under the Massachusetts Endangered Species Act (MESA): E = Endangered, SC = Special Concern; and T = Threatened.

e. This species is also federally threatened.

Priority Habitat

Approximately 36% of the park (35.13 acres) has been designated at Priority Habitat. These areas are associated with the inlet, barrier beach, and salt marsh, without including the main upland areas.

Vegetation

Information on the park's vegetation comes from a checklist compiled in 2012 (Salicicola 2012). This checklist includes the park as well as private lands along its perimeter. There are 158 plant species, 51 of which are characterized as non-native (Salicicola 2012). Upland forests are comprised of various oak species (white, scarlet, northern red, and black), red maple, and pine species (pitch and white). Dune vegetation includes American beach grass, eastern red cedar, pitch pine, bayberry, salt spray rose, poison ivy, and other typical dune species. Marsh species include cordgrasses.

Invasive Species

The plant inventory (Salicicola 2012) includes 15 species characterized as invasive or likely invasive by MIPAG (2005) (Table 4.2.4). Spotted knapweed and Oriental bittersweet are pervasive throughout upland areas, particularly within the former agricultural fields in the northern section of the park. Japanese knotweed was just becoming established along perimeter roads at the time of the inventory.

Table 4.2.4. Known invasive and likely invasive plants of Ellisville Harbor State Park.^a

Species	Status ^a
Amur peppervine	L
Autumn olive	I
Bell's honeysuckle	I
Black swallow-wort	I
Border privet	L
Common reed	I
Japanese honeysuckle	I
Japanese knotweed	I
Morrow's honeysuckle	I
Multiflora rose	I
Oriental bittersweet	I
Reed canary-grass	I
Rusty willow	I
Spotted knapweed	L
Sycamore maple	I

a. Based on Salicicola (2012).

b. Species identified as I = Invasive or L = Likely Invasive per MIPAG (2005).

Natural Communities

There are seven known natural communities. (Table 4.2.5) Those identified as maritime communities tend to have trees with stunted canopies, are regularly exposed to salt spray, and contain relatively high floral diversity (Swain 2016). An eighth community type, Maritime Erosional Cliff, was present prior to the nor'easters of March 2018. There are no remnants of this community type along the bluff.

Table 4.2.5. Known natural communities of Ellisville Harbor State Park.

Community Type ^a	System ^b	State Rank ^c	Source ^d
Coastal Forest/Woodland	T	S3	1, 2
Maritime Beach Strand	T	S3	1
Maritime Forest/Woodland	T	S2	3
Marine Intertidal Gravel/Sand Beach	E	S4	1
Maritime Juniper Woodland/Shrubland	T	S1	1
Maritime Shrubland	T	S3	2
Salt Marsh	E	S3	1

- a. Classified according to Swain (2016).
b. E = Estuarine, P = Palustrine, T = Terrestrial.
c. The NHESP ranks communities from most rare (S1) to the most common (S5).
d. Information in this table was obtained from the following sources:
1. RMP Planner; these identifications should be considered preliminary.
2. Reid (2000).
3. Harper (2017).

A wetland in the northwest corner of the park has been classified by DEP as an emergent marsh, but has also been identified as a “kettle hole sphagnum bog” (DEM n.d.). Investigation is necessary to clarify the community type or types associated with this wetland. Reid (2000) reported an Oak-Hickory Forest community in the park, however, this community type is not known from the ecoregion in which the park is located (Swain 2016).

The former agricultural fields are being lost to encroachment by a variety of woody species. Pitch pine, oaks, staghorn sumac, and quaking aspen have all reduced the extent of these fields. Poison ivy and Oriental bittersweet are common. Management is required to convert the former fields to the Cultural Grassland community type. Delay in management may result in permanent loss of the former agricultural landscape.

Forests

A small portion of the park (24.51 acres, 24.81%), mostly located in upland areas, is forested. These sections are predominantly pitch pine and various oak species (DEM n.d.), along with red cedar.



Bluff, July 2017 (top photo); same location April, 2018 (bottom). Note that the Maritime Erosional Cliff community shown in the top photo is completely absent in the bottom photo. (See Appendix K for photo information).

Wildlife

The park’s marsh, beach, and forests attract a variety of wildlife. As of February 2021, 235 species of birds have been recorded (eBird 2012). This is approximately 46.5% of the bird species known to occur in Massachusetts. Among the birds recorded are 26 species of waterfowl, 29 species of shorebirds, 21 species of warblers, and 16 species of sparrows. The park is important to birds during all seasons. During the ACEC designation process, 20 mammal species were identified as occurring in or near the park, including white-tailed deer, raccoon, eastern cottontail, and harbor seal. Thirty-eight species of finfish were also identified.

A survey of crabs at southeastern Massachusetts’ beaches (Westgate 2011) detected only one species at Ellisville Harbor, the invasive Asian shore crab.

4.3. CULTURAL RESOURCES

This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An

overview of significant events in the history of Ellisville Harbor is presented in Table 4.3.1. Cultural Resources are identified in Table 4.3.2.

Table 4.3.1. Significant Events in the history of Ellisville Harbor State Park.

Year(s)	Event
1980	The Ellisville Harbor Area of Critical Environmental Concern is designated by the Executive Office of Environmental Affairs (EOEA) for its diversity of coastal environmental resources and scenic values. This designation, in part, leads to the creation of Ellisville Harbor State Park a decade later.
1991	To protect and preserve unique ecological, historical, and scenic values and provide coastal recreational opportunities, the Commonwealth acquires the Harlow Farmstead and adjacent lands to create Ellisville Harbor State Park (Book 10456, Page 242).
1994	Commonwealth takes approximately 57 acres to the south of the 1991 acquisition, extending the park into Ellisville Harbor. (Deed: Book 11720, Page 109; Order of Taking: Book 12893, Page 68)
2001	The park's southern boundary within Ellisville Harbor is determined in a settlement agreement.
2001	Approximately 2.85 acres of land between high and low tide, contiguous with the park's southeast boundary, is deeded as a gift to the Commonwealth. (Book 21339, Pages 347–348)
2002	The Massachusetts Legislature, through Chapter 236 of the Acts of 2002, authorized the Harlow Farmstead and Barn to be rehabilitated through the Historic Curatorship Program. The same Act authorized \$100,000 for the dredging of Ellisville Harbor.
2003	A project funded by a private homeowner dredges 1,400 cubic yards of material to reopen the Ellisville Harbor channel. Additional efforts to maintain the opening remain ongoing and are funded by the Friends of Ellisville Marsh.
2005	Blizzard of 2005 closes harbor inlet. Winter storms again block harbor entrance in 2010, 2012, 2013, and 2015.
2009	Barrier spit breaches during a coastal storm.
2010	Harlow Farmhouse is leased under DCR's Historic Curatorship Program. A curator is selected via a competitive bid process.

Table 4.3.2. Cultural resources of Ellisville Harbor State Park.

Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use? ^e	Utilities ^f	MHC # ^g	Guidance ^h
Ellisville	LHD	Early 18 th c.–1943	-	-	-	-	PLY.AD	1, 2
Harlow Farmstead	LA	Early/Mid 19 th c.	-	-	-	-	PLY.AY	3
Harlow Farmhouse	BU	1939	-	-	Y	E, H, S, T, W	PLY.1154	3
Harlow Barn (foundation Only)	AR	1920	-	-	-	-	PLY.1155	4
Stone walls	ST	-	-	-	-	-	-	2
Agricultural fields	LA	-	-	-	-	-	-	1
Farm equipment	OB	20 th c.	-	-	-	-	-	-
Wing House								
Wing House	BU	ca. 1950	4	-	N	E, H, S, T, W	-	5
Pump House	BU	-	4	-	N	-	-	5
Stone Gate Posts	ST	-	2	M	-	-	-	2
Stone Jetty	ST	1935, 1961 ⁱ	5	-	-	-	-	4

- a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.
- b. Date of construction provided, when known.
- c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.
- d. Integrity is a relative assessment of the condition of a resource's retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.
- e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.
- f. The following codes are used to identify utilities associated with buildings: E = Electric, H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.
- g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.
- h. The following guidance is offered for the ongoing maintenance of these cultural resources:
1. Refer to Vegetation in Historic Landscapes BMP (DCR n.d.k).
 2. Refer to Historic Landscapes - Built Features BMP (DCR n.d.i).
 3. Under Historic Curatorship Program, refer to current lease.
 4. Refer to Archaeological Features BMP (DCR n.d.j)
 5. Refer to Historic Building Maintenance BMP (DCR n.d.g)
- i. In 1961, stones from the 1935 jetty were reused to construct a new jetty.

Archaeological Resources

Pre-Contact Resources

Ellisville Harbor State Park has one recorded pre-Contact site, a lithic workshop that dates in part to the Late Archaic/Early Woodland period (6,000–1,700 BP) and possibly the Middle or Late Woodland period (1,700–500 BP). Other areas of the park are considered to have archaeological potential. Four additional pre-Contact sites have been recorded just outside of the park bounds. These sites include a shell midden, burials, lithic workshops, and flake scatter. Untested areas within the park have the potential for similar archaeological resources.

Post-Contact Resources

A local historic district, the Ellisville Residential District (1720-1943), extends into the park. A small quantity of historic materials was recovered during archaeological investigations and represented field scatter not considered to be significant.

Historic Resources

The former agricultural use of the property is the defining feature of the park's identified historic resources. After the state's acquisition of the property in 1991, 12 buildings associated with the former Harlow Farm were demolished due to their decrepit and unrestorable condition.

Historic Landscapes

Harlow Farmstead Landscape. This is a significant surviving agricultural landscape. The property includes former fields, roads, trees, and buildings all of which have been documented on MHC inventory forms. The Harlow Farmhouse, a Colonial Revival structure built in 1939, is located on the site of a former Harlow Halfway House, which served a stagecoach stop and tavern in the 18th and 19th centuries. The Harlow Farmhouse is the last standing reminder of the vibrant agricultural village of Ellisville, whose residents worked the land at the harbor's edge for centuries.

The Harlow Farmhouse has been preserved, maintained, and occupied as a single-family residence under DCR's Historic Curatorship Program. A 25-year curatorship lease was established in 2010; the curator's investment in the property is valued at over \$500,000. As caretakers of the property, the curators fulfill a public purpose by saving an important part of Ellisville's historic landscape while helping DCR to fulfill its conservation mission. The curators have expressed a desire to terminate their curatorship lease early. Should this happen, additional options will need to be identified for the long-term preservation of the Harlow House.



The Harlow Farmhouse as viewed from Ellisville Road. (See Appendix K for photo information.)

Pieces of rusty farm equipment are located along the northern edge of the parking lot. These objects once worked the Harlow Farmstead's soil. They now provide a connection to the former agrarian land use. These objects have not been inventoried or assessed for historical significance.



Example of historic farm equipment associated with the Harlow Farmstead. See Appendix K for photo information.

Buildings

The Wing House, a one-story Cape style building, is located at the end of the forest road that extends eastward from the parking lot. Formerly leased to the Massachusetts Environmental Police for office use, the building is presently unoccupied. The house is served by a septic system of unknown condition and has electric and water service. It has been repeatedly vandalized. An accompanying garage was used for storage by park staff. Due to its poor condition, it was demolished in 2018.



The Wing House has been unoccupied for several years; it is secured but not mothballed. (See Appendix K for photo information.)

The Pump House is a shed-like building located approximately 105 feet downslope from the Wing House. It is set into the hillside and contains a water tank that was once used to provide water to the Wing House.



This pump house is associated with the Wing House's water supply. (See Appendix K for photo information.)

Structures

A stone jetty to the north of marsh's inlet was constructed by the Massachusetts Department of Public Works in 1961, using stones from a jetty constructed nearby in 1931. The jetty is in a deteriorated condition and is regularly overtopped during storm events. A feasibility analysis is being conducted to identify if repair of this structure is feasible and to develop cost estimates.



Stone jetty at Ellisville Harbor State Park. (See Appendix K for photo information.)

Objects

Rectangular stone gate posts flank the entrance to the park road that runs from State Road to the private residence at 1852 State Road. Steel hinge pins are set in the back of these posts. The posts have not been inventoried or assessed for their significance.



One of two carved stone posts that flank the old road through the park. The upper and lower hinge pins are visible on the left side (back) of the post. (See Appendix K for photo information.)

4.4. RECREATION ACTIVITIES

The park remains relatively undeveloped and is used primarily for passive recreation activities associated with enjoyment of the park's scenic qualities. Trails-related activities such as hiking/walking and dog walking are common. A less common use is horseback riding. The following authorized recreation activities are known to take place:

- Dog walking, on leash
- Fishing, fin fish
- Fishing, shellfish
- Hiking/walking
- Horseback riding
- Hunting
- Nature study/photography
- Picnicking
- Running/jogging

Ellisville's shore is not a Designated Swimming Area as identified in 302 CMR 12.00; therefore, swimming is not authorized. Scuba diving occurs just outside the park, with divers passing through the park to access the near-shore waters.

Geocaching, which is neither authorized nor unauthorized on DCR property, takes place in the park. As of February 2021, there was one cache.

4.5. INFRASTRUCTURE

Property Boundary

The park's eastern and western boundaries are well defined by Ellisville and State roads and the Mean Low Water line of Cape Cod Bay, respectively. To the north, the park borders two privately owned residential properties. In the mid-2000s, vegetation clearing began on northern lot bordering State Road. In 2015, the lot was developed, creating a new access point to the park. An encroachment into the park, involving the clearing of 0.4 acres of red pine trees, took place in 2016. The abutter agreed in writing to cease and desist from cutting any more trees and to plant 40 native trees to replace those cut. These trees have not been planted.

The park's southern boundary has moved over time. The boundary associated with the 1991 taking approximately followed the current path from the parking area to the Wing House. A second taking in 1994 expanded the park southward well into Ellisville Harbor. This taking, and the location of the park's southern boundary, were challenged by a group of abutters. A settlement was reached in 2001 that confirmed that the park's southerly and westerly boundary "is that of Lot 21-59 as depicted on the BSC Plan dated July 10, 1991." (Plan Book 34, Page 550) See also Plan Book 46, Page 644 for the agreed

upon southern boundary of the park depicted on an aerial image.

The owner of 1852 State Road has a deeded right "to pass and repass over a private way leading from the state highway to the premises hereby conveyed and to the seashore, through gates and bars" (Book 1407, Page 96). This right is referenced as item 1 of Exhibit A in the Commonwealth's deed for the northern portion of the park (Book 10456, Page 244). The "heirs and assign" of Thomas C. Harlow have the right to use this "said way as lies within" 1852 State Road.

The deed for the southern portion of the park includes the following provision: "to the extent they apply to the locus, the mutual rights of abutters of land now or formerly of Maude A. Doane to use, in common with others lawfully entitled, and any paths over said Doane Land for access to the low water mark and bathing beaches adjoining said Doane land (Book 11720, Page 109).

Buildings and Structures

There are no non-historic buildings and only one non-historic structure, a platform associated with a former stairway to the beach. (Table 4.5.1) The platform is constructed of wood beams and plastic composite decking. It is located at the end of a forest road, on a bluff approximately 35 feet above the beach. Some park visitors continue to access the beach by walking across the platform and then down the face of the bluff.

Table 4.5.1. Non-historic buildings and structures of Ellisville Harbor State Park.

Location and Infrastructure	Date ^a	Condition ^b	In Use ^c	Utilities ^d
Stair platform	-	5	-	-

a. Date of construction provided, when known.

b. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset Management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.

c. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.

d. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.

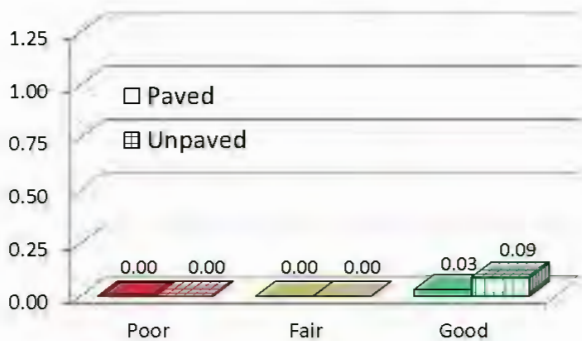


This platform was once connected to stairs to the beach. Erosion undermined the stairs, taking the platform out of use. It now sits in the woods above the beach. (See Appendix K for photo information.)

Roads

A small unpaved road segment connects the parking lot to State Road. (Figure 4.5.1) The condition of this road has worsened since DCR's trail inventory, the source of information displayed in Figure 4.5.1. A portion of this road has been widened by drivers seeking to avoid potholes and driving over vegetation along the road shoulder. It is presently passable by passenger vehicles travelling carefully at low speeds. Several large potholes, up to 10 inches deep, are situated where the road connects to Route 3A.

Figure 4.5.1. Condition and length (in miles) of roads at Ellisville Harbor State Park.



The park's forest roads are not included in these metrics; they are classified as trails and included elsewhere in this chapter. (See Trails, below.)



Drivers attempting to avoid potholes in the park's entrance road have driven over vegetation, widening the road (right side of image). (See Appendix K for photo information.)

Parking

There is one official parking area, it is located at the end of the park's official entrance. The driveway and parking lot were installed in 2002. (Table 4.5.2) This lot has a packed stone dust surface. Two signs near the southeast corner of the lot indicate "Handicapped Parking" and "Reserved Parking." The spaces' surfaces are stone dust over dirt; there is no access aisle.

Table 4.5.2. Number of public parking spaces, by location and type, at Ellisville Harbor State Park.

Location	HP	Restricted	Other	Total
Main Parking Lot	2	0	33	35
Roadside parking, former Harlow Farm Stand	0	0	15	15
Total	2	0	48	50



Parking lot at Ellisville Harbor State Park. (See Appendix K for photo information.)

An unofficial lot is located just off State Road, immediately north of the park entrance. (Table 4.5.2) This was the location of the park's first lot. When Ellisville Harbor was first established, parking was on pavement beside the Harlow Farm Stand. A trailhead and kiosk were established at this location. In the early 2000s, a new parking lot was constructed and the Harlow Farm Stand demolished. The stand's building and paved parking lot were removed, the area was revegetated, and the kiosk and trail head were relocated to the new parking lot. However, some park visitors continue to use this location, damaging vegetation and creating an expanse of bare soil.

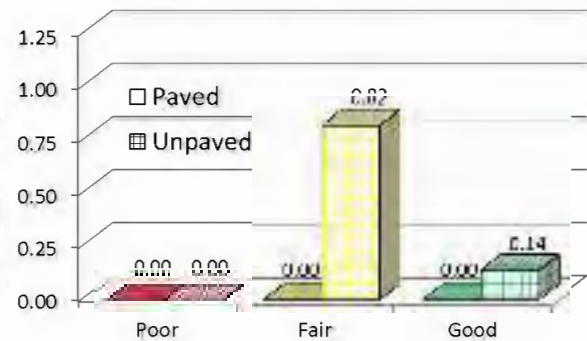


Aerial views of the former Harlow Farm Stand site along the shoulder of State Road. In the 2005 image (left) the location is completely vegetated. In the 2019 image (right) loss of vegetation, due to vehicle traffic, is evident. (See Appendix K for photo information.)

Trails

There are 0.96 miles of official trails. The length of these trails, by condition and surface type, is presented in Figure 4.5.2. Trails are located in the upland section of the property. They are only marked at the parking lot, beach, and one intersection along the way. Standard signs and assurance blazes are absent. Soils along the steeply sloped segment just interior to the beach are moderately eroded with exposed roots in the tread. Two trail segments lead from the beach entrance to a bluff; there are no barricades or warning signs. There are also 0.04 miles of unofficial trails in the park.

Figure 4.5.2. Condition and length (in miles) of official trails at Ellisville Harbor State Park.



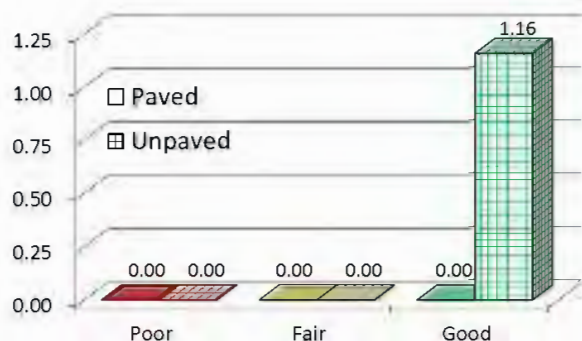
A confusing network of braided trail segments has developed between the official parking lot, the former parking lot location, and the former agricultural fields. It is believed to have been created by those who continue to use the site of the former farm stand as a trailhead. Depreciative behaviors have also been associated with these braided trails. There are no signs associated with these trail segments.



Multiple trails (in red) have developed between the park's official parking area and unofficial roadside parking. The number of trail segments is both unnecessary and confusing. (See Appendix K for photo information.)

There are 1.16 miles of forest roads, including the one between State Road and the private residence at 1852 State Road (i.e., "Cape View Road"). The length of these roads, by condition and surface type, is presented in Figure 4.5.3.

Figure 4.5.3. Condition and length (in miles) of forest roads at Ellisville Harbor State Park.



A sign at the start of the trail to the beach indicates that it is a Healthy Heart Trail. The trail to the beach is approximately one-half mile each way. Although relatively flat along most its length, the final 300 feet to the beach is a steep trail along a side slope. This trail is not included in DCR's list of Healthy Heart trails (<https://www.mass.gov/service-details/find-a-healthy-heart-trail>).

The Plymouth Wishbone Walking Trail begins at Myles Standish State Forest (Section 2) and ends at Ellisville Harbor. There is one trail marker (number 20) on a wooden post at trails end. It is located on a bluff overlooking Cape Cod Bay, adjacent to the out of use stair platform.

Kiosks and Signs

A kiosk is located at the trailhead at the main parking area. It contains an out of date welcome panel with a park map and interpretive information on the history of Ellisville.



Interpretive kiosk and "iron ranger" donation box at Ellisville Harbor State Park (See Appendix K for photo information.)

The park's main identification sign is located just off State Road, immediately north of the parking lot entrance.

Donation Box

There is one cylindrical metal donation box (i.e., "iron ranger"); it is located in the northeast corner of the parking lot, near the kiosk.

Memorials and Markers

There are no known memorials or markers.

4.6. VISITOR SERVICES

There is no regular interpretive programming. The Regional Interpretive Coordinator, based at Myles Standish, tries to offer one to two events per year (e.g., adult walking club, seal viewing walk).

There is one permanent Welcome Wayside panel. It is located at the kiosk in the parking lot. The panel is:

- Welcome to Ellisville Harbor State Park



Ellisville Harbor's only Welcome Wayside panel contains good historical information, but an outdated map and park guidelines. (See Appendix K for photo information.)

This panel and kiosk were relocated from their former location, adjacent to the Harlow Farm Stand. The panel's information reflects the park's status in the 1990s and early 2000s. It was not updated to reflect the removal of farm buildings, construction of a parking lot, or relocation of the trailhead. As a result, information on the panel is outdated.

4.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

Ellisville Harbor is managed by personnel based at Myles Standish State Forest. There are no employees based at the park.

Partnerships and Volunteers

The Friends of Ellisville Marsh, a 501(c)(3) non-profit organization, engages in a mission to "support and maintain the recovery of the special plant, aquatic and bird life in Ellisville Marsh, relying on natural processes to the greatest extent possible" (Friends of Ellisville Marsh 2018). Although its focus is limited to the marsh, the organization collects data on an on-going basis related to the environmental permits for annual dredging of the inlet. They provide volunteers for DCR's Park Serve Day.

Public Safety

The Plymouth Fire Department's Cedarville station provides fire response and emergency services. Personnel from DCR's Forest Fire Control District 2

provide supplemental assistance. The Plymouth Police Department, Massachusetts State Police (Station D-7, Bourne), and Massachusetts Environmental Police (Region M-4) provide law enforcement.

Funding

Conservation Trust Fund

Donations placed into the donation box at the park are deposited in the conservation trust fund for use at Ellisville Harbor.

Retained Revenue

There are no parking fees. Ellisville Harbor does not generate or retain revenue.

Other Revenues

There are no other revenue sources.

4.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs (e.g., Table 4.3.2), legal agreements, and institutional knowledge. This section describes management practices at Ellisville Harbor. Legal agreements unique to the park are listed in Table 4.8.1.

Table 4.8.1. Key legal agreements for Ellisville Harbor State Park.

Party and Subject of Agreement	Type ^a	Expiration Date ^b
Commonwealth of Massachusetts, Donald P. Quinn, and Ellisville Harbor Conservation Trust. Settlement Agreement. August 30, 2001.	A	N/A
Massachusetts Audubon Society Contract for Services, shorebird management and conservation.	CN	2023
Donald and Christine McIvor. Ground Lease; DCR Historic Curatorship Program.	L	2035

a. Agreement types include: A = Agreement; C = Conservation Easement; CN = Contract; E = Easement; L = Lease; P = Permit; S = Special Use Permit; U=Memorandum of Understanding.

b. Year that agreement expires.

Key planning documents are identified in Table 4.8.2.

Table 4.8.2. Key management and guidance documents for Ellisville Harbor State Park.

Author and Document	Year
Department of Environmental Management Ellisville Harbor draft plan.	n.d.
Gannett Fleming, Inc. Environmental Audit Report: Ellisville Harbor State Park. December, 1998.	1998
Department of Environmental Management Ellisville Harbor State Park. [Draft] Master Plan update/addendum.	2000

Annual Maintenance

Ongoing management practices are performed on an as needed basis. (Table 4.8.3.) Trash barrel pickup is performed by personnel from Scusset Beach State Reservation. (See Section 7)

Table 4.8.3. Annual cycle of management activities at Ellisville Harbor State Park.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Litter removal - Trails	AN	AN	AN	AN
Litter removal - Beaches, parking lots, walkways, and picnic areas	AN	AN	AN	AN
Maintenance - Picnic sites, fences, etc.	AN	AN	AN	N/A
Mowing and trimming	AN	AN	AN	N/A
Pruning - Trees and shrubs	AN	AN	AN	AN
Trash barrel pickup	AN	AN	AN	AN

a. Frequency codes are: A = Annually; AN = As needed; D = Daily, # times; E = Every # days; N/A = Not applicable.

Natural Resources

Water Resources

Management plans are required for all state-owned barrier beaches (Executive Order No. 181). There is no management plan for the park's barrier beach.

The filling in and subsequent dredging of a channel into Ellisville Harbor has occurred since at least 1791 (ACRE 2017). Following establishment of the ACEC in 1980, the Commonwealth stopped recurring dredging of the tidal inlet. In 2003, the

barrier spit was breached and the inlet relocated to address erosion of private properties and inefficiencies of flushing the marsh and estuary. In 2007, the Friends of Ellisville Marsh incorporated as a non-profit and began the permitting processes necessary to reinstate dredging. In 2011 the inlet was dredged and the associated distribution of dredge spoil took place in the winters of 2012, 2013, 2015, and 2019. Following a comprehensive coastal process analysis, ACRE recommended modifying the jetty in the state park, "restoring" the parks dunes, and periodic maintenance of the channel for maintaining "the long-term integrity of this barrier beach, inlet, and salt marsh system" (ACRE 2017). The predicted cost of implementing this recommendation is "\$1,370,000 to \$1,440, 000 with a maintenance cost of about \$50,000 to \$100,000 every five (5) years" (ACRE 2017).

Rare Species

Rare beach-nesting birds (i.e., piping plover and least tern) are managed by the Massachusetts Audubon Society under contract to the DCR. Mass Audubon provides the following services: monitoring; protection; public outreach and education; enforcement by voluntary compliance; beach maintenance coordination; vegetation management; predator control; and training.

Invasive Species

There are no park-specific management activities.

In 2013, private individuals released a "few hundred" knapweed weevils on a private property adjacent to Ellisville Beach (Marcoux 2013). It is unknown if these weevils survived or made it onto state property.

Vegetation

Park operations personnel from Myles Standish mow the former agricultural fields once per year. These fields are not within Priority Habitat, so this practice does not require review by the NHESP.

There are no ongoing forest inventory or management activities.

In 2016, an abutter encroached on the park, cutting down 40 native trees. As of 2021, this encroachment has not been mitigated.

Wildlife

There is no stocking of fish or game species.

Cultural Resources

The Harlow Farmhouse and associated grounds are under historic curatorship. It is managed in accordance with the terms of its 25-year Ground Lease.

Recreation Activities

Hunting, fishing, and shellfishing are allowed.

Public access to portions of the beach is restricted during the plover and tern nesting seasons. With the exception of service animals, dogs and other pets are prohibited from the beach “from May 1st through September 15th each year, unless otherwise posted” (302 CMR 12.06(12)). Due to the presence of nesting plovers, the closure begins on April 15th.

Infrastructure

Boundary

The park’s north and west boundaries were located and marked in 2017.

Buildings

The Harlow Farmhouse is under lease through DCR’s Historic Curatorship Program. It is managed by the lessee under the terms of the ground lease.

Current maintenance of the Wing House is limited to periodic inspections to ensure that it remains secured. Repairs are made on an as needed basis.

Roads

The road between State Road and the private residence at 1852 State Road is maintained on an as needed basis by park operations personnel from Myles Standish. The deeded right “to pass and repass over a private way leading from the state highway to” 1852 State Road established no obligations for road condition or maintenance by either party (Book 1407, Page 96).

Parking Areas

The parking lot is maintained, on an as needed basis, by park operations personnel from Myles Standish State Forest. The lot and entrance road are plowed by field personnel from Scusset Beach State Reservation. (See Section 7.)

Trails

Personnel from Myles Standish State Forest maintain trails on an as needed basis.

Kiosks and Signs

Personnel from Myles Standish State Forest are responsible for maintaining the kiosk and signs.

4.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Ellisville Harbor State Park. Applied Land Stewardship Zoning recommendations provide general guidance for managing these properties. Future activities and projects should be checked against the zoning map (Figure 4.9.1) for consistency. Management recommendations are all high-priority, and should be addressed as soon as resources become available.

Applied Land Stewardship Zoning (Figure 4.9.1)

The following Land Stewardship Zoning is recommended to guide management and any future development.

Zone 1

The following sections of Ellisville Harbor have been designated Zone 1.

- The sphagnum bog, and associated 100-foot buffer, in the northwest corner of the park.
- Barrier beach Pm-12.
- All of the salt marsh within the park.

Zone 2

- All portions of the park, with the exception of areas identified as Zones 1 or 3.

Ellisville Harbor State Park



Zone 3

The following portions of Ellisville Harbor are currently developed, appropriate for potential future development, or intensively used for recreation. They have been designated Zone 3.

- The Harlow Farmhouse lease area as identified in Plan of land to be leased “Harlow Farm House” Plymouth, MA. December 10, 2009.
- Park entrance road and parking lot, including a 15-foot buffer north of existing parking lot boundary.
- Wing House and the existing area cleared to tree line.
- The beach, from foredune to low tide line. This area is used for sunbathing, fishing, and fishing access.

Significant Feature Overlay

The following Significant Feature Overlays were developed to protect state-listed beach-nesting birds and the park’s historic farmhouse.

- **Rare Shorebird Significant Feature Overlay, with NHESP management guidelines.** This overlay covers piping plover nesting and foraging areas, and, least tern nesting areas. Beach and dune closures within this area may occur as needed and may expand or contract over time to protect resources.
- **Harlow Farmhouse Significant Feature Overlay.** This overlay corresponds to the ground lease area for the Harlow Farmhouse. Management of this area is in accordance with the terms of the ground lease.

Recreation Guidance

The park’s current emphasis on passive trails-based recreation and limited beach use consistent with shorebird protection should continue. Visitors seeking active recreation or developed beach facilities should be directed to Scusset Beach State Reservation, which is located five miles to the south.

Management Recommendations

Fourteen priority management recommendations were developed for Ellisville Harbor State Park. (Table 4.9.1) Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

All recommendations are of equal priority.

Table 4.9.1. Priority recommendations for Ellisville Harbor State Park.

Category	Recommendation	Implementation^a
Natural Resources	Develop a barrier beach management plan for barrier beach Pm-12.	CTR, ECO , POP
Natural Resources	Continue piping plover and tern management activities to protect populations and to ensure compliance with state and federal law.	CTR, ECO , POP
Natural Resources	Consider implementing seasonal beach closures to protect marine mammals and migratory and staging shorebirds from disturbance.	CTR, ECO , POP
Natural Resources	Remove trees and shrubs from former agricultural fields and manage fields, via mowing and/or fire, to restore fields to historic extent and to promote grassland bird habitat.	FOR, POP , PRT, PSO
Natural Resources	Work with local, state, and federal agencies, and stakeholders to support long-term solutions by others to the stability and sedimentation of the Ellisville Harbor inlet and improve the health of the marsh and estuary.	ECO, POP, PRT, WWY , VOL
Cultural Resources	Find tenant or use for the Wing House. If no tenant or use can be found, demolish building in accordance with applicable regulations.	LGL, POP , PSO
Infrastructure	Work with abutter to mitigate for the cutting of trees along north boundary of park in 2016.	FOR, LGL, POP
Infrastructure	Remove stair platform from above the bluff. Secure all trails to the bluff and post area as closed. If possible, reuse platform materials on site.	POP
Infrastructure	Close former parking area along State Road and revegetate.	POP , PSO
Infrastructure	Repair park access road and parking lot, including improvements to road drainage to minimize erosion. Develop and implement a maintenance schedule for the road and lot.	POP
Infrastructure	Review the park's trails, identify needed/desired trails, close confusing and redundant trails, and install appropriate signs and markings.	POP, RFP , VOL
Infrastructure	Repair the trail tread along the sloping segment approaching the beach.	POP , VOL
Infrastructure	Increase visibility between the parking lot, former parking area along State Road, and the former agricultural fields by thinning and limbing trees, and thinning shrubs to increase visibility through the woods in order to reduce depreciative activities.	FOR, POP , RGR, VOL
Visitor Services	Update the Welcome Wayside panel to include a current property map, regulations, and agency information.	POP, VSP

- a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

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Pilgrim Memorial State Park

Pilgrim Memorial State Park is a commemorative landscape built around Plymouth Rock and dedicated to the Pilgrims who settled in the area in 1620, setting the stage for the colonization of New England. The arrival of the Mayflower in Plymouth marked the beginning of great changes for its passengers as well as the Wampanoag people who originally inhabited this area. Huge numbers of people from across the world visit here each year to see the numerous statues, memorials, and markers at the park - the most famous being Plymouth Rock - and to experience the history of the Pilgrim story. Visitors can view Plymouth Rock, visit the Mayflower II, walk up Leyden Street where the Pilgrims built their homes in 1621, look over the harbor from the National Historic Landmark, Cole's Hill, or walk along Town Brook. DCR's nearby National Monument to the Forefathers is a magnificent 81-foot-tall granite monument topped with a 46-foot-tall statue of a female figure 'Faith' surrounded by smaller figures of "Law," "Liberty," "Education," and "Morality," the basic tenets of Plymouth Colony.

Top Activities

- Attending community special events
- Concert-going
- Dog walking, on leash
- Harbor cruises
- Heritage tourism
- Nature study/photography
- Sightseeing
- Walking

Partners & Permittees

- Pilgrim Hall Museum
- Plimoth Plantation
- Tour Boat Concessionaire
- Town of Plymouth

Park Inventory

Date Established: 1920

Landscape Designation
Parkland

Features

- Plymouth Rock and Portico
- Frazier Pier
- Cole's Hill
- Massasoit Statue
- Mayflower II (Plimoth Plantation)
- Amphitheater
- National Monument to the Forefathers
- Scenic views of Plymouth Harbor

Park Size (acres)

Total Area:	19
Forest:	6
Lakes and Ponds:	0
Wetlands:	0

Threatened & Endangered Species

Massachusetts:	1
Priority Habitat (acres)	0
Federal:	0

Cultural Resources

Archaeological:	0
Buildings:	1
Cemeteries:	1
Historic Districts:	2
Landscapes:	4
Objects:	19
Structures:	2
National Register:	2
National Historic Landmark:	1

Roads (miles)

Unpaved:	0
Paved:	0

Trails (miles)

Unpaved:	0
Paved (Walkways):	1

Contact Info:

(508) 747-5360 • 79 Water Street, Plymouth, MA 02360
<https://www.mass.gov/locations/pilgrim-memorial-state-park>



The sun rises over the Plymouth Rock Portico at Pilgrim Memorial State Park. (See Appendix K for photo information.)

SECTION 5. PILGRIM MEMORIAL STATE PARK

5.1. INTRODUCTION

Created in 1920 as part of the Tercentenary celebration, Pilgrim Memorial State Park (Pilgrim Memorial) memorializes lives lost and hardships endured during the beginnings of the Plymouth Colony. The park, located in Plymouth, contains a series of statues, monuments, and structures that commemorate and honor the lives and early struggles of the Pilgrims. Similarly, the National Monument to the Forefathers (Forefathers Monument), completed in 1889, commemorates the labors, sacrifices, and sufferings of the Pilgrims. Adjacent to Pilgrim Memorial is Frazier Memorial State Pier, under the management of DCR's Office of Waterways. A museum, run by Plimoth Plantation, is located on the pier and the Mayflower II, a modern replica of the original Mayflower, is moored here. Locations of these properties are identified in Figure 5.1.1.

These properties are meaningful symbols of American history, with differing interpretations. On the one hand, the properties are inexorably linked with the birth of the United States of America, and as such have been traditionally celebrated as national

icons. However, many Native Americans view the landing of the Pilgrims as one of many initial events that radically impacted their culture and traditional ways of life.

Pilgrim Memorial's physical, political, and regulatory attributes are summarized in Table 5.1.1.

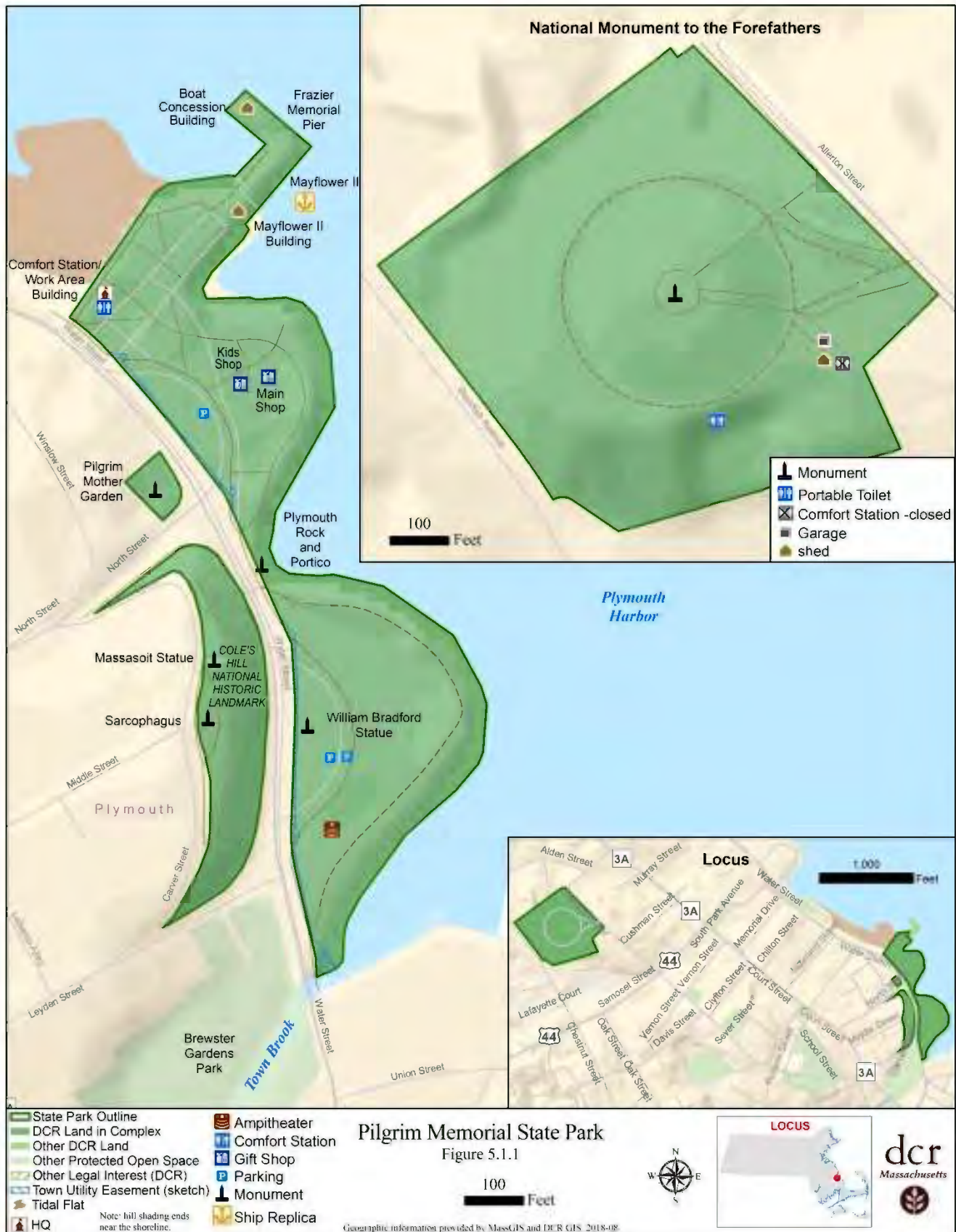
Table 5.1.1. Physical, political, and regulatory settings of Pilgrim Memorial State Park, including National Monument to the Forefathers.

Setting	Name or Metric
Location:	Plymouth
Area (acres)^a:	19.12
Perimeter (miles)^a:	1.71
Landscape Designation(s)^b:	Parkland
Legislative Districts:	
House	First Plymouth
Senate	Plymouth and Barnstable
Regulatory Designations:	
	Local Historic District
	National Historic
	Landmark (Cole's Hill)

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Pilgrim Memorial State Park, including National Monument to the Forefathers



Park Identity. Pilgrim Memorial and the Forefathers Monument are commemorative park landscapes, conceived to tell the story of the Pilgrims, their struggles to survive, and their settlement of a colony that would ultimately evolve into the creation of the United States. Both were established to celebrate and interpret American history and extol the early colonists from the perspective of the Pilgrims' descendants. Today, visitors are also encouraged to consider the significance of the park from the Native Americans point of view.

Location. Pilgrim Memorial is located off a vibrant stretch of Water Street in Plymouth, adjacent to scenic Plymouth Harbor. Surrounding land uses along the corridor include town-owned park land, and tourism-based businesses.

Located approximately 0.75 miles away to the west, the National Monument to the Forefathers is situated in a residential neighborhood off Allerton Street.

Associated Properties. Pilgrim Memorial staff is also responsible for Standish Monument Reservation in Duxbury (see Section 6).

5.2. NATURAL RESOURCES

Physical Features

East of Water Street, the park abuts Plymouth Harbor and accordingly is close to sea level (around 11 to 12 feet above sea level). Plymouth Rock, located within a historic structure known as the Portico, is regularly exposed to tidal flow. Cole's Hill, located on the west side of Water Street, rises to an elevation of 39 feet and is the highest point in Pilgrim Memorial.

The Forefathers Monument is located on a square-shaped parcel upon a highpoint, sometimes referred to as Monument Hill. The monument is situated in a large open area on the top of the hill. Turf slopes away from the monument at approximately 12%, in all directions. This slope is too steep to meet universal accessibility with the existing pathways. Elevations range from 48 feet at the northern edge of the property to 117 feet at the base of the monument.



Portico Building at Pilgrim Memorial State Park. Plymouth Rock is visible behind the black steel grate on the lower level of the Portico. (See Appendix K for photo information.)

Water Resources

There are no surficial water resources in either Pilgrim Memorial or Forefathers Monument. Groundwater resources include a medium-yield aquifer located beneath Pilgrim, and a high-yield aquifer located beneath the Forefathers Monument, noted in Table 5.2.1.

Table 5.2.1. Water resources of Pilgrim Memorial State Park.

Water Resource	Name or Metric
Watershed:	South Coastal
Aquifer:	
Medium Yield (acres)	7.05
High Yield (acres)	10.67
Rivers and Streams (miles)	0.00
Vernal Pools	
Certified (#)	0
Potential (#)	0
Wetlands (acres)	0.00
Lakes and Ponds (acres)	0.00



Flooded vault containing Plymouth Rock during a high storm tide, January 4, 2018. (See Appendix K for photo information.)

As a coastal property, Pilgrim Memorial is susceptible to 100-year, and 500-year storm events, impacts from major storms including hurricanes, and sea-level rise. (Table 5.2.2 and Figure 5.2.1) Hurricane inundation is the greatest threat, with a Category 2 hurricane modeled to inundate nearly 74% of land area in the park. The effects of a three-foot sea level rise scenario would completely inundate Plymouth Rock and the outer edges of the waterfront park. Note that Table 5.2.2 does not include land area at the Forefathers Monument, as no impacts are predicted from flooding, due to its higher elevation and distance from the coast. Still, hurricane force winds could threaten the monument.

Table 5.2.2. Potential impacts of flooding, hurricane inundation, and sea-level rise to Pilgrim Memorial State Park, not including National Monument to the Forefathers.

Type of Impact	Acres	%
Flooding:		
100-year Storm	0.75	8.88
500-year Storm ^a	0.75	8.88
Hurricane Inundation:		
Category 1 Storm	1.21	14.32
Category 2 Storm ^b	6.22	73.61
Category 3 Storm ^b	6.79	80.36
Category 4 Storm ^b	6.96	82.37
Sea Level Rise (2050):		
Intermediate and Intermediate-High scenarios ^c	1.17	17.99
High and Extreme scenarios ^c	1.46	21.42

- a. Cumulative value; includes 100-year storm impacts.
b. Cumulative value; includes impacts of all lower category storms.
c. As identified in Table 1 of DeConto and Kopp (2017).

Rare Species

State-listed Species

There is one known state-listed species (Table 5.2.3). The least tern forages in near-shore waters, including those just off the tip of Frazier Pier.

Table 5.2.3. State-listed species of Pilgrim Memorial State Park, as identified by the NHESP.^{a, b}

Species ^{a, b}	Type ^c	MESA ^d
Least tern	B	SC

- a. Presented alphabetically, by common name.
b. Fact sheets are available at: <https://www.mass.gov/service-details/list-of-vertebrates>.
c. Types of state-listed species include: A = Amphibian; B = Bird; I = Insect; P = Plant; and R = Reptile.
d. Status of species listed under the Massachusetts Endangered Species Act (MESA): E = Endangered, SC = Special Concern; and T = Threatened.

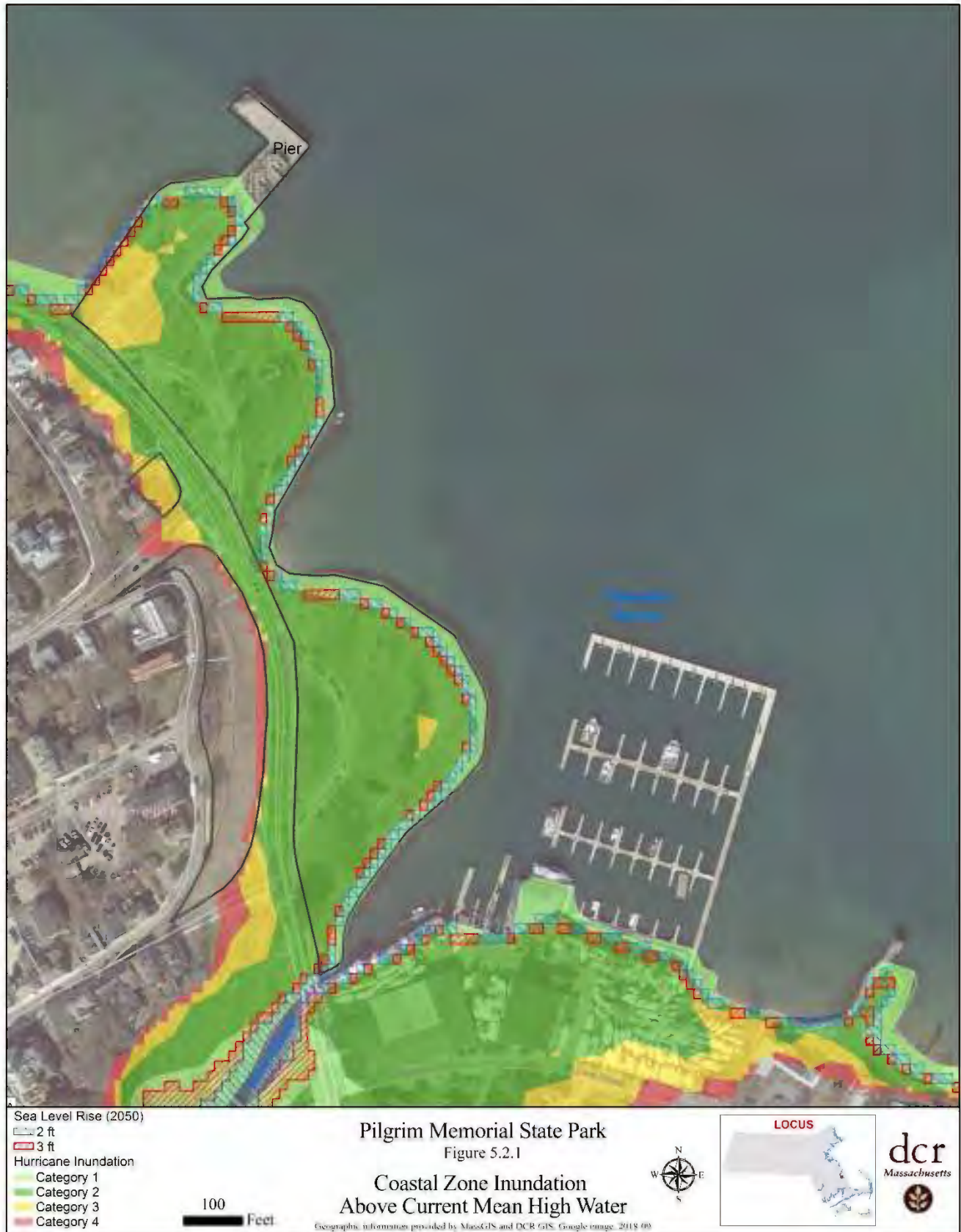
Priority Habitat

There is 0.12 acres of Priority Habitat. It is located at the northern tip of Frazier Pier.

Vegetation

There are no known comprehensive surveys of the flora of Pilgrim Memorial. Most of the plants in the park were installed as part of the park landscaping. Areas east of Water Street near Plymouth Harbor contain large trees including coniferous (pine, cedar, spruce) and deciduous (maple, oak, locust) trees, as well as atop Cole's Hill.

Forefathers Monument once contained a view to the ocean, a significant feature that demonstrates a relationship to the Pilgrim's journey from Holland in 1620. Previous planning documents noted the existence of Washington hawthorns, crabapple trees, yew trees, and juniper trees in the designed landscape. The surrounding forest to the south of the monument contains a mixture of native, non-native, and invasive trees, such as beech, maple, cherry, birch, linden, spruce, black locust, and pine. The west/north section of the site contains older trees including oak, thought to date from the 1940s through 1960s (DCR 2006).



Invasive Species

Eight species of invasive or likely invasive plants have been documented (Table 5.2.4). Many of these species were observed in the south to southwest portion of the Forefathers Monument property, near the park's leaf and brush piles.

Table 5.2.4. Known invasive and likely invasive plants of Pilgrim Memorial State Park, including the National Monument to the Forefathers.

Species ^a	Property ^b	Status ^c	Source ^d
Black locust	F	I	1, 2
Common barberry	F, P	L	1, 2
Japanese knotweed	F	I	1, 2
Multiflora rose	F	I	2
Norway maple	F	I	1, 2
Oriental bittersweet	F	I	2
Sycamore maple	F	I	1, 2
Winged euonymus	F	I	1, 2

- Presented alphabetically, by common name.
- F = Forefathers Monument; P= Pilgrim Memorial.
- Plants are classified as Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).
- Information in this table was obtained from the following sources:
 - DCR (2006).
 - Gregory and Stabile (2016).

Natural Communities

No natural communities have been documented or observed.

Wildlife

No comprehensive surveys have been conducted; as a result, there is little information specific to the park or monument. However, Pilgrim Memorial is identified as a birding “hotspot” by eBird, and as of February 2021, 102 species have been recorded (eBird, 2012). Many of these birds are gulls, and wintering sea ducks and loons. A variety of suburban and urban birds (e.g., rock pigeon, American crow, American robin) also use the park's lawns, shrubs, and trees. This information is preliminary and provides an incomplete picture of the overall bird diversity.

5.3. CULTURAL RESOURCES

This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An overview of significant events in the history of Pilgrim Memorial, including the Forefathers Monument, is presented in Table 5.3.1. Cultural resources are identified in Table 5.3.2.

Archaeological Resources

Pilgrim Memorial. The Plymouth waterfront area has been occupied by indigenous people for thousands of years. Numerous pre-Contact sites, some dating back to as early as the Late Archaic Period (6,000 years Before Present), are documented within a mile of Pilgrim Memorial. Many have been identified through systematic archaeological surveys permitted through the Commonwealth. Despite land-use modifications and intensive occupation, a variety of significant intact archaeological sites are likely to be present.

Land north of the Portico was created during the late 19th century for use as a wharf and for waterside industrial storage. The fill material most likely came from nearby and consisted of contemporary waste. Pre-Contact site potential is considered extremely low. However, historic period intact bulkheads or other wharf features, building foundations, or architectural debris may survive in the area. These features are likely to survive under several feet of non-significant fill deposits.

South of the Portico, the land was created during the late 18th and 19th centuries as part of the waterfront wharf development. The fill material most likely came from nearby and consisted of contemporary waste. Pre-Contact site potential is considered extremely low. The potential for uncovering historic period intact cultural resources is high, but only along the top of the revetment.

Table 5.3.1. Significant events in the history of Pilgrim Memorial State Park, including National Monument to the Forefathers.

Year(s)	Events
1620	Bound for the Hudson River in the <i>Mayflower</i> , tradition states 102 Pilgrims landed ashore and settled at a location next to Town Brook, near present day Pilgrim Memorial State Park.
1621	Approximately half of the Pilgrims die within the first year and are buried on present-day Cole's Hill.
1741	Thomas Faunce (1647–1745) identifies the present location of Plymouth Rock as the first landing site of the Pilgrims. The rock is later broken in half when moving it to nearby Town Square.
1820	The Pilgrim Society, an organization that would become central in advocating and celebrating the Pilgrims' legacy, is founded.
1849	The first cornerstone is laid for the National Monument to the Forefathers. The project is designed by Hammatt Billings and funded by the Pilgrim Society through contributions.
1867	A Gothic Revival canopy, also designed by Hammatt Billings, is completed. The canopy is constructed around Plymouth Rock. Demolished in 1920, stone shells that adorn the top of the canopy are retained and later placed at the National Monument to the Forefathers. The granite stairs up to Cole's Hill are also constructed at this time.
1880	The top and bottom halves of Plymouth Rock are mortared together at its present location, and "1620" is engraved on the top of the rock.
1889	Construction of the National Monument to the Forefathers is completed.
1917	The Plymouth Tercentenary Commission issues a report that recommends land takings and construction of a memorial hall and monuments along Water Street at Cole's Hill in preparation for the 300-year anniversary of the landing of the Pilgrims.
1919	Chapter 187 of the Acts of 1919 authorizes the Plymouth Tercentenary Commission to acquire "lands, wharves and buildings" in fee, by methods including eminent domain, to create the present-day Pilgrim Memorial State Park.
1920	The Pilgrim Society transfers the land, buildings, and structures that constitute the present-day Pilgrim Memorial State Park to the Commonwealth of Massachusetts.
1921	Plymouth Portico, a Neo-Classical Revival structure designed by the famous architecture firm McKim, Mead, and White is completed. Other features to commemorate the Pilgrims, including the Sarcophagus (1921), Massasoit Statue (1921), and Pilgrim Mother Fountain (1925), are also added.
1924	The Plymouth Tercentenary Commission transfers property along Water Street to the Massachusetts Department of Public Works, Division of Waterways and Public Lands. The transfer is reaffirmed by Chapter 264 of the Acts of 1925, and M.G.L. Chapter 91, Section 2A.
1965	Chapter 363 of the Acts of 1965 names a pier under construction as Frazier Memorial State Pier, "in memory of James T. Frazier, a former member of the Board of Selectmen." The pier later houses a museum and the Mayflower II, a replica of the Mayflower.
1968	The Town of Plymouth votes to reject a National Park Service proposal to acquire the property and adjacent lands (13 acres in total) to create Plymouth Rock National Memorial.
1970	The Portico is listed on the National Register of Historic Places.
1974	The National Monument to the Forefathers is listed on the National Register of Historic Places.
1976	The William Bradford statue is completed, fulfilling the intended design of the 1921 plan.
1987	A perpetual preservation restriction that runs with the land is placed on the National Monument to the Forefathers. The restriction is administered by the Massachusetts Historical Commission.
1993	The Pilgrim Society conveys Cole's Hill to the Commonwealth of Massachusetts.
2001	The Pilgrim Society conveys the Forefathers Monument and its grounds to the Commonwealth of Massachusetts.
2008	A preservation project on the Portico is completed. The project replaced the roof and drain system, ceiling tiles, and cleaned and protected the internal steel frame through installation of a cathodic protection unit to prevent rusting of the internal steel frame.
2010	Chapter 263 of the Acts of 2010 authorizes DCAMM and DCR to lease Pilgrim Memorial State Park to Plimoth Plantation for a term of up to 20 years.
2015	Chapter 226 of the Acts of 2016 authorizes conveyance of three easements to reconstruct and maintain infrastructure for pedestrian access and park aesthetics along Water Street and the Town Brook bridge.
2017–2019	Various rehabilitation projects both by the Town and DCR commence in preparation for the 2020 celebration. As part of the Pilgrim Memorial 2020 Improvements project, DCR rehabilitates the Sarcophagus, Massasoit and Bradford statues, and Plymouth Rock.

Table 5.3.2. Cultural resources of Pilgrim Memorial State Park, including National Monument to the Forefathers.

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
Plymouth Historic District	LHD	17 th –19 th c.	-	-	-	-	PLY.AS	-
Plymouth Village Historic District	NRHD	17 th –19 th c.	-	-	-	-	PLY.AT	-
Pilgrim Mother Garden	LA	1925	1	H	-	-	PLY.947	-
Pilgrim Mother Fountain	OB	1925	2	H	-	-	PLY.947	1
Concrete benches	OB	1925	2	H	-	-	-	1
Cole's Hill	LA	1922–1960	-	H	-	-	PLY.AW	1
Cole's Hill Burial Ground	CM	1620	-	H	-	-	PLY.AW	2
(<i>National Historic Landmark</i>)								
PA Society of New England Women Bench	OB	1920	2	H	-	-	-	1
James Cole plaque	OB	1917	1	H	-	-	-	1
Cole's Hill steps	OB	ca. 1859	1	H	-	-	-	1
Light post	OB	Unknown	1	H	-	-	-	1
Massasoit statue	OB	1921	1	H	-	-	PLY.942	1
Society of the Daughters of Colonial Wars Bench	OB	1927	2	H	-	-	-	1
Pilgrim Sarcophagus	OB	ca. 1921	1	H	-	-	PLY.941	1
National Historic Landmark plaque	OB	1961	1	H	-	-	-	1
Pilgrim Memorial State Park	LA	ca. 1920	-	H	-	-	PLY.949	1, 3
Frazier Memorial State Pier	ST	1965	3	-	-	-	-	-
Frazier Memorial State Pier plaque	OB	1966	2	-	-	-	-	1
Main Shop ⁱ (i.e., Book Store) - 67 Water Street	BU	ca. 1955	3	-	S	E, H, I, W(S)	-	-
Historic Plymouth Rock sign	OB	ca. 1920	1	H	-	-	-	1
Plymouth Rock (<i>National Register</i>)	OB	1620	1	-	-	-	PLY.940	1,4
Plymouth Rock Portico - 57 Water Street	ST	1921	1	H	-	E	PLY.940	1
William Bradford statue ^j	OB	1921/1976	1	H	-	-	PLY.948	1
National Monument to the Forefathers	LA	1889	-	H	-	-	PLY.950	1, 5
National Monument to the Forefathers	OB	1889	3	H	-	-	PLY.950	1
Cole's Hill burial marker ^k	OB	-	-	M	-	-	-	1
Granite posts	OB	ca. 1896	-	H	-	-	-	1
Granite bollards	OB	ca. 1896	-	H	-	-	-	1
Granite shells	OB	ca. 1896	-	H	-	-	-	1

- a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.
- b. Date of construction provided, when known.
- c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.
- d. Integrity is a relative assessment of the condition of a resource's retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.
- e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.
- f. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.
- g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.
- h. The following guidance is offered for the ongoing maintenance of these cultural resources:
1. Refer to Historic Landscapes – Built Features BMP (DCR n.d.i).
 2. Refer to Cemeteries and Burial Grounds BMP (DCR n.d.l)
 3. Refer to Archaeological Features BMP (DCR n.d.j).
 4. Refer to Removing Graffiti from Historic Properties BMP (DCR 2015b)
 5. Refer to Vegetation in Historic Landscapes BMP (DCR n.d.k)
- i. Infrastructure located on DCR property, but not owned or controlled by the DCR. Its condition is not assessed
- j. The design was completed in 1921, but the statue itself was not completed until 1976 due to a lack of funding. It is considered a historic resource.
- k. Relocated from Cole's Hill; in storage at Forefathers Monument.

Cole's Hill is a small promontory 35–40 feet above the waterfront area; it has been substantially modified from its natural conditions. The entire hilltop has a very high sensitivity for both Native American and post-Contact cultural resources and the archaeological components have a high level of integrity and research potential. This was most likely the location of a large village site (spanning a time range of over 6,000 years). Encountering unmarked human burials or remains on Cole's Hill must be considered a distinct possibility.

Pre-Contact site potential of Cole's Hill is very high if undisturbed deposits remain. During a 1999 archaeological survey an intact pre-Contact feature (spanning a time range of over 6,000 years) was identified, indicating that ancient sites and features may remain in situ even in areas that have seen extensive development over the past 400 years. Historic material, including an intact house foundation, has been found on Cole's Hill in great quantity during all archaeological campaigns. During the 1999 campaign, intact post-Contact resources were found within 8 inches of the ground surface, while intact pre-Contact resources were found within 19.7 inches of the surface. Further testing in 1999 did not recover additional intact Native deposits but did recover lithic flakes and tools in historic period contexts including one possible piece of Ramah chert. The presence of Ramah chert, from Labrador, Canada would be very significant as this type has not previously been found as far south as Massachusetts.

From the document *Notes on Cole's Hill* (Belcher 1954): "Some years ago, probably about 1930, it was necessary to re-set some of the stone steps at the bottom of the flight leading from the top of the hill. When they were removed, a container was found within which were various papers, evidently placed there when the steps were first constructed. These papers, together with some additional newspapers current at the time, were placed in a new container and replaced under the steps when re-set." The steps may have been built at the same time as the first Portico in 1859; however, the Beers Atlas map shows the stairs there by 1874. During construction to reset the lower course of stairs in 2018, a metal container set on a concrete block was found. The box was heavily waterlogged, oozing the remains of whatever was stored inside. The Pilgrim Society, who placed the box there originally, took the box for

conservation and to determine if any artifacts could be saved.

National Monument to the Forefathers. This site sits atop a small promontory to the northwest of the Plymouth waterfront. Prior to the building of the monument extensive grading of the parcel, landscaping efforts, and modern utility upgrades destroyed any subterranean features. Although no archaeological sites are currently documented within the limits of the parcel, the western portion is considered archaeologically sensitive and may contain intact ancient sites and historic material. A number of systematic surveys have been conducted in areas around the park and numerous pre-Contact and historic sites have been located and recorded.

Historic Resources

Pilgrim Memorial's historic (i.e., post-Contact) resources are predominantly associated with the Tercentenary celebration in 1920, that celebrated the 300-year anniversary of the landing of the Pilgrims in Plymouth Harbor. The burial ground of Cole's Hill (1620s) and the Forefathers Monument (1889) are the exceptions. In addition, most of the individual historic resources are objects, such as sculptures and memorials.

Historic Landscapes

Historic landscapes are places that, through their physical characteristics and features, reflect the interaction of human beings with the environment (DCR, 2005). Pilgrim Memorial encompasses a number of important historic landscapes, described below along with their associated historic resources.

Cole's Hill. Overlooking Plymouth Harbor, Cole's Hill's importance is tied to its use by indigenous people for thousands of years and as an interment site for approximately 50 Pilgrims who perished during the first winter of 1620–21. Cole's Hill is a National Historic Landmark (designated in 1961) that contains a series of objects associated with honoring the Pilgrim's struggles and is the predominant landmark of the Plymouth settlement (Rettig 1976). These objects include the Pilgrim Sarcophagus (1921), a sealed granite ossuary erected by the Mayflower Society and containing the remains of the Pilgrims unearthed from Cole's hill. A dedication and the names of those buried there are spelled out in bronze lettering on the Sarcophagus.

The granite steps leading up the hill from Water Street are one of the oldest features, dating to ca.1867. At the top of the stairs are a shield shaped bronze plaque with the 1917 dedication to James Cole, and a historic light post. The bronze plaque was conserved in 2017. Two historic memorial benches face the ocean, one from the Pennsylvania Society of New England Women (1920), and the other from the Society of the Daughters of Colonial Wars (1927).



Massasoit statue. (See Appendix K for photo information.)

Another central feature of Cole's Hill is the bronze Massasoit statue (1921) designed by noted Massachusetts sculptor Cyrus Dallin (1861–1944). The 10-foot-tall sculpture of the sachem perched atop a large rock that honors the Wampanoag leader “of great esteem” credited with assisting the Pilgrims in surviving the first winter. Cole's Hill is used by Native Americans on Thanksgiving to commemorate the National Day of Mourning. A modern bronze plaque entitled “National Day of Mourning” is mounted to a boulder near Massasoit.

Other objects on Cole's Hill include a bronze plaque describing the “Gurnet Fortifications” and the 1966 National Historic Landmark plaque.

The Sarcophagus was cleaned and lettering restored in 2016/2017. The bronze plaques and Massasoit were cleaned and conserved in 2017. A new luminaire was placed on top of the historic pole, and lighting restored in 2019.

Pilgrim Memorial State Park. Set along Plymouth Harbor in a former working wharf district, the area was transformed in 1916–1920 to construct the state park that it is today. Plymouth Rock (1620), a large boulder of Dedham granodiorite that was pulled from a former wharf (DCR 2017) is placed within the tidal zone to show a connection to the supposed landing spot of the Pilgrims. The rock is surrounded by the Plymouth Portico (1921), a Neo-Classical Revival structure that reflects a desire of the era to communicate permanence and strength in national monuments (DCR 2008). In 2008, the Portico was rehabilitated to install a new rubber roof and copper drains, restore the original ceiling tile system, clean rust from the internal steel beams, and install cathodic protection to prevent future rust (DCR 2008). The Pilgrim Memorial 2020 Improvements included repointing and stone repairs on the structure, restoration of the pebbled flooring, and replica oval medallions depicting the Mayflower installed on the railing. Also within the park is the William Bradford Statue (designed in 1921) that was part of the original Tercentenary Commission park design; it was not completed until 1976 due to a lack of funding. The statue was conserved in 2017. The park also contains the Frazier State Pier, which is solely used for recreational /educational purposes and remains under the management of DCR.

Pilgrim Mother Garden. Completed in 1925 at the corner of North and Water Street, the Pilgrim Mother Garden contains a fountain sculpted by C. Paul Jennewin (1890–1978). Constructed with marble from Tennessee donated by the Daughters of the American Revolution, the fountain depicts an archetypical Pilgrim woman, rather than a specific individual. Inscribed on the back of the monument are the names of 29 Pilgrim children and adults who were known at the time to have journeyed across the Atlantic Ocean on the Mayflower. Since that time, research has uncovered the existence of one

additional Pilgrim woman whose name was not listed (DCR 2017).

The fountain is operable, with water flowing from the top of the central obelisk, into an upper basin where it overflows into the lower basin, set off from the path by a low stone wall. A conservation assessment in 2017 recommended repairs and cleaning of both the fountain and the basin. In 2019 these conservation activities took place, thanks to a \$10,000 grant from the Daughters of the American Revolution.

Surrounding the fountain is a formal, symmetrical design of privet hedge and parterres of perennial plantings. Circular pathways follow the curve of the fountain basin and connect to a series of orthogonal pathways at the outer edges of the garden. A central path runs from the sidewalk on Water Street, up two large steps, and straight up to the fountain edge. Paths are punctuated by historic concrete benches. Crabapple trees flank the rear of the garden, in front of a stone retaining wall. In 2018 the Garden was rehabilitated to improve accessibility. Pathways were paved, the front step from the sidewalk eliminated, and new accessible paths installed. The hedge, lawns and plantings were also restored.



Fountain at Pilgrim Mother Garden. (See Appendix K for photo information.)

National Monument to the Forefathers. The monument consists of a 35-foot octagonal base containing four figures (Education, Law, Liberty, and Morality), and marble bas-reliefs of four seminal events for the Pilgrims (the departure of the Pilgrims from Holland, signing of the Mayflower Compact, the landing of the Mayflower, and the first treaty with the Wampanoag). Atop the base is a 46-foot statue of Faith, who is holding a Bible in her left

hand and pointing to the sky. The monument is said to be the largest freestanding solid granite structure in the world (DCR 2006). The marble bas-relief panels were conserved in 2006.



Marble bas-relief scene depicting the signing of the Mayflower Compact. (See Appendix K for photo information.)

Design and construction of the monument, along with the Plymouth Rock canopy, was a stated purpose of the founding of the Pilgrim Society in 1820 (Preservation Technology Associates, Inc. 2003). An impetus for the project may have been the sense of an eroding national unity in the decades before the Civil War (O’Gorman 1995). The Society undertook an intensive fundraising effort for the project in 1853, for which it hired Hammatt Billings to design, along with the first Plymouth Rock canopy. The first cornerstone was set in 1859. The original design showed a 153-foot structure, comprising of a 70-foot Faith figure resting on top of an 83-foot pedestal with an observation pedestal set at approximately 80-feet (Preservation Technology Associates, Inc. 2003). However, the Civil War and the inflationary post-war impacts forced Billings to half the size of the monument in a design change accepted by the Pilgrim Society in 1874 (Stoddard 1972). The monument was completed in 1889, for a total cost of \$150,000. The site traditionally had views to Plymouth Harbor; however, these views are no longer visible due to vegetation on adjacent properties.

The designed landscape consists of a graveled circular road that circumnavigates the monument, before forking at a grassed triangle that leads to the site’s driveway off Allerton Street. (See Figure 5.1.1) Between the driveway and monument is a lawn that slopes up to the monument, with trees

planted behind the monument. Two linear pathways connect the driveway to the monument. The original design included a third pathway that connected the north section of the monument to the Morality figure. Along the parcel's adjoining edge with Allerton Street is a historic iron fence, with granite posts. The driveway is bounded by two gate posts, comprised of mortared granite blocks over a base stone, and topped with a granite capstone.



National Monument to the Forefathers, as seen from entrance road off Allerton Street. (See Appendix K for photo information.)

Overall, the monument is in fair condition, with excessive corrective maintenance and repair required. Needed repairs include injecting small cracks, cleaning granite and resetting loose stones, repointing all joints, and making repairs to the secondary figures (Law, Morality, Liberty, and Education). The site is also in need of some repairs, including the concrete steps and granite stairs from Allerton Street to the Dedication Panel. Pathways that run from the circular driveway to the Morality and Liberty statues should be rehabilitated or recreated, to fulfill the original design intent.

In 2017 DCR and the Pilgrim Rock Foundation partnered to repair the chain on Liberty and the missing fingers on Law. The bases for the secondary figures were also repointed.

The National Park Service added the monument to the National Register of Historic Places in 1974. The Pilgrim Society donated the property to the Massachusetts Department of Environmental Management (now DCR) in 2001.

Additional information on this monument may be found in DCR (2006).

5.4. RECREATION ACTIVITIES

Neither Pilgrim Memorial nor Forefathers Monument contains significant recreational resources, such as day-use facilities or playing fields. The following authorized activities take place on the property:

- Attending concerts/festivals
- Dog walking, on leash
- Heritage Tourism
- Nature Study/photography
- Walking

Pilgrim Memorial holds special events such as concerts from an amphitheater opened in 2014. The amphitheater and surrounding grounds host ongoing concert series, festivals (e.g., Plymouth Waterfront Festival), cultural bazaars, and other events that attract thousands of people annually. A large annual Thanksgiving festival takes place every November. These events are often organized by the Town of Plymouth. In 2018, the event space near the amphitheater was restored to install irrigation lines, new grass, and other landscaping.



The annual waterfront festival draws thousands to Pilgrim Memorial and nearby Water Street. (See Appendix K for photo information.)

Geocaching, which is neither authorized nor unauthorized on DCR property, takes place in the park. As of February 2021, there were two caches, both at Pilgrim Memorial State Park.

5.5. INFRASTRUCTURE

Property Boundary

Pilgrim Memorial State Park

A map of the park may be found in Figure 5.1.1. The park consists of three sections. The majority of the park (6.64 acres) that contains the Portico, various monuments, and Frazier State Pier, is located east of Water Street. This section is generally bounded by Plymouth Harbor (to the north and east), Town Brook to the south, and Water Street to the west. The Cole's Hill parcel contains 1.32 acres and is bounded by North Street to the north, Water Street to the east, Leyden Street to the south, and Carver Street to the west. An iron rail fence set into granite bollards marks the property line along North and Carver Streets. A small parcel (0.14 acres) that contains the Pilgrim Mother Fountain is bounded by gift shop property to the north, Water Street to the east, North Street to the south, and an adjacent residential/commercial property to the west by a retaining wall. These boundaries are generally well-marked and easily identified in the field.

West of the bathroom building a stairway leads from the Water Street sidewalk down to a rocky beach of unknown ownership. A plan from April 1935 shows Commonwealth of Massachusetts ownership of the intertidal land north of the Water Street seawall. This is the only known reference that shows Commonwealth ownership of this area; additional research is needed to determine ownership.

In 2016, DCR conveyed two easements (totaling 5,262 square feet) to the Town of Plymouth to allow installation and maintenance of sidewalks, ramps and other infrastructure related to their Water Street Promenade project. The authorizing legislation (Chapter 226 of the Acts of 2015) also allows the Town to construct, repair, and maintain improvements related to the Town Brook Bridge over Water Street.

National Monument to the Forefathers

This parcel (10.67 acres) is bounded by residential parcels to the north and south, Allerton Street to the east, and Standish Avenue to the west. In 2016, DCR attempted to locate the monuments that mark the property boundaries. The east and west boundaries are well marked, but the north and south boundaries adjacent to the residential properties

could not be located. There is a potential encroachment on the southern property boundary, but it will need to be surveyed to verify.

In 1966, the Pilgrim Society conveyed an easement to New Bedford Gas & Edison Light Company and the New England Telephone & Telegraph Company and successors for the installation and maintenance of electric and telephone transmission poles, wires, and other fixtures (Book 3310, Page 339). The easement is located "at the southwesterly sideline of Allerton Street adjacent to the Grantor's southerly property line." There is no known plan showing the exact boundaries of the easement.

Buildings and Structures

The non-historic buildings and structures of Pilgrim Memorial, including the Forefathers Monument, are listed in Table 5.5.1.

Pilgrim Memorial State Park

Most of the buildings are concentrated near or on Frazier State Pier, as shown in Figure 5.1.1. Some are owned and managed by DCR, and others serve as space for outside vendors, including the Plimoth Plantation Mayflower II building. There are no septic systems associated with these buildings, as those that require wastewater disposal use public sewer. Below are descriptions of buildings owned and managed by DCR.

Comfort Station/Work Area. Constructed in the Cape style with a modest unornamented exterior, the building provides toilet facilities for park users. It also contains a small work area for park staff and has a small mechanical room for the building. The building uses public water and sewer. There is no dedicated workspace for interpretive staff in the building, which lacks adequate space to accommodate staff. In 2019, the building was rehabilitated in anticipation of the Plymouth Quadricentennial. Improvements included installation of a replacement roof and replacement siding, installation of an additional window in the men's room, installation of low-flow water fixtures, installation of energy efficient water heater and LED lights, installation of an outdoor water fountain and bottle fill station, and modification of floors and thresholds to improve accessibility. The footprint and floorplan remained the same.

Table 5.5.1. Non-historic buildings and structures of Pilgrim Memorial State Park, including National Monument to the Forefathers.

Infrastructure	Date ^a	Condition ^b	In Use ^c	Utilities ^d
Pilgrim Memorial State Park				
Comfort station/Work area building - 79 Water Street	1998	2	Y	E, H, I, T, W
Concessionaire building - Harbor Cruises ^e - 77R Water Street	1970	3	Y	E, P
Mayflower II building ^e - 77 Water Street	1982	-	Y	E, H, I, W
Kids Shop ^e (i.e., Book Store) - 71 Water Street	1990	-	Y	E, H, W
Amphitheatre	2014	1	Y	E
National Monument to the Forefathers				
Garage	ca. 1969	2	Y	E
Shed	2014	2	Y	-
Restroom	ca. 1969	5	N	E, W

- Date of construction provided, when known.
- Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset Management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.
- N = No; S = on a seasonal basis; U = Unknown; and Y = Yes.
- The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.
- Infrastructure located on DCR property, but not owned or controlled by the DCR. Its condition is not assessed.



Comfort Station/Work Area Building. The work area entrance is located behind the building, around the right corner. (See Appendix K for photo information.)

Amphitheater. The amphitheater, constructed in 2014, was designed and constructed by the Town of Plymouth for public concerts, pursuant to an agreement with DCR. The structure, located at the southern section of the park along the waterfront, is available for rental by the public. Concert attendees sit on a grassed lawn, which is frequently damaged by heavy foot traffic. This structure replaced a mobile stage and has attracted increased use.



Pilgrim Memorial's amphitheater serves as the focal point for artistic and cultural activities in the park. (See Appendix K for photo information.)

National Monument to the Forefathers

Maintenance Garage. The property contains a small one-story maintenance garage that DCR personnel use for storage of equipment. The building was originally constructed in the 1960s as a gift shop, when the Pilgrim Society owned the property. DCR repurposed the space after acquiring the property in 2001 (DCR 2006). The space is approximately 400 square feet and is sided by wood clapboards and topped by a front gable, asphalt shingled roof.

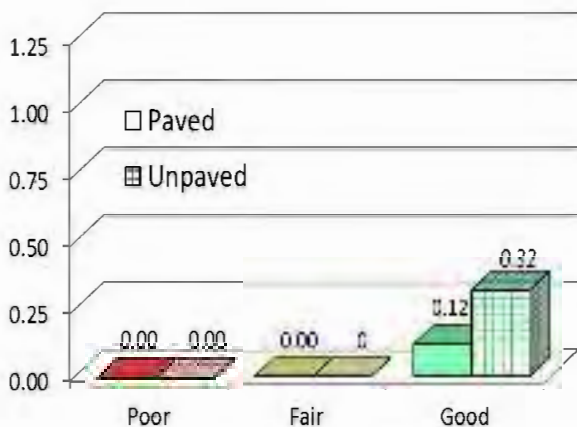
Maintenance Shed. Behind the garage is a small modular maintenance shed that was installed in 2014. The shed is used to store additional maintenance equipment and tools.

Bathroom Building. Between the maintenance shed, and the southern property line is a defunct bathroom building. The building is tied to the town's water and sewer system but has not been operational since DCR acquired the property in 2001.

Roads

There are 0.44 miles of roads, the conditions of which are summarized in Figure 5.5.1. The 2006 RMP for the Forefathers Monument (DCR 2006) noted that the circular access road requires significant effort to keep it properly maintained, with material washing to low spots creating divots in the road.

Figure 5.5.1. Condition and length (in miles) of roads at Pilgrim Memorial State Park.



Parking

The parking areas of Pilgrim Memorial are identified in Table 5.5.2. These numbers reflect changes in parking configuration made under the 2018 landscape restoration project.

Table 5.5.2. Number of public parking spaces, by location and type, at Pilgrim Memorial State Park, including National Monument to the Forefathers.

Location	HP	Restricted	Other	Total
Pilgrim Memorial State Park^a				
North Pull-in	2	6 ^b	0	8
South Pull-in	2	0	17	19
National Monument to the Forefathers				
	0	0	54 ^c	54
Total	4	6	71	81

a. Number of spaces is based on pavement markings.

b. Reserved employee spaces for DCR (2), Plimoth Plantation (2), and Captain John Boat (2).

c. Number of spaces is based on the number of potential 18-foot-long spaces. Estimate assumes a single row of vehicles, parked parallel to travel lane, around circumference of roadway between pathways to monument. Estimate also assumes provision of parking for four buses.

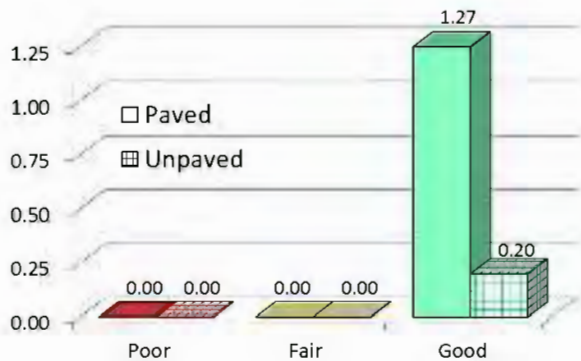
Pilgrim Memorial State Park. Parking is limited to spaces within two semicircular roads (i.e., pull-ins) off Water Street. The south pull-in allows two-hour parking on both sides of the road; the north pull-in is primarily for employee parking and tour bus drop-offs. Vehicular parking and idling are not allowed in the drop off zone, although cars are often parked illegally and buses frequently live park while riders visit the site. Accessible parking is available in both pull-ins. Additional street parking is available along Water Street near the park and five municipal parking lots are located within one-quarter mile. However, parking is often difficult to locate in this area.

National Monument to the Forefathers. Parking is provided along the edge of the gravel access road. There are no designated accessible spaces for cars or vans. There is no designated parking for tour buses.

Trails

Conditions of trails are shown in Figure 5.5.2. Approximately 1.27 miles of paved trails are located in Pilgrim Memorial, and 0.20 miles of unpaved trails are located in the Forefathers Monument. The 2018 Landscape Rehabilitation project at Pilgrim Memorial replaced all trails and sidewalks, except for a small area near Frazier Pier which was in good condition. All new paths are accessible.

Figure 5.5.2. Condition and length (in miles) of official trails at Pilgrim Memorial State Park, including National Monument to the Forefathers.



Park staff have noted that Cole's Hill access is difficult for some, as alternate routes to the steep stone steps opposite the Portico building are limited.

National Monument to the Forefathers. The Forefathers Monument contains two sets of stairs (one concrete, one granite) along a pathway that leads from the Allerton Street to the Dedication Panel at the Monument. The first steps, made of concrete, were identified in the 2006 RMP as being uneven and unsafe, with a distended lowest step that creates a tripping hazard. The second staircase was also identified as being unsafe due to displaced steps and the uppermost tread is broken. These conditions remain.

The current site design lacks a universal accessible pathway to the monument.

Kiosks and Signs

Pilgrim Memorial State Park. There are three identification signs. The first is a Main Identification Sign; it is located in a grassed median off the east side of Water Street. The second is a Cantilevered Identification Sign for Frazier Memorial State Pier; it is located just south of the bathroom building. The third sign, an identification sign for the Amphitheatre, is located along a paved path to the east of that structure. All of these signs follow the DCR graphic standards.

There is a three-sided kiosk in the plaza in front of the Bathroom Building One side contains orientation information that notes destinations in the park and contains a map to help visitors plan their visit. Another side contains a sign by the Plymouth

County Convention and Visitors Bureau that shows other attractions within the town and county, including Ellisville Harbor State Park (Section 4) and Standish Monument Reservation (Section 6). The third side is used by park staff to highlight upcoming interpretive events, within the park and complex. The kiosk is framed using wood and is decorated with a three-sided shingled roof.

On Cole's Hill are two signs that advertise local attractions. To the right of the stairs up Cole's Hill from Water Street is a sign that advertises the Pilgrim Hall Museum. At the corner of Water and North Street is another sign that advertises the Spooner House at 27 North Street (operated by the Plymouth Antiquarian Society) and the Mayflower Society House at 4 Winslow Street (operated by the General Society of Mayflower Descendants). Neither sign was installed by DCR; they are grandfathered by the 1993 Cole's Hill transfer agreement from the Pilgrim Society.



Pilgrim Hall Museum sign located on Cole's Hill. (See Appendix K for photo information.)

National Monument to the Forefathers. There is one main park identification sign, located near the start of the park entrance road from Allerton Street. Lead-in signs are located on Samoset Street that directs traffic to the monument. A series of signs line the perimeter of the access road that request visitors not to park on grassed areas, and to clean up after their dogs.

Donation Boxes

The park contains two iron rangers (i.e., cylindrical metal donation boxes) to accommodate cash donations for the park. One is located near the Portico, next to the interpretive panel. There is another at Forefathers Monument, located in a grassed triangular median at a split of the circumferential access road.

Memorials and Markers

Pilgrim Memorial State Park. There are several markers, including:

- National Day of Mourning metal plaque, atop Cole's Hill (1998)
- Metal plaque attached to the front of the amphitheater building, bearing the inscription *Pilgrim Memorial Amphitheater. Dedicated July 2014*, information on funding sources for the amphitheater, and the DCR logo
- A memorial bench in honor of Jennifer Lynn Kane, a Plymouth-raised victim of the September 11, 2001 attack on the World Trade Center
- Memorial bench with metal plaque bearing the inscription *In honor of our loving parents Louis and Miriam Comenitz*
- Cole's Hill National Historic Landmark metal plaque (1961)
- Frazier Memorial State Pier plaque (1966)
- Gurnet Fortifications metal plaque that highlights the strategic role that Gurnet Point, located approximately four miles away on Plymouth Harbor, played in protecting Plymouth Harbor during the American Revolution (1976)
- Mayflower II metal plaque that identifies the crew members who sailed the replica ship from England in 1957.



National Day of Mourning plaque at Cole's Hill. (See Appendix K for photo information.)

National Monument to the Forefathers. The monument contains a metal plaque that states it was placed on the National Register of Historic Places in 1974 (date unknown).

5.6. VISITOR SERVICES

Pilgrim Memorial State Park. In 2019, the regional Visitor Services Supervisor and seasonal Park Interpreters ran programs or otherwise reached approximately 319,578 visitors. (Table 5.6.1). It is acknowledged that some of these visitors may have attended more than one program.

Table 5.6.1. Number of contacts reached through interpretive programming and other visitor services contacts at Pilgrim Memorial State Park in 2019.

Type of Contact	Number of Contacts Reached
Formal Programs^a (total)	94,078
Children	19,751
Adults	74,327
Informal Interpretation	82,978
Visitor Services Contacts	142,522

a. Includes 2,476 talks offered between April and the beginning of December 2019. Formal programs include both the Walking Tours and the Rock Talk.

The following formal programs were offered by DCR in 2018:

- Beyond the Rock: Forgotten Stories of the Plymouth County
- Trail, Tragedy, & Transition: Forging a Settlement
- Life and Death: Women of the Mayflower
- It's All About that Rock (the Rock Talk)
- Way of the Wampanoag

The most attended program was Rock Talk, a 10-minute talk offered by interpreters in the Portico.

There is an interpretive sign discussing the history and meanings of Plymouth Rock. The sign is located near the Portico, near a path that runs adjacent to the water's edge. There are three nearby interpretive signs near the corner of Leyden and Water Streets that discuss the history of Cole's Hill, Plymouth Harbor, and Leyden Street. These are within the roadway right-of-way and were not installed by DCR.

The 2018 Visitor Interpretive Experience Plan notes the need to improve external connections and relationships through coordination and cooperation, including Plymouth Plantation, The Mashpee Wampanoag Museum/Aquinnah Cultural Center, the Pilgrim Hall Museum, and the General Society of Mayflower Descendants.



A park interpreter giving a formal talk at Pilgrim Memorial State Park. (See Appendix K for photo information.)

National Monument to the Forefathers. There are no formal programs or interpretive signs.

5.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

One year-round Park Supervisor staffs the park. Seasonal employees provide additional staffing during the peak use period (i.e., Memorial Day through Columbus Day).

Partnerships and Volunteers

Plimoth Plantation manages the Mayflower II replica and exhibits at Frazier State Pier and two gift shops in the park. They charge admission fees to the former and receive proceeds from sales at the latter. These proceeds are used by Plimoth Plantation to support the restoration of the Mayflower II and its educational mission.

Public Safety

The Plymouth Fire Department provides fire response and emergency services. Personnel from DCR's Forest Fire Control District 2, based at Myles Standish State Forest, provide supplemental assistance. The Plymouth Police Department has law enforcement authority over the lands east of Water Street at Pilgrim Memorial, pursuant to Chapter 91, Section 2A.

Funding

Conservation Trust Fund

Financial contributions placed into the park's iron rangers are added to the Conservation Trust Fund and used at Pilgrim Memorial State Park. The fund's balance could not be identified at the time of this writing.

Retained Revenue

There is a pay and display machine for parking at Pilgrim Memorial State Park. There is no fee for parking at the National Monument to the Forefathers.

Other Revenues

Pursuant to the terms of a five-year agreement with Plymouth Sea Tours LLC starting in 2016, the vendor is required to make an annual payment that increases by three percent each year. Pursuant to Chapter 91, Section 2A, rates charged for the use of

the pier may be required to be approved by the Governor and Council and receipts may be required to be paid into the state treasury.

In addition, the Department is subject to receive 40% of revenues from public use of five binocular towers.

5.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs (e.g., Table 5.3.2), legal agreements, and institutional knowledge. This section describes those practices unique to the management of Pilgrim Memorial State Park. Legal agreements unique to the state park are listed in Table 5.8.1.

Table 5.8.1. Key legal agreements for Pilgrim Memorial State Park.

Party and Subject of Agreement	Type ^a	Expiration Date ^b
Town of Plymouth Placement of the National Day of Mourning Plaque.	A	2004
Plimoth Plantation Operation of Mayflower II exhibit on Frazier State Pier, and gift shops.	A	2008
Plymouth Sea Tours, LLC Concessionaire to operate boat ride to Provincetown from Frazier State Pier.	A	2021
Tower Optical Company Operation of coin-operated binoculars.	A	2020
Pilgrim Society Care and maintenance of Cole's Hill.	A	None
Town of Plymouth Perpetual easement over sidewalk installed in preparation for Quadricentennial celebration.	E	None

a. Agreement types include: A= Agreement; E=Easement; L=Lease; and U=Memorandum of Understanding.

b. Year that agreement expires. Permanent agreements are indicated by an expiration date of "None."

Key management and guidance documents are identified in Table 5.8.2.

Table 5.8.2. Key management and guidance documents for Pilgrim Memorial State Park.

Author and Document	Year
Gannett Fleming, Inc. Environmental Audit Report: Pilgrim Memorial State Park, Plymouth, Massachusetts.	1998 ^c
Preservation Technology Associates, Inc. Historic Assessment: National Monument to the Forefathers, Allerton Street, Plymouth MA. June 2003.	2003
Massachusetts Department of Conservation and Recreation Resource Management Plan: National Monument to the Forefathers.	2006
Institute for Human Centered Design. Pilgrim Memorial State Park, Plymouth, MA. Department of Conservation and Recreation ADA transition plan. February 2017.	2017
Massachusetts Department of Conservation and Recreation Pilgrim Memorial State Park: Visitor interpretive experience plan. DRAFT; April 20, 2018.	2018

Annual Maintenance

Ongoing management practices follow a regular schedule. Common activities, and the desired frequency with which they occur, are identified in Table 5.8.3. Table 5.8.4 includes management activities for National Monument to the Forefathers.

Table 5.8.3. Annual cycle of management activities at Pilgrim Memorial State Park.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Cleaning - Bathroom(s)	N/A	D	D	N/A
Cleaning - Catch basins, culverts, drains	AN	AN	AN	AN
Cleaning - Walkways	AN	AN	AN	AN
Litter removal - Walkways	AN	AN	AN	AN
Maintenance - fences, etc.	AN	AN	AN	N/A
Mowing and trimming	E14	E7	E14	N/A
Mulching and fertilizing	N/A	A	N/A	N/A
Pruning - Trees and shrubs	AN	AN	AN	AN
Sweeping - Walkways	AN	AN	AN	AN
Trash - Empty - Barrels ^b	AN	D1	D1	AN
Trash - Empty - Bathroom ^b	N/A	D1	D1	N/A
Weeding - Flower beds and grassy areas	N/A	E14	N/A	N/A
Weeding - Paved areas	N/A	AN	AN	N/A

a. Frequency codes are: AN = As needed; D = Daily, # times; E = Every # days; N/A = Not applicable.

b. Performed by Plimoth Plantation

Table 5.8.4. Annual cycle of management activities at National Monument to the Forefathers.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Cleaning - Walkways	AN	AN	AN	AN
Cleaning - Catch basins, culverts, drains	AN	AN	AN	AN
Litter removal - Walkways	AN	AN	AN	AN
Maintenance - Picnic sites, fences, etc.	AN	AN	AN	N/A
Mowing and trimming	E14	E14	E14	N/A
Pruning - Trees and shrubs	AN	A	AN	AN
Sweeping - Walkways	AN	A	AN	AN
Trash - Empty - Barrels	AN	E7	AN	AN
Weeding - Flower beds and grassy areas	AN	AN	AN	N/A
Weeding - Paved areas	N/A	AN	N/A	N/A

c. Frequency codes are: A = Annually; AN = As needed; D = Daily, # times; E = Every # days; N/A = Not applicable.

As part of their responsibilities under an agreement with DCR, Plimoth Plantation is responsible for trash removal in the bathrooms and outside receptacles.

Natural Resources

Water Resources

There are no activities unique to this property.

Rare Species

There are no activities unique to this property.

Invasive Species

There are no monitoring or management activities unique to this property.

Vegetation

Pilgrim Memorial State Park. Park staff performs routine maintenance in accordance with the schedule identified in Table 5.8.3. This includes mowing, trimming, mulching, and fertilizing.



Staff mowing the grass at Pilgrim Memorial State Park. (See Appendix K for photo information.)

In 2017, DCR acquired new aeration and slice seeding equipment to help with grass maintenance in Plymouth; this was funded through DCR's Office of Water Resources. The new irrigation equipment is EPA WaterSense certified, and uses less energy and water than traditional irrigation systems.

National Monument to the Forefathers. The park's staff performs routine maintenance in accordance with the schedule identified in Table 5.8.4. This includes mowing and trimming. A detailed maintenance plan for Forefathers Monument was included in its RMP (DCR 2006). There are no management activities (e.g., CFI plots) related to the forested areas.

Wildlife

Hunting and trapping are prohibited by regulation (302 CMR 12.11(3)dd), unless authorized by the Commissioner.

Cultural Resources

Pilgrim Memorial State Park. Park staff members perform routine maintenance around the park, including graffiti removal. The DCR Office of Cultural Resources provides technical assistance and project management related to care and maintenance of historic resources. Projects done in preparation for the 2020 Quadricentennial celebrations include the restoration of the Pilgrim Sarcophagus (completed in 2016), cleaning of the Massasoit statue (completed in 2017), and rebuilding/refurbishing the Cole's Hill stairs.

As part of an easement granted to the Town of Plymouth, the town maintains an expanded section of sidewalk of variable width, adjacent to its layout of Water Street. These areas are shown in Figure 5.1.1.

MGL Chapter 91, Section 2A authorizes DCR to arrange with the town of Plymouth or with any "appropriate memorial or historical society" for the care, maintenance, and use of those lands east of Water Street, including Frazier State Pier.

National Monument to the Forefathers. This facility was the subject of a previous RMP, which includes detailed information on maintaining the monument and its associated landscape (DCR 2006). Routine maintenance is conducted by DCR. Recent projects at the monument include the restoration of Law's finger and Liberty's chain.

The monument and a portion of the grounds are subject to a Preservation Restriction agreement. The restriction, issued by the MHC, prohibits alterations (excepting ordinary maintenance) to the monument and grounds within a 225-foot radius around the monument without prior review and approval by the MHC.



A contractor makes repairs to the missing fingers of the Law figure on Forefathers Monument. (See Appendix K for photo information.)

Recreation Activities

The DCR Special Use Permit office reviews applications and issues permits for special events, including festivals, and weekly concerts. Approximately 45 events were held in 2019, with the summer months being the most popular season for these events.

Trash bins are emptied by Plimoth Plantation every morning, pursuant to the terms of an expired agreement. (See Table 5.8.1)

Infrastructure

Buildings

Pilgrim Memorial State Park. Maintenance of the bathroom/office building is performed by DCR. The Mayflower II exhibit building is maintained by Plimoth Plantation.

National Monument to the Forefathers. Maintenance of the garage, shed, and bathroom building is conducted by DCR. Recommendations for maintaining the garage and bathroom were presented in the 2006 RMP (DCR 2006).

With the lack of staff workspace and equipment storage at Pilgrim Memorial, DCR is exploring the siting of a new park headquarters building at the Forefathers Monument, to serve both facilities.

Structures

The 2017 transfer of management of other state piers to Mass Development did not affect the Frazier Pier; it remains under the management of DCR's Office of Waterways. MGL Chapter 91 Section 2A

authorizes DCR to repair, alter, and maintain the pier and makes rules and regulations for its administration.

Roads

Pilgrim Memorial State Park. DCR is responsible for maintaining the two semicircular roads (i.e., pull-ins) including snowplowing. It is also responsible for snow removal from sidewalks within the park.

National Monument to the Forefathers. DCR is responsible for maintaining the park access road. The roads are not plowed during winter.

Parking Areas

Pilgrim Memorial State Park. DCR is responsible for maintaining the parking spaces associated with the pull-ins; this includes snowplowing.

Kiosks and Signs

Park employees are responsible for updating the content of kiosks and signs.

5.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Pilgrim Memorial State Park. Applied Land Stewardship Zoning recommendations provide general guidance for managing Pilgrim Memorial and Forefathers Monument. Future activities and projects should be checked against the zoning map (Figure 5.2.1) for consistency.

Applied Land Stewardship Zoning (Figure 5.2.1)

The following Land Stewardship Zoning is recommended for Pilgrim Memorial State Park, including the National Monument to the Forefathers, to guide management and any future development.

Zone 1

- There are no Zone 1 areas.

Zone 2

- The north, west, and south forested slopes of the Forefathers Monument.

Zone 3

The following portions of Pilgrim Memorial are currently developed. They have been designated Zone 3.

- All of Pilgrim Memorial State Park along Water Street.
- Cole's Hill.
- Pilgrim Mother Garden.
- Currently landscaped and developed areas of Forefathers Monument.

Significant Feature Overlay

A Historic Protection overlay is included over areas that are subject to enhanced regulatory protection for historic resources. These include Cole's Hill (National Historic Landmark), and the 225-foot Preservation Restriction on the National Monument to the Forefathers and grounds.

Recreation Guidance

Intensive recreation should remain limited to the two areas where it currently occurs: Frazier Pier; and the turf area south of the Portico. The latter is the location of the amphitheater and is used for a variety of cultural events and festivals. Any proposed new or expanded recreation activities or facilities should be consistent with the park's focus on historic curatorship and interpretation, and avoid negatively impacting the monuments, Portico, adjacent landscape, archaeological resources, and visitor experience. This guidance applies to both Pilgrim Memorial and Forefathers Monument.

Management Recommendations

Eight priority management recommendations were developed for Pilgrim Memorial State Park (Table 5.9.1) and seven for the National Monument to the Forefathers (Table 5.9.2).

Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to

prevent the loss of integrity of significant cultural resources.

- Improvements consistent with park identity that are needed to support intended park activities.
- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

The following recommendations are of equal priority.

Table 5.9.1. Priority recommendations for Pilgrim Memorial State Park.

Category	Recommendation	Implementation^a
Natural Resources	Prepare and implement a Climate Change Resiliency plan to protect the state park, including the Portico base and Plymouth Rock, from sea-level rise and storm surge.	ENG
Infrastructure	Implement recommendations identified in DCR's Accessibility Assessment.	CTR, POP, PSO, UAP
Infrastructure	Work with the Town of Plymouth to construct a crosswalk from the end of the westerly sidewalk on North Street, across to Carver Street to improve access to Cole's Hill.	FOP, PRT
Infrastructure	Conduct boundary research to definitively determine ownership of the intertidal area between the Water Street seawall and the Mean Low Water line.	LAQ
Visitor Services	Develop interpretive materials related to Native American life in Plymouth both before and after contact.	VSP
Management Practices	Review Chapter 91, Section 2A and determine level of compliance related to assets acquired, built, or improved by the Pilgrim Tercentenary Commission, and make corrections where needed.	LGL
Management Practices	Negotiate and execute an agreement with Plimoth Plantation to structure their use and volunteer services for Pilgrim Memorial State Park (gift shops) and Frazier State Pier (Mayflower II exhibits).	LGL, POP
Management Practices	Establish, implement, and promulgate special use permit protocols for event permitting of the Amphitheater that ensure landscape recovery of the restored grounds.	EXT, POP

- a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

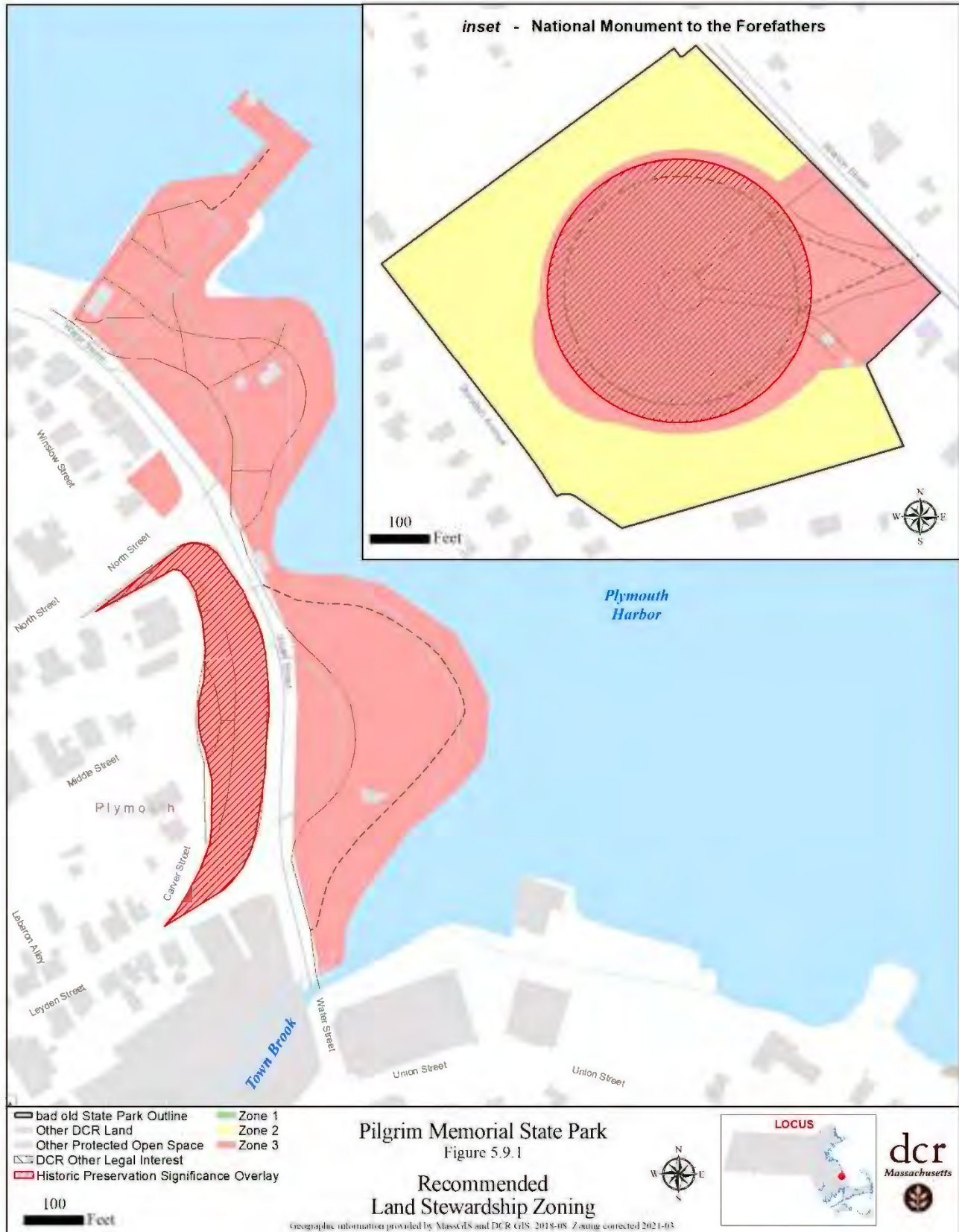
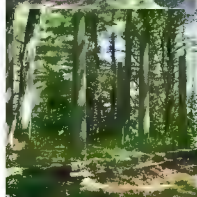


Table 5.9.2. Priority recommendations for National Monument to the Forefathers.

Category	Recommendation	Implementation^a
Cultural Resources	Complete restoration of Forefathers Monument as outlined in 2006 RMP, to include injecting small cracks and consolidating friable stone surfaces, cleaning stone, resetting loose stones, and repointing all joints.	OCR
Cultural Resources	Repair concrete steps and granite stairs from Allerton Street to the Dedication Panel Rehabilitate pathway between circular driveway and Liberty statue, and recreate pathway to Morality statue, in keeping with the original site design.	OCR
Infrastructure	Construct universally accessible parking and a pathway to the Forefathers Monument.	RFP, UAP
Infrastructure	Pave surface of circular loop road using an historically sensitive surface that is accessible, and develop an ongoing protocol for its maintenance, and implement protocol on an ongoing basis.	ENG, POP
Infrastructure	Conduct an assessment of the ability of existing facilities to meet all of the needs of the park in regard to office space, equipment storage and repair, and visitor services.	POP, RFP, UAP
Visitor Services	Develop interpretive materials.	VSP
Visitor Services	Publicize the Forefathers Monument to visitors to Pilgrim Memorial.	EXT

a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

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Standish Monument Reservation

The 116-foot-high Standish Monument is crowned by a 14-foot statue of Captain Myles Standish, military captain of the Pilgrims. The monument was built on Captain's Hill, the highest point on what was once Standish's Duxbury farm. The figure of Captain Standish points towards Provincetown and holds the Mayflower Compact, the first governing document of Plymouth Colony, written in November 1620 in Provincetown, first landing place of the Pilgrims. Although the cornerstone was laid in 1872, it took 26 years and several stops and starts to raise the money needed to finally finish the monument in 1898. Visitors may notice the different colors of granite, reflecting the various construction periods. People enjoy walking the grounds of this small park and taking in scenic views, while learning about Myles Standish and his role in both Plymouth Colony and the Town of Duxbury. When the tower is open, visitors can climb the 125 steps to a small viewing area at the top which offers a panoramic view of the South Shore church spires, several 19th-century lighthouses, Duxbury Beach, Plymouth Harbor and DCR's Pilgrim Memorial State Park, and the DCR's Blue Hills Reservation.

Top Activities

- Dog walking, on leash
- Heritage tourism
- Picnicking
- Walking/Running

Friends Group

- None

Partners & Permittees

- None

Park Inventory

Date Established: 1920

Landscape Designation

Parkland

Features

- Standish Monument and statue
- Views of Cape Cod Bay and Southeastern Massachusetts
- Picnic tables

Park Size (acres)

Total Area:	28
Forest:	27
Lakes and Ponds:	0
Wetlands:	0

Threatened & Endangered Species

Massachusetts:	0
Priority Habitat (acres):	0
Federal:	0

Cultural Resources

Archaeological:	1
Buildings:	1
Cemeteries:	0
Historic Districts:	0
Landscapes:	2
Objects:	0
Structures:	3
National Register:	0
National Historic Landmark:	0

Roads (miles)

Unpaved:	0.1
Paved:	0.5

Trails (miles)

Unpaved (Hiking):	0.2
Paved:	0.0

Contact Info:

(508) 747-5360 • Crescent Street, Duxbury, MA 02332

<https://www.mass.gov/locations/myles-standish-monument-state-reservation>



Statue of Myles Standish, atop the Standish Monument. (See Appendix K for photo information.)

SECTION 6. STANDISH MONUMENT RESERVATION

6.1. INTRODUCTION

Standish Monument Reservation is located in a quiet residential neighborhood in South Duxbury. (Figure 6.1.1) Upon approach, it appears to be nothing more than a small hilltop park covered in mature white pines. It is only after you have entered the park and ascended Captain's Hill that the park's true nature is revealed. On the hilltop is a 116-foot-high granite monument in honor of Captain Myles Standish, a founder of both the Plymouth Colony and the Town of Duxbury.

Visitors come to the reservation to view the monument and climb its spiral staircase to the top. From here, they are rewarded with views of Duxbury, Kingston, and Massachusetts bays as well as much of the South Shore. Two other properties within the Complex, Bay Farm (Section 1) and the National Monument to the Forefathers (Section 5) may be viewed from the monument. Tables located below the tower, provide visitors an opportunity to picnic. Local residents come to the reservation to exercise and to walk their dogs.

The monument was constructed, between 1872 and 1898, by the Standish Monument Association. In 1920 the Association donated the "Standish monument, and the grounds and structures appurtenant thereto" to the Commonwealth (Chapter 456 of the Acts of 1920). The monument was placed under the control of the Commissioner of Conservation and given the name Standish Monument Reservation. This remains its official name.

This park is open on a seasonal basis. From June through November it is unlocked on Fridays and weekends. The park is locked the remainder of the year. Low levels of visitation are known to occur when the park is officially closed; neighbors use the park throughout the year.

The park's physical, political, and regulatory attributes are summarized in Table 6.1.1.

Standish Monument Reservation



Table 6.1.1. Physical, political, and regulatory settings of Standish Monument Reservation.

Setting	Name or Metric
Location:	Duxbury
Area (acres)^a:	28.01
Perimeter (miles)^a:	0.91
Landscape Designation^b:	Parkland
Legislative Districts:	
House	12 th Plymouth
Senate	Plymouth and Norfolk
Regulatory Designation:	None identified

a. Calculated using a Geographic Information System (GIS).

b. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Park Identity. Standish Monument Reservation is defined by the presence of the Standish Monument. This tower and statue honor Captain Myles Standish and his role in establishing and defending Plymouth Colony; it affords visitors views of coastal bays and much of southeastern Massachusetts.

Location. The reservation is located atop Captain's Hill, within a residential neighborhood in South Duxbury. The peninsula on which the reservation is located is surrounded by Duxbury Bay to the south and east and Kingston Bay to the west. The park is accessed via Crescent Street.

Associated Properties. This park is managed by staff from Pilgrim Memorial State Park in Plymouth. (See Section 5.)

6.2. NATURAL RESOURCES

Physical Features

The reservation is located on the peak and southern and western slopes of Captain's Hill. This hill ranges from an elevation of 184 feet above sea level at its peak, where the monument is located, to approximately 49 feet near its entrance on Crescent Street. It is the highest point in Duxbury.

Water Resources

There are no surficial or groundwater resources. (Table 6.2.1)

Table 6.2.1. Water resources of Standish Monument Reservation.

Water Resource	Name or Metric
Watershed:	South Coastal
Aquifer:	
Medium Yield (acres)	0.00
High Yield (acres)	0.00
Rivers and Streams (miles)	0.00
Vernal Pools	
Certified (#)	0
Potential (#)	0
Wetlands (acres)	0.00
Lakes and Ponds (acres)	0.00

No part of the reservation is predicted to be subject to flooding, hurricane inundation, or sea level rise.

Rare Species

State-listed Species

No state-listed species are known from the reservation.

Priority Habitat

There is no Priority Habitat.

Vegetation

Pictures of the monument from at the time of its completion show a grass covered hilltop with scattered junipers and pitch pine. Ornamental shrubs were present between the monument and the upper parking area. A 1912 photo of the base and side-slope of Captain's Hill (*Gambrel Cape on Captain's Hill, South Duxbury, with Standish Monument*; Drew Archival Library, Duxbury Rural and Historic Society

<https://www.flickr.com/photos/drewarchives/8536594195/in/photolist-dCJJYb-dCJieA-dCXxg7-e1maYM-e2mMM4-e2HmTf-e2BBQx-e1kNVi-e1mh3x-e2BJbt-e3qVRY>) indicates that the surrounding area was also dominated by herbaceous vegetation, with scattered shrubs and small trees. Today, the reservation is dominated by white pine in the canopy, with a mixture of native and non-native shrubs, herbs, and forbs in the understory. There have been no formal surveys.



Standish Monument, August 20, 1922. (See Appendix K for photo information.)

Invasive Species

No inventory has been conducted; four species have been incidentally observed (Table 6.2.2)

Table 6.2.2. Known invasive plants of Standish Monument Reservation.

Species ^a	Status ^b	Source ^c
Japanese barberry	I	1
Japanese knotweed	I	1
Norway maple	I	1
Oriental bittersweet	I	1

- a. Presented alphabetically, by common name.
 b. Plants are classified as Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).
 c. Information contained in this table was obtained from the following sources:
 1. Incidentally observed by RMP Planner during site visit.

Natural Communities

Only one natural community has been tentatively identified. (Table 6.2.3) With the exception of the lawn and parking area at the summit, the reservation is covered in the White Pine-Oak Forest community type. This is a marginal example of a White Pine-Oak Forest as there may be too little oak in the

canopy to meet the strictest definition of this community (NHESP 2016c).

Table 6.2.3. Known natural communities of Standish Monument Reservation.

Community Type ^a	System ^b	State Rank ^c	Source ^d
White Pine – Oak Forest	T	5	1

- a. Classified according to Swain (2016).
 b. E = Estuarine, P = Palustrine, T = Terrestrial.
 c. The NHESP ranks communities from most rare (S1) to the most common (S5).
 d. Information contained in this table was obtained from the following sources:
 1. RMP Planner.

Forests

Most of the reservation (27.04 acres, 96.54%) is forested. A white pine plantation once covered much of Captain's Hill, and white pine remains the dominant tree species. Non-forested areas include maintained lawn and parking lots.

Wildlife

There is little information on the park's wildlife, only the birds have been documented. As of February 2021, 72 species of birds have been recorded (eBird 2012). Of note are 13 species of warblers, only one of which (pine warbler) likely nests in the park. This suggests that the reservation's forested hilltop may be an attractive stopover point for migratory warblers.

6.3. CULTURAL RESOURCES

This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An overview of significant events in the history of Standish Monument Reservation is presented in Table 6.3.1. Cultural Resources are identified in Table 6.3.2.

Table 6.3.1. Significant events in the history of Standish Monument Reservation.

Year	Events
1871	Dedication ceremony takes place on land that becomes the reservation; two thousand people attend.
1872	The Standish Monument Association is incorporated “for the purpose of erecting and maintaining in the town of Duxbury a monument to the memory of Miles Standish.” The monument’s cornerstone is laid on October 7; 8,000–10,000 people attend the ceremony. Construction continues for four years, until the money runs out.
1898	Following a second round of fund raising, the monument is completed.
1920	Standish Monument Association conveys the monument and surrounding land to the Commonwealth via deed. (Book 1367, Pages 280–282)
1922	Statue atop monument is struck by lightning causing its head and arm to topple to the ground (Ravenscroft 2013). Visitation increases; total visitation for the year was 44,564 visitors and 11,141 automobiles.
1924	Legislature authorizes \$2,286 for “improvements to the roadway.” (Chapter 126 of the Acts of 1924)
1925	Legislature authorizes \$8,000 for repairs to the monument. (Chapter 211 of the Acts of 1925)
1927	Legislature authorizes \$1,200 for “construction of a roadway to the Standish monument.” (Chapter 138 of the Acts of 1927).
1930	Replacement statue of Myles Standish is placed atop the monument.
1941	The Commonwealth sells 0.11 acres of the reservation to the Town of Duxbury for the widening of Crescent Street.
1958	Commonwealth takes 7.49 acres along Crescent Street “in fee for conservation purposes.” (Book 2674, Pages 324–325) This acreage is located west of Town of Duxbury property and the reservation.
1977	The Commonwealth purchases an underground utility corridor easement across private property east of the monument. (Book 4289, Page 498–499)
1986	The legislature authorizes \$325,000 for the “construction, reconstruction, and renovation of” the reservation. (Chapter 142 of the Acts of 1986). These repairs take place in 1987 and 1988.

Table 6.3.2. Cultural resources of Standish Monument Reservation.

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
Standish Monument Landscape	LA	1872–1898	3	H	-	-	-	1, 2, 3
Monument	BU	1872–1898	3	H	Y	E	DUX.900	1
Stairway	ST	1872–1898	4	H	-	-	-	1,2
Roadway	LA	ca. 1924–1928	2	M	-	-	-	1
Stone pillars	ST	1872–1898	3	H	-	-	-	1
Wall	ST	1872–1898	3	M	-	-	-	1
Stone Pavilion	AR	-	5	H	-	-	-	3

a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.

b. Date of construction provided, when known.

c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.

d. Integrity is a relative assessment of the condition of a resource’s retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.

e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.

f. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.

g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.

h. The following guidance is offered for the ongoing maintenance of these cultural resources:

1. Refer to Historic Landscapes – Built Features BMP (DCR n.d.i).
2. Refer to Vegetation in Historic Landscapes BMP (DCR n.d.k).
3. Refer to Archaeological features BMP (DCR n.d.j).

Archaeological Resources

Pre-Contact Resources

One Woodland Period site is documented in the reservation. Only one other pre-Contact site is documented on the peninsula, a lithic workshop located on the southeast coast. No systematic archaeological surveys have been conducted at the reservation or on the peninsula.

Much of the reservation's original parcel was disturbed during construction of the monument and its associated features. It is unknown how much impact this disturbance had on archaeological resources.

Post-Contact Resources

There is one Post-Contact resource, the remnants of a stone pavilion. It is located along the reservation's boundary with Town of Duxbury property, adjacent to the water tower. The pavilion consists of an elevated 30 foot by 12 foot stone and masonry platform. Four 10-foot-tall concrete columns are located on the front of the platform and another four are located on the back. A pergola once rested atop these columns. Two rows of 14-foot-wide stairs are located on the front of the platform. Remnants of small ornamental gardens are located to each side of the stairs. Historically, this structure was covered in grape vines and had a backdrop of evergreen trees (City Design Collaborative, Inc. 1985).



Remnants of pavilion along the northern border of Standish Monument Reservation. (See Appendix K for photo information.)

Historic Resources

Myles Standish, the reservation's namesake, was among the most prominent members of the Plymouth Colony. He was a professional soldier who journeyed to Plymouth with the Pilgrims and then spent most of his life in both military and civilian public service. He was the colony's chief military commander, a role that brought him into conflict with Native Americans as well as other colonies (Plimoth Plantation and the New England Genealogical Society n.d.). A signer of the Mayflower Compact, Standish served as the Colony's treasurer and deputy governor, and was one of the founders of Duxbury.

In the 1870s, "a number of the captain's descendants and leading Americans" formed an association to honor Myles Standish (Johnson 1897). In 1872, the Standish Monument Association incorporated in order to erect and maintain a monument to the captain. This monument was erected on land donated by "Stephen M. Allen, the owner of the estate once farmed by Standish" (Johnson 1897). All known historic resources in the reservation are associated with this monument.

Historic Landscapes

Standish Monument. The Standish Monument Landscape consists of the following elements: the Standish Monument; stairs from the northern parking area to the entrance of the monument; ornamental plantings and turf areas; park road/drive; and the park entrance. The monument and its associated landscape are likely eligible for listing on the National Register of Historic Places at the local level for its associations with Myles Standish and also for its unique architecture.



Standish Monument and stairs in 2016, as viewed from the south. (See Appendix K for photo information.)

The Standish Monument is a 116-foot-tall granite tower with a 14-foot-tall granite statue of Myles Standish on top. The monument was constructed in two phases. The first phase ran from 1872 through 1876. The money ran out, and construction stopped when the tower was only 72 feet high. The monument's six archway entrance stones were donated by each of the New England states, and the keystone was donated by the federal government. Each of these stones bears the abbreviated name of the donor (i.e., N.H., MASS.). Approximately 18 feet above ground level, the names of Massachusetts' 14 counties are carved into the stones. The second phase of construction was completed in 1898. The granite used in this phase differed from that used in the first, resulting in a sharply demarcated change in color on the monument. The monument's original brass door has been damaged by time and vandalism; it is currently in storage at Myles Standish State Forest. Inside the monument, a spiral staircase provides access to a viewing area at the top of the monument. The condition of the monument and statue has not been assessed since the mid-1980s.



Close-up of the stone arch over the monument's entrance. Each state stone was provided by that state, and the keystone was provided by the federal government. (See Appendix K for photo information.)

In 1920 the Standish Monument Association requested state funding for repairs to the monument. The Commonwealth asked for control of the property in exchange for preserving the monument and was deeded the property and monument.

The granite stairs are contemporary to the monument and are visible in a circa 1900 photo. There are two sets of granite stairs (i.e., upper and lower), with a concrete walkway between them. The lower end of the upper staircase is flanked by pillars constructed of granite blocks similar to those used to construct the tower. Historic photographs indicate that the metal railings currently associated with these stairs, were not present circa 1900 or 1929. It is unknown when they were installed. They are currently in poor condition with missing paint, flaking metal, and broken welds.



Entrance stairs at Standish Monument. (See Appendix K for photo information.)

Sometime between 1900 and 1929 formal landscape elements were added around the monument. A 1929 photograph reveals a cropped row of hedges at the margin of the lawn and parking lot. Four rows of hedges, running in straight lines uphill, flank either side of the staircase. These hedges are no longer present. Coarse grasses present circa 1900 were replaced by a mown lawn by 1929. Trees have filled in nearly all of the reservation that is not paved or maintained as lawn, converting an open grassland into a forest. Historic water views from the base of the tower have been lost due to this reforestation.

The original configuration of the road from Crescent Street to the top of Captain's Hill is unknown. Construction of the current roadway is believed to date to 1924–1928. A 1941 topographic map indicates that the current roadway layout had been established by that time. The roadway consists of a paved, narrow two-way road for most of its length, becoming a one-way circular access drive near the monument. Parking and picnic tables are associated with the circular portion of the roadway.

The park's entrance is flanked by granite pillars similar to those flanking the stairs. A low (approximately two-foot-high), stone retaining wall lines the northern edge of the entrance. It does not share materials, design, or quality of construction with the other stonework in the reservation.



Pillars at entrance to Standish Monument Reservation. (See Appendix K for photo information.)

Buildings

The Standish Monument Landscape includes the property's one historic building. (See *Historic Landscapes*, above.)

Structures

The Standish Monument Landscape includes all of the historic structures at the property. (See *Historic Landscapes*, above.)

Objects

There are no known historic objects.

6.4. RECREATION ACTIVITIES

Recreation is associated with the Standish Monument or the park road. There are no recreation fields or facilities. The following authorized activities take place in the reservation:

- Bicycling, road
- Dog walking, on leash
- Heritage tourism
- Picnicking (summer only)
- Running/jogging (on road)
- Walking

Geocaching, which is neither authorized nor unauthorized on DCR property, takes place in the reservation. As of February 2021, there was one cache.

Kingston Bay, Duxbury Bay, Duxbury Beach, Plymouth Harbor, the National Monument to the Forefathers, and much of the South Shore are visible from the top of the monument. At the time of the monument's construction, these locations were also visible from its base. These views are now obstructed by vegetation.

6.5. INFRASTRUCTURE

Property Boundary

The reservation is bounded on the west by Crescent Street, on the south and east by private residences, and on the north by municipal Water and Sewer Department land. Its boundaries were last marked and monitored in summer, 2016.

The DCR holds a permanent underground easement through the southern boundary of the private residence at 80 Myles View Drive. (Book 4289, Pages 498–499) This 174 by 5 foot easement was established to bring electricity and other utilities to the monument. Under the terms of this easement, the Commonwealth may: excavate a trench; remove

vegetation necessary for excavation; and enter upon the land to repair the powerline, should the need arise. This easement requires that the Commonwealth “return the surface to its condition prior to said excavation;” this applies to both the original installation and future repairs.

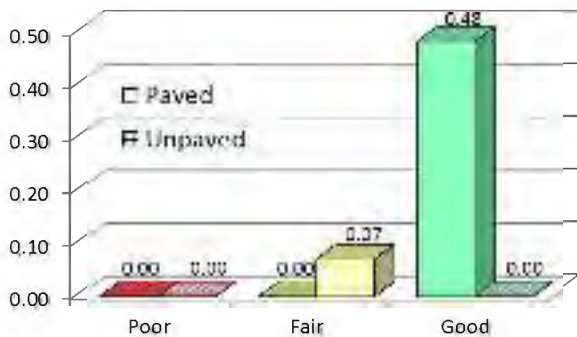
Buildings and Structures

There are no non-historic buildings or structures.

Roads

The park’s only paved road extends from the entrance gate to the top of Captain’s Hill. It is a two-way road for its first 0.26 miles, and then becomes a one-way, counterclockwise loop near the top of the hill. A 0.07-mile-long unpaved administrative road extends from the park road to the Town of Duxbury’s water tower. It dates to at least 1941 and is the only access road to this tower. These roads’ lengths and conditions are identified in Figure 6.5.1.

Figure 6.5.1. Condition and length (in miles) of roads at Standish Monument Reservation.



Parking

There are three public parking areas; they are located along the one-way portion of the park road. (Table 6.5.2) The East Lot is situated on a slope just before the crest of the hill. The North Lot is located on gently sloping ground immediately downhill of the monument. It includes two parking spaces for tour buses in addition to car parking. A wooden guardrail borders the south (i.e., downhill) side of the lot. The West Lot is nearly level and is located beneath a stand of white pines. There are no accessible spaces in any of the lots.

Table 6.5.1. Number of public parking spaces, by location and type, at Standish Monument Reservation.

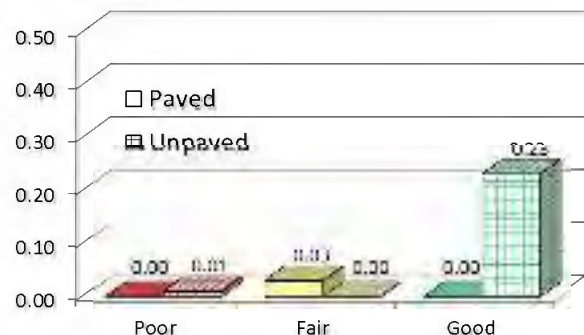
Location	HP	Restricted	Other	Total
East Lot	0	0	7	7
North Lot	0	2	10	12
West Lot	0	0	8	8
Total	0	2	25	27

When the park is closed, cars are parked along the uphill side of the access road, immediately outside the gate. There is room for approximately three cars.

Trails

There are 0.27 miles of official trails. The length of these trails, by condition and surface type, is presented in Figure 6.5.2. The paved trail segment is the walkway between the parking lot and the base of the monument.

Figure 6.5.2. Condition and length (in miles) of official trails at Standish Monument Reservation.



A footpath extends from Crescent Street to the Town of Duxbury’s water tower. This path, which is outside the reservation, provides pedestrian access to the top of Captain’s Hill. The monument may be accessed from the water tower by simply crossing a maintained lawn.

Kiosks and Signs

There is one kiosk; it is located on the edge of the north parking lot. The park’s main identification sign is located to the left (i.e., north) of the entrance gate when entering the reservation. The name on the sign does not match the reservation’s official name. The sign bears the name *Myles Standish Monument*

State Reservation, while the property's official name is *Standish Monument Reservation*.



Sign at entrance to Standish Monument Reservation. (See Appendix K for photo information.)

Donation Box

There is no donation box.

Memorials and Markers

The centerpiece of this park is the Standish Monument; it was described in detail in Section 6.3. Historic Resources. There are four rectangular marble plaques inside the monument; all bear a carved laurel wreath at the top center, with text below. The inscriptions are:

- *The Pilgrim Fathers were separatists from the English church. They held that any convenient number of believers might for themselves into a church and choose their own officers. They entered into a covenant of the Lord by which they joined themselves while in England into a church society in the fellowship of the gospel to walk in all His ways made known or to be made known unto them according to their best endeavors whatsoever it should cost them.*
- *In memory of Captain Myles Standish the one trained soldier in the Pilgrim Community. Always their military commander but also a valuable civil servant and wise promoter of the business interests of the Pilgrim Stock Company. In fight fearless impetuous and resolute. In all affairs cautious and firm. In business shrewd just and far-seeing. A conscientious and high-minded leader of devout men and women who founded in a wilderness a tolerant church and a free state.* There are two carved symbols below

the text; an owl and what appears to be an ornamental design.

- *In the Mayflower's cabin 21 November 1620 forty-one men combined to form "a civil body politic" and to "enact constitute and frame such just and equal laws ordinances acts constitutions and offices from time to time as shall be thought most meet and covenant for the general good of the colony."*
- *Twenty seven years of interested effort by the Standish Monument Association completed this memorial July 15 1899. Corner stone laid October 7 1872. Transferred to the care of the Commonwealth of Massachusetts August 6 1920.*

6.6. VISITOR SERVICES

On weekends from May through August, interpreters from Pilgrim Memorial State Park (Section 5) staff Standish Monument Reservation. They unlock the main gate and open the monument for public access. The reservation is also occasionally opened and staffed on weekdays, as interpreters are available. The remainder of the year the reservation's gate and monument remain locked. When interpreters are present but the weather is too cold, the unheated monument remains locked and only the main gate is opened to the public.

In 2019, interpretive personnel were present at the reservation a total of 38 days. They tallied 2,088 visitors and provided informal interpretation to 975 of these visitors. There is no information on total visitation.

6.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

The reservation is managed by personnel based at Pilgrim Memorial State Park. (See Table 5.7.1) There are no employees based at this park.

Partnerships and Volunteers

There are no partnerships or ongoing volunteer efforts.

Public Safety

The Duxbury Fire Department provides fire response and emergency services. Personnel from DCR's Fire Control District 2, based at Myles Standish State Forest, provide supplemental assistance. The Duxbury Police Department, Massachusetts State Police (Station D-1, Norwell), and Massachusetts Environmental Police (Region M-2) provide law enforcement.

Funding

Conservation Trust Fund

There are no trust funds dedicated to this park.

Retained Revenue

There are no parking fees. The reservation does not generate or retain revenue.

Other Revenues

There are no other revenues.

6.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs (e.g., Table 6.3.2), legal agreements, and institutional knowledge. This section describes those practices unique to the management of Standish Monument Reservation. No legal agreements, such as an agreement with the Town of Duxbury for access to the water tower, were located during the preparation of this RMP. Only one key management and guidance document was identified (Table 6.8.1).

Table 6.8.1. Key management and guidance documents for Standish Monument Reservation.

Author and Document	Year
Gannett Fleming, Inc. Clean State Audit: Myles Standish Monument State Park. (sic) December 1998.	1998

Annual Maintenance

Most management practices are performed on an as needed basis. (Table 6.8.2.) Only lawn mowing and weeding are performed on a regular schedule.

Table 6.8.2. Annual cycle of management activities at Standish Monument Reservation.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Litter removal	AN	AN	AN	N/A
Mowing and trimming	AN	E14	AN	N/A
Mulching and fertilizing	N/A	A1	N/A	N/A
Pruning – Trees and shrubs	N/A	A3	N/A	N/A
Sweep walkways	N/A	A1	N/A	N/A
Trash barrel pick up	N/A	AN	N/A	N/A
Weed - Flower bed and grass	AN	E14	AN	N/A
Weed - Paved area	AN	AN	AN	N/A

a. Frequency codes are: A = Annually; AN = As needed; D = Daily, # times; E = Every # days; N/A = Not applicable.

Although the reservation is managed as a seasonal facility, it is used year-round. Even when gates are locked, local residents walk and run through the park. The annual cycle of management (Table 6.8.2., above) reflects the amount of time that the park is officially open, rather than use levels.

Natural Resources

Water Resources

There are no activities related to the management of water resources that are unique to this park.

Rare Species

Because there are no known rare species, there are no rare species monitoring or management activities.

Invasive Species

There are no park-specific management activities.

Vegetation

Park operations personnel from the Pilgrim Memorial State Park cut the grass on an as needed basis during the spring and fall, and every other week during the growing season.

There are no ongoing forest inventory or management activities.

Wildlife

Hunting and trapping are prohibited by regulation (302 CMR 12.11(3)dd), unless authorized by the Commissioner.

Cultural Resources

There are no ongoing cultural resource management activities unique to this park.

Recreation Activities

There are no recreation management activities unique to this park.

Infrastructure

Boundary

There are no boundary-related maintenance activities.

Buildings

There are no non-historic buildings to maintain.

Roads

The park road is not plowed in the winter.

Parking Areas

The parking lots are maintained, on an as needed basis, by park operations personnel from Pilgrim Memorial State Park. They are not plowed in the winter.

Trails

Personnel based at Pilgrim Memorial State Park provide minor trail repairs on an as needed basis.

Kiosks and Signs

A kiosk is located on the edge of the north parking lot. It is updated by either Park Interpreters from Pilgrim Memorial State Park or the Regional Interpretive Coordinator.

6.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Standish Monument Reservation. Applied Land Stewardship Zoning recommendations provide general guidance for managing these properties. Future activities and projects should be checked against the zoning map (Figure 6.9.1) for consistency. Management recommendations are all high-priority and should be addressed as soon as resources become available.

Applied Land Stewardship Zoning (Figure 6.9.1)

The following Land Stewardship Zoning is recommended to guide management and any future development.

Zone 1

- There are no Zone 1 areas.

Zone 2

- All portions of the park, with the exception of areas identified as Zone 3.

Zone 3

The following portions of Standish Monument Reservation are currently developed or appropriate for potential future development. They have been designated Zone 3.

- Area within the loop road, including all existing parking areas.
- A 30-foot buffer outside the eastern segment of the loop road; for a possible scenic overlook location.
- The monument and its associated landscape.
- Maintained lawn between the monument and Town of Duxbury property.

Significant Feature Overlay

There is no Significant Feature Overlay.

Recreation Guidance

Recreation activities must be consistent with reservation's focus on Myles Standish and the story of his involvement in the Plymouth Colony and the settlement of Duxbury. They should avoid negatively impacting the monument, adjacent landscape, and visitor experience. In addition, they must be sensitive to the residential nature of the neighborhood in which the reservation is located. Because of this, active recreation (e.g., court and field-based sports) facilities are not considered appropriate.

Management Recommendations

Five priority management recommendations were developed for Standish Monument Reservation. (Table 6.9.1) Recommendations are considered a

high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
- Improvements consistent with park identity that are needed to support intended park activities.

- Actions required for regulatory compliance or compliance with legal agreements.
- Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

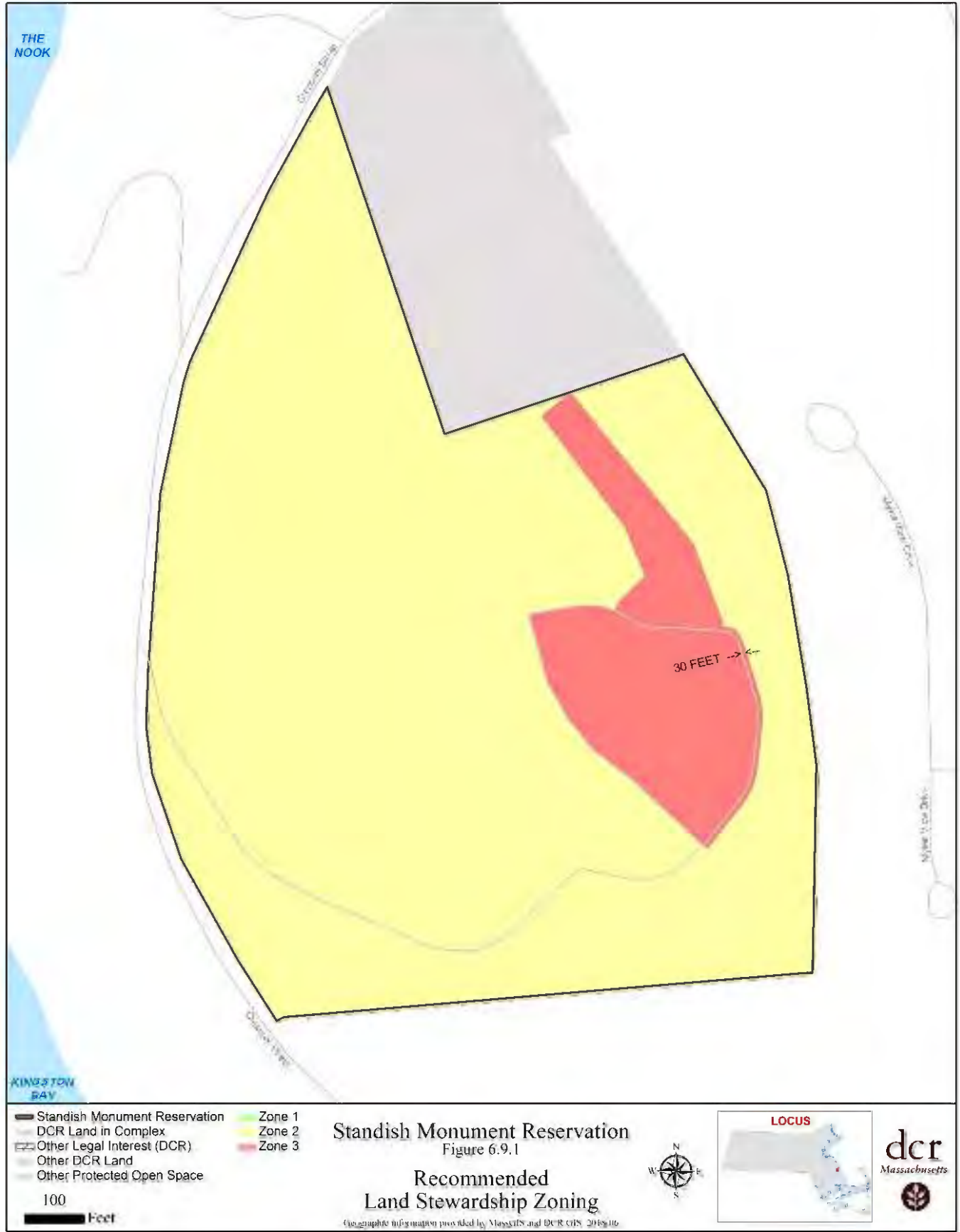
Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.

All recommendations are of equal priority.

Table 6.9.1. Priority recommendations for Standish Monument Reservation.

Category	Recommendation	Implementation ^a
Cultural Resources	Assess condition of the monument and Standish sculpture; develop a rehabilitation, conservation, and maintenance plan.	CTR, OCR
Cultural Resources	Assess the condition of the metal railings along the walkway to the monument; repair as needed.	CTR, OCR
Cultural Resources	Restore water views from base of tower and limited areas in the eastern parking lot.	FOR, OCR, POP
Visitor Services	Develop interpretive materials.	VSP
Management Practices	Explore opportunities for increased partnerships, including friends groups, to increase public use and enjoyment of DCR parks.	EXT, POP

- a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.





Scusset Beach State Reservation

Known for its campground and spectacular ocean beach, Scusset Beach State Reservation also provides a variety of wildlife habitats including intertidal flats, salt marshes, dunes, upland forests, and freshwater wetlands. The reservation, which consists of a combination of land leased from the U.S. Army Corps of Engineers and DCR-owned property, is located on the shores of Cape Cod Bay at the entrance to the Cape Cod Canal. It is both a destination for premiere recreation opportunities as well as a gateway to the scenic Cape Cod Canal landscape.

The reservation is surrounded by additional U.S. Army Corps of Engineers resources that provide additional recreation and heritage tourism opportunities. A 7-mile-long multi-use path along the canal provides opportunities for bicycling, walking, and in-line skating. Scusset's accessible fish pier, which is located just off the path, is particularly popular with saltwater anglers. From the reservation's headquarters visitors can access Sagamore Hill. Throughout its history this hill has been used as a meeting ground by Native Americans, served as the site of the Ben Lomond Golf Club, and later became the Sagamore Hill Military Reservation. Those who hike to the top are rewarded with scenic vistas of Cape Cod Bay.

Top Activities

- Bicycling, road
- Camping, RV and tent
- Dog walking, on leash
- Fishing, fin fish
- Hunting
- Nature study/photography
- Picnicking
- Playground use
- Running/jogging
- Ship watching
- Swimming/sunbathing

Friends Group

- Friends of Scusset Beach
<https://friendsofscussetbeach.org/>

Partners & Permittees

- United States Army Corps of Engineers.
The Corps leases 180.7 acres of federal land to DCR for recreation purposes.

Park Inventory

Date Established: 1954

Landscape Designation
Parkland

Features

- Campsites (104) near the shore
- Fish Pier
- Multi-use path along the Cape Cod Canal
- Nature Center with interpretive programming
- Unique 1950s modern architecture
- Playground
- Picnic Area

Park Size (acres)

Total Area:	268
Forest:	148
Lakes and Ponds:	0
Wetlands:	48

Threatened & Endangered Species

State-listed:	5
Priority Habitat (acres):	33
Federal:	1

Cultural Resources

Archaeological:	0
Buildings:	3
Cemeteries:	0
Historic Districts:	1
Landscapes:	2
Objects:	0
Structures:	0
National Register:	1
National Historic Landmark:	0

Miles of Roads

Unpaved:	1
Paved:	4

Trails (miles)

Unpaved (Hiking):	0.1
Paved:	0.4

Contact Info:

(508) 888-0859 • 20 Scusset Beach Road, Sagamore, MA 02562
<https://www.mass.gov/locations/scusset-beach-state-reservation>



A family heads for the cool waters of Cape Cod Bay on a late summer day at Scusset Beach. (See Appendix K for photo information.)

SECTION 7. SCUSSET BEACH STATE RESERVATION

7.1. INTRODUCTION

Scusset Beach State Reservation (Scusset Beach) is a coastal park with an emphasis on beach going and RV camping. It is located at the eastern end of the Cape Cod Canal. (Figure 7.1.1) This location provides coastal access for swimming, sunbathing, and surfcasting. It also provides access to additional recreation opportunities on Army Corps of Engineers (Corps) property just outside the reservation. Scusset Beach allows visitors to enjoy many of the benefits of Cape Cod without crossing a bridge or fighting traffic. Its proximity to Boston, Plymouth, and Cape Cod makes it an easy day trip for area residents and a convenient base camp for tourists.

Efforts to establish a state reservation at Scusset Beach began in 1937. Over the next 17 years a variety of proposals were developed to acquire Federal and private lands around Scusset Beach. Much of what is now private residences along Phillips Road, Sandwich, and the adjacent salt marsh

were included in these proposals. In 1954, the Department of Public Works was authorized to “acquire by lease from the United States the land known as Scusset Beach” and was “directed to improve and develop” the property (Chapter 472 of the Acts of 1954). A lease was obtained, and park development soon followed. In 1957 the reservation opened to the public. At that time, it was a day-use facility for beach goers. In the early 1970s a second wave of development took place, and the park’s campground was created.

The park’s physical, political, and regulatory attributes are summarized in Table 7.1.1.

Park Identity. Scusset Beach is defined by its recreation infrastructure and proximity to both Cape Cod Bay and the Cape Cod Canal. It is a popular location for a day at the beach, or a week or two camping near the shore. It is also popular with area fisherman who use the park to access the north side of the canal and its fish pier.

Scusset Beach State Reservation



Table 7.1.1. Physical, political, and regulatory settings of Scusset Beach State Reservation.

Setting	Name or Metric
Location:	Bourne, Sandwich
Area (acres)^a:	268.34 ^b
Perimeter (miles)^a:	5.50
Landscape Designation^c:	Parkland
Legislative Districts:	
House	5 th Barnstable
Senate	Plymouth & Barnstable
Regulatory Designations:	National Register Historic District
	Old King's Highway
	Regional Historic District
	Priority Habitat

a. Calculated using a Geographic Information System (GIS).

b. Includes 87.67 acres owned by the DCR and 180.67 acres leased from the U.S. Army Corps of Engineers.

c. For a summary of DCR's landscape designations, see <http://www.mass.gov/eea/docs/dcr/ld/ld-factsheet-final.pdf>.

Location. Scusset Beach is located in Barnstable County, in the towns of Bourne and Sandwich. It is situated on the north side of the east entrance to the Cape Cod Canal. There is one official entrance; it is accessed via Scusset Beach Road in the Sagamore village of Bourne.

Scusset Beach is located on a combination of DCR and Corps property. The original portion of the park, including all recreation facilities, is on the Corps' Cape Cod Canal. The Corps leases the land to DCR for "public park and recreation purposes" for "the benefit of the United States and the general public." The portion of the reservation owned by the DCR is located north of the park entrance, primarily in the Town of Bourne. Throughout this chapter the term "lease area" is used to refer to that portion of the reservation owned by the Corps, but under DCR control. The term "Corps property" refers to U.S. Army Corps of Engineers Property outside the lease area (i.e., those portions of the Cape Cod Canal operated by the Corps or other lessees).

Associated Properties. Although no other parks are managed by Scusset Beach personnel, there are informal relationships with two nearby parks. Staff from Scusset Beach empty trash barrels and plow snow at Ellisville Harbor State Park (Section 5), which is managed by personnel from Myles Standish State Forest (Section 2). Registered campers at Shawme-Crowell State Forest get free day use access to Scusset Beach. (See DCR 2015 for information on Shawme-Crowell.)

7.2. NATURAL RESOURCES

Physical Features

Scusset Beach is bounded on the east by Cape Cod Bay and on the south, west, and north by Corps property. To the northwest is private, residential development along Sachem Drive in Bourne, and to the northeast is private residential development along Phillips Road, Sandwich. The latter residences are constructed on a barrier beach that is contiguous with the park's dunes. When the lease area and adjacent Corps property are considered together, they are largely surrounded by water, with only small upland connections to the west and northeast.

Elevation ranges from approximately 70 feet on the summit of Moss Hill, to sea level at Cape Cod Bay. Most of the lease area is flat and at or below 10 feet in elevation. In contrast, the DCR-owned portion of the reservation is primarily hillside that ranges in elevation from approximately 70 feet at the summit, to near sea level in Bass Creek. Sagamore Hill, which at 74 feet is the highest point in the area, is not within the reservation, but is located on adjacent Corps property.

Water Resources

There is a mixture of ground and surface waters. (Table 7.2.1) The park is located over the Plymouth-Carver Aquifer, with groundwater flowing toward the canal. Nearly all of DCR's Moss Hill parcel lies above a high-yield lens. An isolated high-yield lens is located on Corps property on the south slope of Sagamore Hill. That lens' water flows in all directions, including beneath the park to the canal. (See Fuss & O'Neill (2007) for additional information on the Plymouth-Carver Aquifer.)

Table 7.2.1. Water resources of Scusset Beach State Reservation.

Water Resource	Name or Metric
Watershed:	South Coastal
Aquifer:	
Medium Yield (acres)	0.00
High Yield (acres)	91.82
Rivers and Streams (miles)	0.89
Vernal Pools	
Certified (#)	0
Potential (#)	0
Wetlands (acres)	48.37
Lakes and Ponds (acres)	0.00

Approximately 18% of the park's area is wetlands. Most of this is part of a large wetlands complex located on Corps, Town of Bourne, Town of Sandwich, and DCR properties. These wetlands lie behind the barrier beach along Phillips Road, and drain southward to the canal via Bass Creek. Smaller, isolated wetlands also occur between Scusset Beach Road and the canal access road.

Models predict significant impacts from flooding, and from storm surge associated with Category 3 or greater hurricanes. (Table 7.2.2) Both 100- and 500-year floods are predicted to inundate approximately 71% of the reservation, including all built facilities except the camping area comfort station and the dump station. With the exception of the western third of the camping area, all parking lots and roads are predicted to flood. Storm surge associated with a Category 3 hurricane is predicted to inundate the lease area except for the dunes, bathhouse, maintenance building, dump station, and camping area. (Figure 7.2.1) Only that portion of the Moss Hill parcel along Bass Creek will be affected. Surge from a Category 4 storm will inundate the bathhouse, maintenance building, most of the dump station area, and most of the camping area.

Table 7.2.2. Potential impacts of flooding, hurricane inundation, and sea level rise to Scusset Beach State Reservation.

Type of Impact	Acres	%
Flooding:		
100-year Storm	190.70	71.07
500-year Storm ^a	190.70	71.07
Hurricane Inundation:		
Category 1 Storm	0.00	0.00
Category 2 Storm ^b	0.07	0.03
Category 3 Storm ^b	115.91	43.20
Category 4 Storm ^b	178.97	66.70
Sea Level Rise (2050):		
Intermediate and Intermediate-High scenarios	0.00	0.00
High and Extreme scenarios	0.00	0.00

a. Cumulative value; includes 100-year storm impacts.

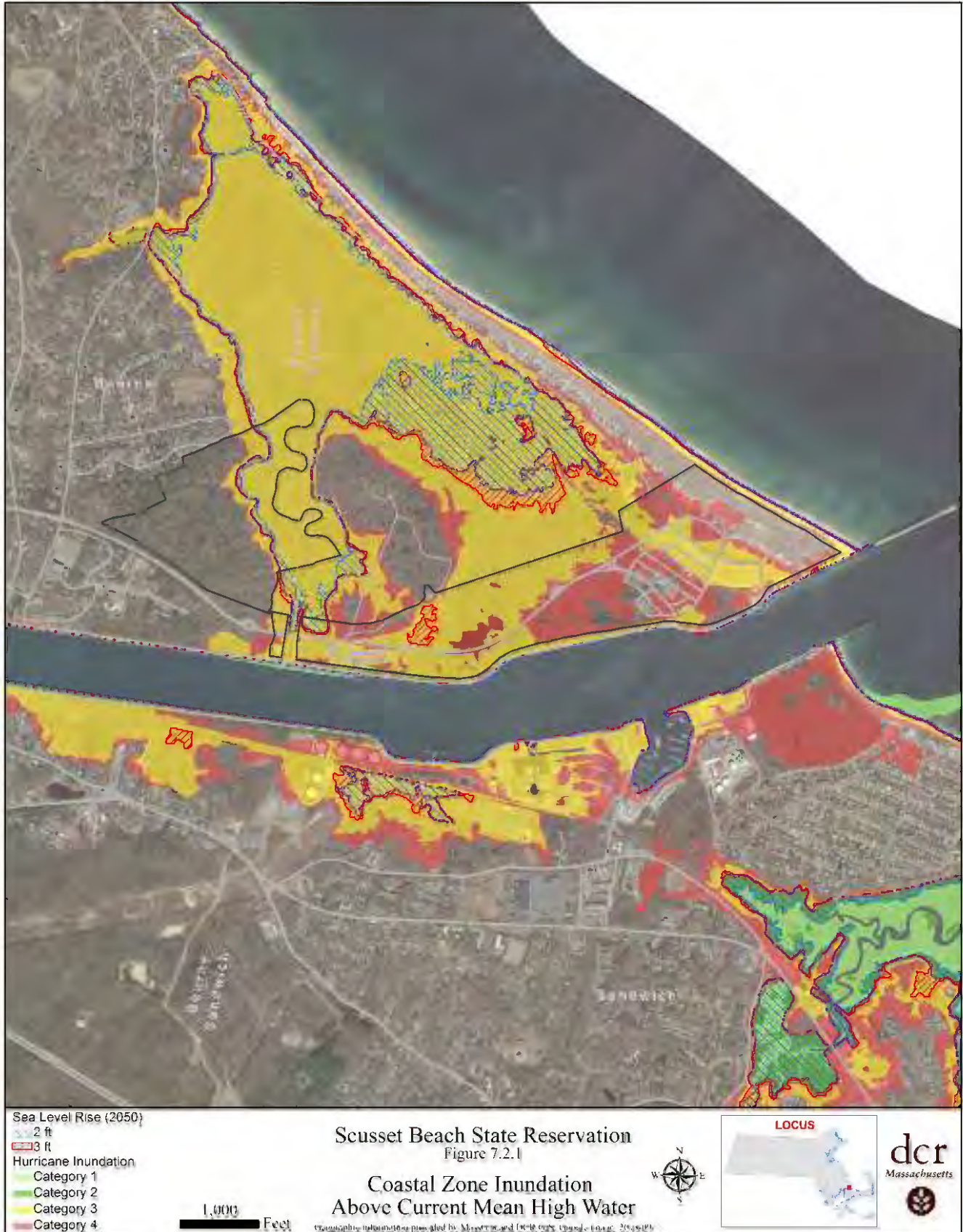
b. Cumulative value; includes impacts of all lower category storms.

c. As identified in Table 1 of DeConto and Kopp (2017).



Predicted flooding impacts at Scusset Beach State Reservation. Areas predicted to be inundated by a 100-year flood are shown in blue. These areas will also be inundated in a 500-year flood. The velocity zone is identified in purple. The camping area's road network may be seen in the center of the picture. (See Appendix K for photo information).

Sea level rise is not projected to impact park infrastructure by 2050. However, local impacts to the beach (i.e., loss of beach area and rare species habitat) may be too fine scale to be identified by the model. It is also important to note that data sources pertaining to storm surge and sea level rise are independent and do not assume an interactive effect. Combined impacts may be more severe than predicted by either model independently.



The east side of the Moss Hill parcel, along Bass Creek, has been identified as having a high potential to support the inland migration of the adjacent salt marsh (DFG & TNC 2010).

Rare Species

State-listed Species

Five state-listed species are known from Scusset Beach; one is also federally listed. (Table 7.2.3) Piping plovers nest along the water's edge, requiring the same beach and intertidal areas prized by park visitors. Common terns and least terns forage just offshore, and dune noctuid moths occur in the dunes. Gerhard's underwing is not associated with the beach or dunes, it occurs in pitch pine-scrub oak communities.

Table 7.2.3. State-listed species of Scusset Beach State Reservation, as identified by the NHESP.

Species ^{a, b}	Type ^c	MESA ^d
Common tern	B	SC
Dune <i>Sympistis</i>	I	SC
Herodias underwing	I	SC
Least tern	B	SC
Piping plover ^e	B	T

a. Presented alphabetically, by common name.

b. Fact sheets are available at:
<http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/esa-list/list-of-rare-species-in-massachusetts.html>.

c. Types of state-listed species include: A = Amphibian; B = Bird; I = Insect; P = Plant; and R = Reptile.

d. Status of species listed under the Massachusetts Endangered Species Act (MESA): E = Endangered, SC = Special Concern; and T = Threatened.

e. This species is also listed as Threatened under the Endangered Species Act.

Priority Habitat

Only about 12% of the reservation (32.71 acres) has been designated Priority Habitat. One contiguous patch extends from the beach parking lot to Cape Cod Bay, and from the Safari Field to the Cape Cod Canal.

Vegetation

Although there has been no comprehensive plant inventory, some information is available. Appendix 2 of Normandeau Associates, Inc. (2003) includes Wildlife Habitat Evaluation field data forms for four locations within the lease area, and four outside the lease area. Sites within the lease area include two forested areas, one wetland, and a back dune. Present in the forested sites were black, white, and scrub oaks; pitch pine; black cherry; eastern red cedar; and gray birch. Northern arrowwood, bayberry, poison ivy, and greenbriers were common associates. The wetland site was dominated by red maple, with tupelo, poison ivy, northern arrowwood, and highbush blueberry. In drier portions of the site pitch pine, eastern red cedar, gray birch, black cherry, and American holly were also present. Open areas of the dune site were dominated by little bluestem, goldenrod, poison ivy, and golden heather; bayberry, salt spray rose, and eastern red cedar were in protected areas. American beach grass, which was not identified on the field data forms, is the dominant plant on much of the dune system. A survey of the entire canal's wildflowers, including those of Scusset Beach, took place in the early 1980s (DiGregorio and Wallner 1985).

Invasive Species

Invasive species have not been surveyed. Casual observations have identified four species classified by MIPAG (2005) as either Invasive or Likely Invasive. (Table 7.2.4) In addition, multiflora rose has been identified just off the lease area (Normandeau Associates, Inc. 2003). Given the park's history of disturbance and development, additional invasive species are a near certainty.

Table 7.2.4. Known invasive plants of Scusset Beach State Reservation.

Species ^a	Status ^b	Source ^c
Common reed	I	1, 2
Morrow's honeysuckle	I	1
Oriental bittersweet	I	1, 2
Spotted knapweed	L	1, 2

a. Presented alphabetically, by common name.

b. Plants are classified as Invasive (I), Likely Invasive (L), or Potentially Invasive (P) according to MIPAG (2005).

c. Information contained in this table was obtained from the following sources:

1. Normandeau Associates, Inc. (2003).
2. Observed by RMP Planner.

Natural Communities

The natural communities of Scusset Beach have not been inventoried. A preliminary list (Table 7.2.5) identifies eight community types. Additional types may be present.

Table 7.2.5. Known natural communities of Scusset Beach State Reservation.

Community Type ^a	System ^b	State Rank ^c	Source ^d
Deep Emergent Marsh	P	4	1
Maritime Beach Strand	T	3	1, 2
Maritime Dune	T	3	1, 2
Maritime Shrubland	T	3	1
Pitch Pine-Oak Forest/Woodland	T	4	1, 2
Pitch Pine-Scrub Oak	T	2	1
Red Maple Swamp	P	4	1, 3
Shrub Swamp	P	5	1, 3

- Classified according to Swain (2016).
- E = Estuarine, P = Palustrine, T = Terrestrial.
- The NHESP ranks communities from most rare (S1) to the most common (S5).
- Information contained in this table was obtained from the following sources:
 - Normandeau Associates, Inc. (2003). Includes areas outside of current lease area.
 - Observed by RMP Planner.
 - MassGIS; DEP Wetlands (2005).



The Maritime Dunes of Scusset Beach State Reservation. (See Appendix K for photo information.)

Areas that are currently developed, or were historically developed, tend to have anthropogenic plant assemblages rather than natural communities.

Forests

Approximately 55% of the reservation (147.94 acres) is forested. The forests have been heavily influenced by historic disturbance associated with the construction of the Cape Cod Canal and Scusset Beach's former use as a military facility. Eastern red cedar, black cherry, and staghorn sumac are common in these areas. Non-forested areas include parking lots, the Safari Field, dunes, wetlands, and areas of maintained turf.

The park's one CFI plot is in a stand classified as Oak-Mixed forest; it is located on the side of Moss Hill. Pitch pine and black oak are dominant in the canopy; red maple and white oak are also present. The shrub layer includes black cherry, serviceberry, and arrowwood; poison ivy and greenbriers are common vines. The stand was 81 years old in 2020 and had a Site Index value of 53.

Wildlife

Recent information on the park's wildlife is largely limited to birds. Scusset Beach is a birding hotspot, and as of February 2021, birders had reported 254 species (eBird 2012). This is approximately 50.3% of the bird species known to occur in Massachusetts. Among the birds recorded are 28 species of waterfowl; 40 species of shorebirds, gulls, and terns; 27 species of warblers; and 17 species of sparrows. Two prominent species, the piping plover and least tern, nest in the park and are the subject of intense management. During the winter, large rafts of sea ducks, including common eider, king eider, and the occasional harlequin duck congregate at the canal entrance and may be easily viewed from the park.

7.3. CULTURAL RESOURCES

This section describes the known and potential cultural resource areas, including pre-Contact and post-Contact archaeological resources, and historic landscapes, buildings, structures, and objects. An overview of significant events in the history of Scusset Beach is presented in Table 7.3.1. Cultural Resources are identified in Table 7.3.2.

Table 7.3.1. Significant events in the history of Scusset Beach State Reservation.

Year	Events
1937	Scusset Beach is included in an initial list of beaches to be acquired by the Commonwealth for State Reservations. (HB 112 of 1937)
1941	Initial legislation is filed to acquire Scusset Beach “together with marshes, uplands or approaches.” (SB 603 of 1941)
1953	A Committee on Conservation was established to make a study on issues including the development of Scusset Beach. (HB 2269 of 1953)
1954	During his State of the State address, Governor Christian A. Herter reports on “negotiating with the Federal government to permit return to state control several areas which would benefit our citizens” (including Scusset Beach) to “be preserved in their natural state for the benefit of all who enjoy surf bathing, as well as...surf-casting.” (SB 0001 of 1954)
1954	The Department of Public Works is authorized to “acquire by lease from the United States the land known as Scusset Beach...containing three hundred and eighty acres more or less” ...and “is hereby authorized and directed to improve and develop Scusset Beach.” (Chapter 472 of the Acts of 1954)
1955	Legislature authorizes \$750,000 “for the improvement and development of Scusset Beach.” (Chapter 738 of the Acts of 1955)
1957	Scusset Beach State Reservation is opened to the public
1958	Legislature authorizes \$19,500 “for the further development and improvement of Scusset Beach. (Chapter 650 of the Acts of 1958)
1966	Parking area is resurfaced. (Chapter 131 of the Acts of 1966)
1968	Control of Scusset Beach is transferred from the Department of Public Works to the Department of Natural Resources’ Division of Forests and Parks. (Chapter 501 of the Acts of 1968)
1973	Major expansion of facility, including the addition of a campground and relocation of beach parking.
1976	Legislature authorizes \$500,000 for “a marine research and management station at Scusset Beach State Reservation.” (Chapter 481 of the Acts of 1976). This authorization is later amended to allow construction of the facility elsewhere in Sandwich. (Chapter 442 of the Acts of 1978)
2004	The Town of Sandwich receives a parcel of land in Shawme Crowell State Forest “for purposes of constructing, operating, and maintaining a water tower.” “Any compensation...shall be deposited within the Conservation Trust...for improvements to facilities, structures, and trails within Shawme Crowell State Forest and Scusset Beach State Reservation.” (Chapter 202 of the Acts of 2004)
2004	\$700,000 is appropriated for “Scusset Beach improvements and repairs.” (Chapter 352 of the Acts of 2004)
2009	New picnic area constructed at Fish Pier.
2009	The Friends of Scusset Beach Reservation is established.
2011	Park headquarters moves to Fish Pier Building.
2011	Camping area comfort station is renovated.
2013–2014	New playground constructed.
2014	The Scusset Beach State Reservation Trust Fund is established “for the long-term preservation and management of Scusset Beach.” (Chapter 88 of the Acts of 2014)
2014	The Division of Capital Asset Management and Maintenance is authorized to transfer control of 85.1 acres from MassDOT to DCR in exchange for 13.2 acres of Shawme-Crowell State Forest. Of the acres to be transferred, 12.8 are to be used for mitigation purposes “and the remainder of which shall be used for conservation purposes associated with Scusset Beach State Reservation.” (Chapter 266 of the Acts of 2014) This transfer is finalized in 2018.
2015	Camping area renovated to upgrade electrical system.
2018	Pavilion constructed in the Safari Area; playground expanded
2020	Major energy efficiency improvements implemented at Maintenance Building.

Table 7.3.2. Cultural resources of Scusset Beach State Reservation.

Location and Resource	Type ^a	Date ^b	Condition ^c	Integrity ^d	In Use ^e	Utilities ^f	MHC # ^g	Guidance ^h
RESERVATION-WIDE								
Old King's Highway Regional Historic District (Town of Sandwich only)	NRHD	17 th –19 th c.	-	-	-	-	SDW.R	-
Cape Cod Canal	LA	1909–1914 1933–1940	-	-	-	-	BOU.AF, SDW.Z	1
FISH PIER AREA								
Headquarters (Fish Pier Building)	BU	1957	3	H	Y	E, H, I, S, T, W	-	2
BEACH								
Beach facilities landscape	LA	1957	-	M	-	-	-	1
Bathhouse	BU	1957	3	M	S	E, S, W(S)	-	2
Maintenance building (garage & concession)	BU	1957	4	M	Y	E, H, S, T, W(S)	-	2

- a. Resource types include the following: AR = Archaeological; BU = Building; CM = Cemetery; LA = Landscape; LHD = Local Historic District; NRHD = National Register Historic District; OB = Object; and ST = Structure.
- b. Date of construction provided, when known.
- c. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.
- d. Integrity is a relative assessment of the condition of a resource's retention of its historic character-defining features; H = High; L = Low; M = Medium; and U = Unknown.
- e. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.
- f. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.
- g. Massachusetts Historical Commission inventory number; does not include Historic Archaeological numbers.
- h. The following guidance is offered for the ongoing maintenance of these cultural resources:
1. Refer to *Historic Landscapes – Built Features* BMP (DCR n.d.i).
 2. Refer to *Historic Building Maintenance* BMP (DCR n.d.g).

Archaeological Resources

The land beneath Scusset Beach has been subject to a series of disturbances. Construction of the canal, the construction and subsequent demolition of military facilities, and construction of the park's recreation facilities have all disrupted the soil and, potentially, archaeological resources. As a result, much of the park is not considered sensitive for archaeological resources. In contrast, several archaeological features are known from Corps property just outside the lease area.

Pre-Contact Resources

There are no known resources in the park. Two sites have been identified on nearby Sagamore Hill. This includes a small, lithic workshop (19-BN-227) and two loci with chipping debris (19-BN-687). No temporal/cultural affiliation could be attributed to

these resources (Doherty et al. 2003). The Sagamore Hill area “should be considered archaeologically sensitive and ground disturbance should be avoided...all other areas within the state reservation have low sensitivity for Native American archaeological resources” (Doherty et al. 2003). Sagamore Hill may be of high cultural significance to the Wampanoag Tribe (Doherty et al. 2003).

Post-Contact Resources

There are no known post-Contact resources in the park. “Given the lack of integrity of Historic Period archaeological materials, and the systematic removal of the military emplacement more than 50 years ago, the historic sensitivity of the majority of the reservation was considered to have been compromised” (Doherty et al. 2003).

Historic archaeological resources have been tentatively identified on the Moss Hill parcel. A walkover of this parcel identified spoil piles, two potential cellar holes or borrow pits, and a network of cart paths. Research is necessary to confirm these resources. For now, this parcel should be considered archaeologically sensitive.

Historic Resources

Scusset Beach's historic resources are associated with either the development of the Cape Cod Canal or the initial park development of the late 1950s.

Historic Landscapes

There are two historic landscapes, the Cape Cod Canal Landscape and the Beach Facilities Landscape. The latter is located within the Cape Cod Canal Landscape.

Cape Cod Canal Area. The Cape Cod Canal is “an 18.1-mile-long, human-made, saltwater, sea-level, deep water, marine navigational canal” (Doherty and Kierstad 2000). Interest in constructing a canal at this location dates to Captain Myles Standish in 1623 (Allen 1952). The first successful canal was constructed by the Boston, Cape Cod and New York Canal Company between 1909 and 1916. It opened to vessel traffic in 1914 and was completed in 1916. In 1928 the canal was sold to the US government, with the U.S. Army Corps of Engineers “assigned the task of improving the waterway, to make it safe for navigation, and to operate it as a toll free waterway” (Corps 2013). Between 1933 and 1940, the federal government reconstructed the canal to a width of 480 feet and depth of 32 feet. It was during this reconstruction that three bridges, the Bourne, Sagamore, and a vertical lift railroad bridge were constructed. The site of the present-day Scusset Beach State Reservation was the site of military activity as early as the late 1930s (Doherty and Kierstad 2000). From 1941 through 1945, the northeast end of the canal, including what is now Scusset Beach, was home to the Sagamore Hill Military Reservation, which protected the eastern approach to the canal. Military training in the area continued into the 1950s, well after the military reservation was closed (Doherty and Kierstad 2000). Today, historic buildings and structures associated with the canal's construction, operation, and military history may be viewed in the canal area. In addition, construction of the canal “had a dramatic impact on

the surrounding landscape, including that in the present-day” park (Doherty and Kierstad 2000).

Four historic resources are located just outside the park, but within the Cape Cod Canal Area. They are: the canal itself (Cape Cod Canal MHC# SDW.977); the North Breakwater (MHC# SDW.978); East Mooring Basin (MHC# SDW.980); and Sagamore Hill Gun Battery (SDW.AA). The first three resources are associated with the canal's construction and design; they may be observed from several locations in the park, as well as from the canal access road. The fourth is associated with area's military history. A hiking trail leads from a trailhead opposite park headquarters to the site of the gun battery.

Beach Facilities Landscape. This landscape was among the first developed for the reservation and is a rare example of mid-century modern recreation architecture. It consists of two L-shaped buildings separated by a common courtyard, and several outdoor features. A flagpole was once centered in the courtyard; an outdoor shower with four shower heads is now present. The western building is the Bathhouse; it includes men's and women's toilets and dressing rooms. A playground and wading pool were once located on the west side of this building; they were abandoned and partially removed. The eastern building is the Maintenance Building; it includes a kitchen and outdoor food counter, first aid room, lifeguard room, a manager's office, and 5-bay garage. In 2020, \$400,000 in improvements were made to this building, including replacing existing electric heaters with an air-to-air heat pump, installing larger, insulated garage doors, and installing translucent panels “Kalwall panels”) over existing window openings.

An outdoor eating terrace was originally located southeast of the food counter; a version of this terrace remains today. The terrace is located on beach sand, making it inaccessible to wheelchairs. A masonry block wall, with openings that mimic those of the buildings' windows, creates a visual barrier between the eating terrace and garage area. Beach parking is located southwest of these buildings; the extent of this lot was modified in the early 1970s during the second wave of recreation construction.



Aerial view of Scusset Beach Facilities Landscape, circa 1960. The open access from the buildings to beach is now gone, replaced by protective dunes and a boardwalk. The parking lot (background) was relocated closer to the building when the campground was constructed in 1974. (See Appendix K for photo information.)

Both buildings are constructed of masonry blocks in a 1950s modern style and are capped by flat concrete roofs. These roofs extend out over concrete walkways and are supported by octagonal concrete columns. The walkways have been undermined by wind-driven soil loss, which has resulted in localized cracking and collapse. Concrete benches once lined these walkways; only one remains. Four additional concrete benches, once associated with the playground, are extant. A series of circular openings in the overhanging roof, and a lattice of masonry blocks over the buildings' windows are distinctive architectural features of these buildings. In 1997, the bathhouse roof was modified to add half-story metal walls capped with large skylights. This was done to address chronically wet floors and walls within the shower rooms.

Water is seasonally available; both buildings share a common septic system. With the exception of the new heaters in the garage, these buildings are unheated.



Soil loss from under a concrete walkway near the concession window. At some locations this has already resulted in cracked or collapsed pavement. (See Appendix K for photo information.)

Although some original landscape elements have been removed, and modifications to the Bathhouse have changed its appearance, this landscape retains much of its integrity. The concrete construction with 1950s modern design elements has a strong character representative of mid-20th Century beach recreation facilities in Massachusetts. Although similar buildings were once common along the Commonwealth's coast, few remain. The buildings at Scusset Beach are particularly good examples of a vanishing architectural style.



View of Concession/Garage from beach side of Bathhouse. Note the octagonal columns, circular openings in roof, latticework over windows, and concrete bench. (See Appendix K for photo information.)

Buildings

The park headquarters is located in a one-story, concrete block building formerly known as the Fish Pier Building. The pier itself is located outside the lease area. The building is L-shaped, with two distinct sections connected by a shared, flat roof.

The eastern (i.e., bathroom) section contains public restrooms, and the western (i.e., administrative) section contains the park's administrative offices and camping registration desk. Both sections are constructed of masonry blocks; the bathroom section is covered in wooden siding. Small portions of the administrative section's exterior are also covered in wood. Large windows face the canal; all other sides of the building have rows of small windows located just below the roof. Ornamental T-shaped concrete features partially cover these windows. The westernmost section of the roof extends from the administrative section out over a concrete patio. The design of this area mirrors the outside walkways of the beach buildings, including the concrete floors and octagonal concrete columns. Two Friends benches and the Friends bulletin board are associated with this patio. The inside of the administrative section has been rehabilitated and meets current administrative needs.



Scusset Beach headquarters building, with bathrooms on left and administrative section in center of photo. The outdoor patio with octagonal columns may be seen on the right edge of this photo. (See Appendix K for photo information.)

The building is heated, and the bathrooms open to the public, year-round. It is the only building in the park with both heat and bathrooms. An underground propane tank is located in front of the building, at the edge of the parking lot. This building has its own septic system.

Although this building shares many design elements with the Bathhouse and Maintenance Building, it is less visually distinct than those buildings. It lacks their circular roof openings and cement latticework.

Structures

There are no known historic structures in the park.

Objects

There are no known historic objects in the park.

7.4. RECREATION ACTIVITIES

The following authorized recreation activities take place at Scusset Beach:

- Basketball; one net, near playground
- Bicycling, road
- Camping, RV and tent
- Dog walking, on leash
- Fishing, fin fish
- Hiking/walking
- Horseshoe pitching
- Hunting
- Nature study/photography
- Picnicking
- Playground use
- Running/jogging
- Swimming/Sunbathing



The adjacent Cape Cod Canal provides opportunities for fishing, walking, and bicycling. When conditions are favorable to catch striped bass, hundreds of anglers may line the canal. (See Appendix K for photo information.)

Geocaching, which is neither authorized nor unauthorized on DCR property, takes place in the reservation. As of February 2021, there was one cache.

Additional recreation opportunities are available on adjacent Corps property. The canal access road serves as a paved multi-use trail for walking, bicycling, in-line skating, ship watching, and fishing access. It is popular with Scusset Beach's campers.

Elsewhere along the canal, Corps facilities include eight recreation areas (i.e., bathrooms, picnic table, and fishing access), an ice arena, a visitor center, an interpretive trail, and a 465-site campground operated by the Bourne Recreation Authority.

Shawme-Crowell State Forest is located 3.5 miles from Scusset Beach. It too offers camping, but in an entirely different context. Shawme-Crowell is forested, lacks ocean access, and has more sites (285) and a shorter camping season than does Scusset Beach. Shawme-Crowell's campground is older than Scusset Beach's and cannot accommodate the larger RVs that use Scusset Beach. Registered campers at Shawme-Crowell receive free day use access to Scusset Beach. See DCR (2015c) for additional information on Shawme-Crowell.

Information on Scusset Beach's recreation facilities is provided below.

Camping

There is one camping area; it has 104 campsites. (Table 7.4.2) Campers register at the reservation headquarters after entering the park. All RV sites, including host sites, have a paved pad, picnic table, and electric hookup. All are considered accessible. There are 29 water faucets and four dumpsters throughout the RV area. Tent sites are vegetated, and have roadside parking, a picnic table, fire ring, and grill. The Safari Field is a 3.4 acre field that functions as a group camping site for RVs. Twenty to 75 self-contained RVs, with up to 280 people, may use this site at the same time. It is not accessible. There is one electric hookup and one water faucet on the west side of the field. A pavilion was added in 2018. At full capacity, Scusset Beach can accommodate 173 RVs and five tent sites. All campers use the same comfort station and dump station. The dump station is open daily during the camping season.

Table 7.4.1. Summary of camping resources at Scusset Beach State Reservation.

Camping Resource	Total
Campsites (total)	104
Host	4
Management	2
RV/Trailer - electric	92
Tent	5
Safari Field (group) ^a	1
Comfort Stations	1

a. This site accommodates groups of 20-75 self-contained RVs.

Like other properties in the Complex, Scusset Beach's trees suffered storm damage from a series of three nor'easters in March, 2018. Prior to this storm, approximately 70% of RV sites had trees and shrubs; the remainder had only turf. Many of the campground's trees were lost or damaged by the combination of strong winds and snow. This has altered the campsites, which now have decreased shade, privacy screening, and site aesthetics.

A single building is located in the center of the camping area. It is a combination comfort station and nature center. This building was renovated in 2011; however, original 1973 piping and valves remain. A dish sink and pay phone are located on the outside of the comfort station side of the building; an outdoor interpretive program area is located under an overhanging roof, adjacent to the nature center portion of the building. To the north is an open shed used for collecting and sorting recyclables. A playground and basketball net are located between the camping area and beach parking. A community fire pit, with benches and picnic tables is located near the camping area entrance. The camping area's circulation system is well marked with large, easily understood pavement markings and signs.



Example of RV sites in the camping area at Scusset Beach State Reservation. (See Appendix K for photo information.)

Scusset Beach is normally open to camping daily, from Memorial Day weekend through Columbus Day Weekend. During the off-season, the camping area is open only on weekends, with use restricted to self-contained RVs as the comfort station is shut down during this period.

A recent assessment of DCR campgrounds rated the Scusset Beach camping area as Above Average (Arcadis 2015). The camping area's comfort station and the beach bathhouse were collectively considered to be in good condition. For a complete assessment, see Arcadis (2015).

Use levels are high, with an overall occupancy rate of approximately 86 percent. (Table 7.4.2)

Table 7.4.2. Campsite occupancy rates, by type, at Scusset Beach State Reservation.^a

Campsite Type	Occupancy Rate (%)
RV/Trailer - electric	77.44
Tent	73.47
Safari Field (group)	100.00
Total	77.28

a. Based on 2019 data.

In 2019, campers came from 43 states and the District of Columbia, five Canadian provinces, Austria, and Germany. Most were from Massachusetts, other northeastern states, and Florida. (Table 7.4.3)

Table 7.4.3. Common geographic origins of campers staying at Scusset Beach State Reservation.^a

Geographic Origin	Percent
Massachusetts	74.19
Connecticut	5.05
Rhode Island	4.49
New York	4.04
New Hampshire	2.25
Florida	2.68
Quebec	1.00
Total	93.70

a. Only states and provinces with one or more percent of total camping registrations are included. Based on 2019 data.

The camping area's dump station is located on the north shoulder of Scusset Beach Road, approximately 0.1 miles west of the entrance to the camping area. It is used for dumping waste from self-contained campers (i.e., RVs) into a tight tank. Recycling containers are located in a shed adjacent to the comfort station, and dumpsters are located at multiple locations in the camping area.

Beach

The beach is located on the east side of the reservation, on Cape Cod Bay. There are two access points; a boardwalk over the dunes that originates at the Bathhouse, and a trail just north of the breakwater. (See *Trails*, below for more information on beach access via this trail.) Although there is approximately 0.4 miles of shoreline available to beachgoers, only a limited area is guarded. Two guard chairs are located to the north, and two are located to the south, of the boardwalk. Only those two chairs closest to the boardwalk are regularly staffed. Lifeguards are normally present seven days per week from late June through approximately Labor Day weekend.

Water quality is tested weekly, from late May through Late August. Between 2010 and 2019, there were two exceedances of *Enterococcus* bacteria. Both were associated with rainstorms.

Accessibility enhancements at the beach include an accessible pull-off platform on the boardwalk, beach mat that extends seaward from the eastern end of the boardwalk, and the availability of beach wheelchairs.

Picnic Sites

A small picnic area is located among a grove of trees near the headquarters. There are six picnic tables and three grills. This site is not accessible. Tables are also located elsewhere in the park and on nearby Corps property. Within the park, picnic tables are located adjacent to the Nature Center, at the camping area's community fire pit, and adjacent to the concession stand. Two additional tables are located just outside the park, at the junction of the canal service road and jetty.



This park's only picnic area is located adjacent to the canal access road and fish pier. (See Appendix K for photo information.)

Trails-based Recreation

There is no formal trails system. Most trails connect parking areas with either the beach or with Corps facilities just outside the park (e.g., Sagamore Hill interpretive trail, fish pier, canal access road, and jetty).

7.5. INFRASTRUCTURE

Property Boundary

The reservation's eastern boundary is Cape Cod Bay. Its southern boundary is approximated by the northern shoulder of the canal access road. Where present, a wooden guardrail/fence marks the exact boundary. The western boundary lies between the contact station, and the rotary on Scusset Beach Road. Although this boundary is not identifiable on the ground, it is clear that the rotary is not within the lease area. The park's main identification sign is located on this rotary. The northern boundary largely follows a utility corridor. In the northeast corner, the boundary follows the property lines of adjacent residences. Many activities in which park visitors engage (e.g., bicycling or walking the canal access road, fishing the canal, or ship watching from the jetty) actually take place on Corps property outside the lease area (i.e., outside the park).

Inholdings. The lease area is not contiguous; a strip of land along Bass Creek is not included in the lease area. (Figure 7.1.1) Its boundaries are only partially identifiable.

Easements. There are no known easements on the Moss Hill parcel. DCR does not hold any easements on federal property.

Encroachment. There are no known encroachments.

Buildings and Structures

There are few buildings and structures in the reservation; either historic or non-historic (Tables 7.3.2 and 7.5.1). Only three of the non-historic buildings are main buildings; the remaining three are outbuildings. The main buildings are the ranger office, contact station, and campground bathhouse.

Table 7.5.1. Non-historic buildings and structures of Scusset Beach State Reservation.

Location and Infrastructure	Date ^a	Condition ^b	In Use ^c	Utilities ^d
PARK ENTRANCE				
Contact Station	2014	2	S	E
Former administration building	1973	4	Y	E, H, T
Shed, wood	-	3	Y	-
Shed, generator ^e	-	-	-	-
CAMPING AREA				
Comfort Station/Nature Center	1973	3	S	E, P, S, T, W(S)
Recycling shed	-	2	S	-
SAFARI FIELD				
Pavilion	2018	1	S	E, W(S)

a. Date of construction provided, when known.

b. Preliminary condition assessment using the building system and equipment condition codes as used in the Massachusetts Capital Asset Management Information System (CAMIS). The following codes are used: 1 = Excellent-easily restorable to like new condition; 2 = Good-routine maintenance required; 3 = Adequate-some corrective and preventative maintenance required; 4 = Fair-excessive corrective maintenance and repair required; 5 = Poor-renovation needed; and 6 = Fail.

c. Use categories include N = No, building is not in use; S = Building is used on a seasonal basis; and Y = Yes, building is in use year-round.

d. The following codes are used to identify utilities associated with buildings: E = Electric; H = Heat; I = Internet; S = Septic system; T = Telephone; W = Water; and W(S) = Water is available on a seasonal basis. This information is included for all buildings.

e. This building is located in the lease area but is not owned by the DCR.

The contact station is located at the park entrance. The park's original contact station was constructed here in 1957, during the first wave of development. In 2014, that building was demolished and a new one constructed by students from Upper Cape Cod Regional Technical School. The new contact station is used to collect parking fees, issue fish pier passes, and direct campers to the reservation headquarters to register.



This contact station was constructed by students from Upper Cape Cod Regional Technical School in 2014. (See Appendix K for photo information.)

The former administration is also located at the park entrance. It was constructed in 1973, during the park's second wave of development. It was once the

park's main administrative building, but is now used for storage. It has electric heat and no plumbing. There are two associated outbuildings; one is for firewood storage and the other belongs to the Corps.

The Comfort Station/Nature Center is centrally located in the camping area; it is open seasonally. The building is divided into two sections. The larger section includes the men and women's bathrooms and showers; the remainder of the building serves as the park's Nature Center. This Nature Center serves as office space for the seasonal Park Interpreter, indoor programming space, and Friends meeting space. An open-air shed adjacent to the comfort station is used by campers to sort and store recyclable materials.

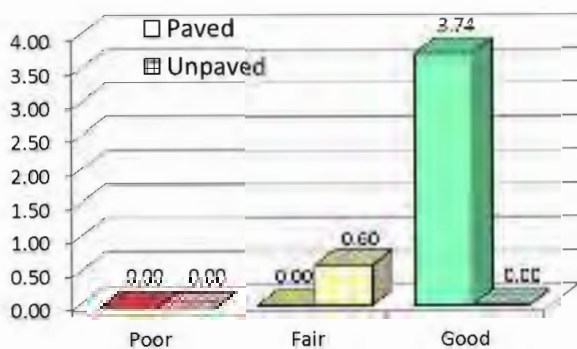
Water to the park's buildings, both historic and non-historic is provided by the North Sagamore Water District. Wastewater is discharged to septic systems. A Groundwater Discharge Permit (No. 861-1) has been issued for septic systems associated with the bathhouse and maintenance building, headquarters, and camping area. These facilities are allowed to generate up to 12,500, 250, and 9,270 gallons per day, respectively.

Roads

There are 3.80 miles of roads; over 98% of which are paved. (Figure 7.5.1) Scusset Beach Road is a

public road that dead ends within the park at the beach parking area. It serves as the park's main road. There are two spurs off this road. The first is the camping area entrance, which in turn connects to several internal paved roads. The second is the connector between the beach parking lot and the jetty parking lots. Nearly all of these roads were repaved and striped in 2016 and are in good condition. The canal access road, which is often perceived to be part of the reservation, is actually outside the lease area.

Figure 7.5.1. Condition and length (in miles) of roads at Scusset Beach State Reservation.



There is one lane approaching the contact station. All visitors, both newly arrived day users and campers returning to the park, must queue up along Scusset Beach Road for access. During periods of peak use, this results in a line of traffic extending well outside the park. A second entrance lane, for returning campers only, has been proposed by the Forest and Park Supervisor to shorten the line of traffic and reduce wait times. Similarly, during peak periods, departing campers queue up along Scusset Beach Road awaiting access to the dump station. This results in the blocking of the only outbound travel lane from the beach.

Parking

There are 641 parking spaces available to visitors. (Table 7.5.3) Most (93.14%) are associated with three day-use attractions: the Fish Pier, beach, and mouth of the Cape Cod Canal. There is lighting at the Fish Pier lot, but not the Beach or Jetty lots.

Table 7.5.2. Number of public parking spaces, by location and type, at Scusset Beach State Reservation.^a

Location	HP	Restricted	Other	Total
Park Entrance				
Ranger Office Lot	2	0	8	10
Fish Pier				
Row 1 - Striped ^b	3	8	51	62
Row 2 - Unstriped ^c	0	0	37	37
Row 3 - Striped ^d	0	0	3	3
Row 4 - Striped ^e	0	0	5	5
Camping Area				
Comfort Station/Nature Center ^f	2	32	0	34
Beach				
	11	0	396	407
Jetty				
Paved Lot	3	0	20	23
Unpaved Lot	0	0	60	60
Total	21	40	580	641

- The number of spaces is determined by pavement markings, when present. If the lot is unstriped, the number of spaces is based on the potential number of 9 foot by 18 foot spaces that can fit in the lot. RV parking is based on the number of 66 foot by 12 foot spaces that can fit in the lot.
- Restricted spaces include staff parking and 10-minute parking.
- Values given are for parallel parked automobiles; if perpendicular parked, capacity is 73 vehicles. RV capacity for this row is 11 spaces.
- Only a portion of this row is striped; for three RVs. If the entire row was striped for RVs, it would have a capacity of 11. With the current three RV spaces, the remainder of this row could accommodate 50 perpendicular parked automobiles.
- Only a portion of this row is striped; for five automobiles. The remainder of this row could accommodate an additional 60 automobiles if striped. RV capacity for this row is 10 spaces.
- Restricted to use by registered campers.

Accessible parking is available at all locations, and the total number exceeds the two percent minimum required for the reservation. Although recent pavement markings clearly identify accessible spaces and aisles, some required aisles and signs are missing. Most HP access aisles do not connect to pathways, requiring visitors to travel through active parking lots to get to buildings and recreation facilities. In addition, none of the accessible spaces are identified as being van accessible, even though many are of appropriate width and have proper aisles.

Two small lots and a driveway shoulder adjacent to the maintenance building provide parking for staff and DCR vehicles. Two spaces are reserved for

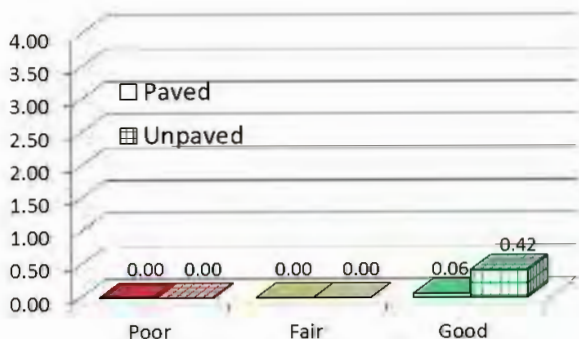
DCR vehicles and two more are reserved for concession staff.

There is no structured bike system within the reservation. However, the abutting canal access road functions as a seven-mile-long paved multi-use trail. The access road is readily accessible from three spots within the reservation: the Fish Pier lot, camping area, and jetty parking lot. Bike racks are located at the headquarters; camping area comfort station (2 racks); and at the bathhouse. An additional bike rack is located just outside the park, where the canal access road meets the jetty.

Trails

Trails are limited. (Figure 7.5.2) Most connect parking areas to the beach, jetty, or canal access road. Two trail segments, the boardwalk to the beach and the boardwalk to the junction of the jetty and canal access road, are constructed of wood and provide universal access. The only traditional trail segments connect parking areas to the Sagamore Hill trail on Corps property north of the lease area.

Figure 7.5.2. Condition and length (in miles) of official trails at Scusset Beach State Reservation.



A trail segment extends between the jetty parking lot and the beach. This is the only beach access available to emergency vehicles. During the piping plover nesting season, localized closures of nesting areas may shut down beach access via this trail, leaving the main boardwalk as the only emergency access to the beach. This boardwalk was not constructed to support the weight of vehicles, even small utility vehicles (e.g., “Gator” or Kubota). (See photo of boardwalk at the top of page 7-1.)

In 2011, the Friends constructed an approximately 600-foot-long gravel surfaced trail between the camping area comfort station and the beach parking

lot. This trail segment is not reflected in trails data or Figure 2.5.2. It would add an additional 0.11 miles of good, unpaved trails to the metrics. The Friends have also constructed a boardwalk between the jetty parking lot and the canal access road.

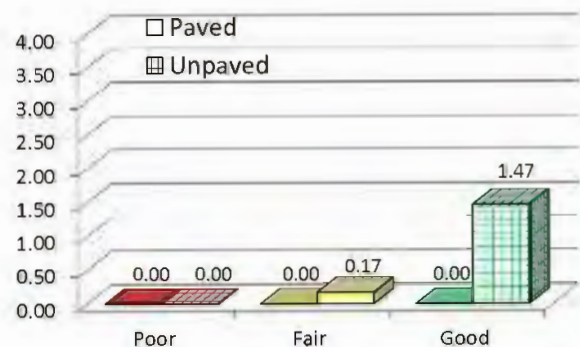


This small boardwalk between the jetty lot and canal access road was constructed by the Friends to provide universal access to the canal access road. (See Appendix K for photo information.)

There is no formal trail system in the Moss Hill parcel. This is due to DCR not having ownership or control of the property until 2018. This area is largely within Priority Habitat and trail creation is subject to regulatory review under MESA.

There are 1.64 miles of forest roads. (Figure 7.5.3) They are primarily associated with an east-west power line corridor along the northern boundary of the lease area, and a connecting road between the beach parking area and Phillips Road. The latter is intended to provide emergency access. However, the road is overgrown, restricting fire engine access.

Figure 7.5.3. Condition and length (in miles) of forest roads at Scusset Beach State Reservation.



Kiosks and Signs

Scusset Beach has kiosks, bulletin boards, map boards, and sign boards at the following locations:

- Kiosks
 - In front of headquarters; standard DCR
 - Between headquarters and canal access road; Corps kiosk on Corps property
 - At Sagamore Hill Trail trailhead; Corps kiosk within DCR lease area
 - Group campfire area in camping area; standard DCR
- Bulletin boards; glass/Lexan covered
 - Contact Station; south side of building
 - Headquarters; bathrooms
 - Headquarters; entrance to camping registration desk
 - Headquarters; Friends area (for Friends use)
 - Sagamore Hill Trail trailhead; Corps bulletin board within DCR lease area
 - Comfort Station/Nature Center
- Bulletin boards; uncovered
 - Boardwalk entrance, near concession
- Map board; Ranger Office lot
- Sign board (interchangeable letters for custom messages); Ranger Office lot

The reservation has one Main Identification sign and four Site/Facility signs. The Main Identification sign is located outside the lease area, on the traffic island in the Scusset Beach Road rotary. It bears the text “SCUSSET BEACH STATE RESERVATION Leased from the US Corps of Engineers.” The Site/Facility signs are:

- *Headquarters Scusset Beach State Reservation*; located on traffic island in front of reservation headquarters
- *Sagamore Hill Historic Site; Scusset Beach State Reservation. Leased from Army Corps of Engineers.* Cantilevered identification signs located at Sagamore Hill Trail trailhead
- *Camping Area, Scusset Beach State Reservation*; on traffic island at entrance to camping area
- *Nature Center, Scusset Beach State Reservation*, on bathhouse/nature center.

An additional sign identifies the Safari Field; it is not consistent with DCR sign standards.

Donation Box

There is one donation box; it is located in front of the reservation headquarters.

Memorials and Markers

One marker, an informational panel, and nine bench plaques were identified during the preparation of this RMP. They are:

- Metal plaque attached to a concrete base; in front of the ranger office. This plaque bears the following inscription: *Land & Water Conservation Fund. Massachusetts Department of Natural Resources & Bureau of Outdoor Recreation – Dept. of Interior.*
- Metal Corps informational panel at entrance to the Sagamore Hill trail. This bears the legend *Sagamore Hill Trail*, a trail map, and brief information on the trail.
- Benches
 - Four memorial benches at the beach (2), campground (1), and headquarters (1)
 - Two non-memorial Friends plaques; one each at the beach and headquarters
 - Three plaques on wooden benches near headquarters, bearing the following inscription: *Troop 1620 Boy Scouts Eagle Scout Project 2008.*
 - One plaque on a wooden bench at the entrance to the Sagamore Hill Trail, bearing the following inscription: *Troop 1620 Boy Scouts Eagle Scout Project 2008.*

Additional markers may be present but may have gone undetected during the planning process.

An “Inspiration Garden” is located beneath the kiosk at the community fire pit. This consists of a number of “kindness rocks” (i.e., painted rocks with artwork and inspirational messages). There are two additional painted stones. The first bears the text *Scusset Beach kindness rocks, Est. 2017*; the second instructs visitors to *Take one for inspiration, leave one for motivation.* (See <http://thekindnessrocksproject.com/> for additional information.) Although the project instructs participants to “adhere to...rules and regulations &

ask for permission before dropping rocks in public locations;" permission was neither sought nor given for this location. Scusset Beach is not listed among the project's official locations.



This marker acknowledges \$471,000 in facility upgrades funded by the Land and Water Conservation Fund in the 1970s. (See Appendix K for photo information.)

7.6. VISITOR SERVICES

Scusset Beach has a dedicated nature center and interpretive programming. In 2017, the most recent year in which there was a seasonal Park Interpreter throughout the entire summer, the interpreter reached over 2,016 visitors. Information for 2019, in which programming was reduced in response to the interpreter being injured mid-season, is also provided. (Table 7.6.1)

Table 7.6.1. Number of visitors reached through interpretive programming and other visitor services contacts at Scusset Beach State Reservation in 2017 and 2019.

Type of Contact	Number of Visitors Reached	
	2017	2019 ^a
Formal Programs (total)	455	55
Children	247	26
Adults	208	29
Informal and Roving Programs	345	400
Visitor Services	492	376
Nature Center	724	432

a. Programming reduced in July 2019 following injury to Park Interpreter. 2017 data are included because they are considered representative of a typical year.

The following formal programs have been offered by DCR in recent years:

- Beach exploration

- Beach night hike
- Beachcomber scavenger hunt
- Cape Cod Canal: A modern marvel
- Creature feature
- Evening beach ramble
- Kidleidoscope
- Nature Center open house
- Nature recycles
- Reading the landscape
- Sagamore Hill hike
- Secrets of the sand
- Tidal flats foray
- Wrack line discovery: Trash or treasure?
- Wildlife Walk



The park's nature center is located in the comfort station in the center of the Camping Area. (See Appendix K for photo information.)

There are two different types of interpretive displays at a total of four locations. They are:

- *Caution: Endangered bird ahead.* Two panels; one at each of the following locations:
 - Approach to boardwalk, from Bathhouse
 - Approach to jetty, from jetty parking lots
- *These dunes aren't made for walking.* Two signs, located around the boardwalk and concession stand

In addition, the Corps has the following interpretive panels just outside the reservation, at the junction of the canal access road and jetty.

- Navigation: Transiting the canal
- The Cape Cod Canal

- Recreation: Explore the opportunities
- Beginning the canal

7.7. MANAGEMENT RESOURCES

Staffing

DCR Personnel

Scusset Beach is managed by a combination of year-round and seasonal park operations employees.

Partnerships and Volunteers

The park's main partner is the Friends of Scusset Beach Reservation, Inc. (the Friends). This group was established in September 2009 to "promote and conserve the natural, scenic and historic resources of Scusset Beach State Reservation." They "assist the Commonwealth of Massachusetts in the operation of Scusset Beach Reservation" and "assist and work in cooperation... in general support and enrichment of" the park (<http://friendsofscussetbeach.org/?p=70>).

The Friends raise money for projects and materials, donate needed tools and goods, apply for grants, and provide volunteer labor to improve the reservation. A list of their accomplishments may be found at <http://friendsofscussetbeach.org/?p=75>.

Public Safety

The Bourne and Sandwich Fire Departments provide fire response and emergency services. Personnel from DCR's Forest Fire Control District 1, Shawme Crowell State Forest, provide supplemental assistance. The Massachusetts State Police (Station D-7, Bourne), Massachusetts Environmental Police (Region M-4), and local police (i.e., Bourne and Sandwich) provide law enforcement. DCR and Corps rangers provide assistance to emergency responders on an as needed basis.

Funding

In accordance with the terms of Supplemental Agreement No. 10 to the lease, "all income derived from the property shall be spent on the administration, maintenance, operation and development of the leased premises." This includes, but is not limited to, funds in the Scusset Beach Reservation Trust Fund.

Visitors to the reservation, with the exception of those seeking access to the Fish Pier or the Corps'

Sagamore Hill Trail, must pay a fee. This fee differs between day use and camping.

Scusset Beach Reservation Trust Fund

Parking fees include a \$2 surcharge that goes into the Scusset Beach State Reservation Trust Fund. (See M.G.L. Part I, Title II, Chapter 10, Section 35ZZ for additional information on this fund.)

Retained Revenue

Parking and camping fees go towards DCR's retained revenue.

Other Revenues

Reserve America, DCR's online reservation provider, solicits donations to the park during the campground registration process. In 2019, these donations amounted to approximately \$1,400 and during the pandemic year of 2020 they amounted to approximately \$1,800.

The Friends raise money through membership fees, donations, grants, and special events (i.e., a 5k road race, pancake breakfast). Funds are used to purchase supplies and services that are donated to the park and further the Friends' mission. For example, the Friends have purchased power tools and welding equipment which was then donated to the park. There is no direct transfer of revenues to the park.

7.8. MANAGEMENT PRACTICES

Management of DCR properties is guided by a variety of regulations, policies, BMPs (e.g., Table 7.3.2), legal agreements, and institutional knowledge. This section describes those practices unique to the management of Scusset Beach State Reservation. Legal agreements unique to the park are identified in Table 7.8.1. The most important of these is the Department of Army lease agreement and its supplemental agreements. Only the most recent Supplemental Agreement is listed in Table 7.8.1.

Table 7.8.1. Key legal agreements for Scusset Beach State Reservation.

Party and Subject of Agreement	Type ^a	Expiration Date ^b
Department of the Army Lease to states for public park and recreational purposes and natural resources management purposes; Scusset Beach, Cape Cod Canal Project, Barnstable County, Massachusetts. Lease No. DACW33-1-96-48	L	1997
Department of the Army Supplemental Agreement No. 10 between the Secretary of the Army and the Commonwealth of Massachusetts. Lease No. DACW33-1-96-48. Cape Cod Canal Project, MA	L	2015
Mr. G's Pizza & Ice Cream Permit to operate, manage, and maintain a fixed food concession.	S	2020
Massachusetts Audubon Society Contract for Services, shorebird management and conservation.	CN	2023

a. Agreement types include: A = Memorandum of Agreement; CN = Contract; E = Easement; LE = Lease; LI = License; LO = Location; P = Permit; S = Special Use Permit; U=Memorandum of Understanding.

b. Year that agreement expires.

No friends agreement was located during the preparation of this document.

Key planning documents are identified in Table 7.8.2.

Table 7.8.2. Key management and guidance documents for Scusset Beach State Reservation.

Author and Document	Year
Gannett Fleming, Inc. Environmental Audit Report: Scusset Beach State Reservation. Sandwich, Massachusetts. December 1998.	1998 ^d
Normandeau Associates, Inc. Scusset Beach State Reservation; Comprehensive Planning Process	2003
Doherty, J. M., V. H. Adams, H. Herbster, and S. Cherau Technical memorandum. Cultural resources assessment for management plan. Scusset Beach State Reservation, Bourne and Sandwich, Massachusetts. PAL Report No. 1263-1	2003

Annual Maintenance

Ongoing management practices typically follow a regular schedule. Common activities, and the desired frequency with which they occur, are identified in Table 7.8.3.

Table 7.8.3. Annual cycle of management activities at Scusset Beach State Reservation.

Activity	Spring ^a	Summer ^a	Fall ^a	Winter ^a
Beach – Public Areas Raked	N/A	E7	N/A	N/A
Beach – Sanitizing	N/A	E7	N/A	N/A
Cleaning - Bathrooms	D1	AN	D1	N/A
Cleaning - Campsites	E14	E14	E14	AN
Cleaning – Catch basins, culverts, drains	AN	AN	AN	AN
Cleaning - Visitor center	D1	D1	D1	D1
Cleaning - Walkways	D1	D1	AN	N/A
Litter removal - Recreation areas	D1	D1	D1	N/A
Maintenance - Picnic sites, fences, etc.	AN	AN	AN	N/A
Mowing and trimming	AN	E7	AN	N/A
Pruning - Trees and shrubs	N/A	AN	N/A	N/A
Raking - Beach	N/A	E7	N/A	N/A
Trash - Empty - Barrels	D1	D1	D1	AN
Sanitizing - Beach	N/A	E7	N/A	N/A
Trash-Empty-Bathrooms	D1	D1	D1	AN
Weed – Paved areas	AN	AN	N/A	N/A

a. Frequency codes are: A = Annually; AN = As needed; D = Daily, # times; E = Every # days; M = Monthly, # times; N/A = Not applicable.

Natural Resources

Water Resources

There are no water management activities unique to this park. The Corps, not DCR, is responsible for regulating the flow of water through Bass Creek.

Rare Species

Rare beach-nesting birds (i.e., piping plover, common tern, and least tern) are managed by the Massachusetts Audubon Society under contract to the DCR. Mass Audubon provides the following services: monitoring; protection; public outreach and education; enforcement by voluntary compliance;

beach maintenance coordination; vegetation management; predator control; and training.

Invasive Species

There is no ongoing monitoring or management of invasive species.

Vegetation

Turf areas, including the lawn adjacent to the ranger office, headquarters, roadsides, traffic rotary, and Dump Station are mown weekly during the growing season and as needed during the spring and fall.

An optimal cycle of mowing within the campgrounds is still being sought. In the past, park personnel have tried two approaches to mowing the campground: on a regular cycle (i.e., Tuesday and Thursday); and only when sites were vacant. Both approaches were equally liked and disliked by campers.

The utility corridor that forms the northern boundary of the lease area is mown once per year. Due to wet soils that prevent tractor access, only about 75% of the corridor gets mown. While performing this annual cut, DCR personnel also cut the Corps' Sagamore Hill Trail.

Vegetation is cut annually along the dirt road that connects Phillips Road to the bathhouse parking lot. This is done to allow for emergency vehicle access to the park. Park personnel mow grass and brush and, if needed, Forest Fire Control District 1 personnel cut back trees blocking the road. Brush and grass piles associated with this maintenance are located along the road shoulder.

There is one CFI plot; it is located on DCR's Moss Hill parcel. Under the terms of the lease, DCR may not cut timber, but may salvage fallen or dead timber provided that no commercial uses shall be made of the timber.

There is no ongoing monitoring or management of invasive plants.

Wildlife

There is no prohibition on hunting or fishing (302 CMR 12.11(3)). Those portions of the reservation meeting required setbacks from paved roads and occupied dwellings are open to hunting, as is adjacent Corps property meeting the same conditions.

Cultural Resources

In accordance with the lease, the DCR "shall not remove or disturb, or cause or permit to be removed or disturbed, any historical, archaeological, architectural or other cultural artifacts, relics, remains, or objects of antiquity."

Members of the Wampanoag Tribe that present tribal cards to the contact station attendant may park for free in order to access Scusset Beach for the purposes of sustenance or religious expression. Free parking is provided to all Native Americans possessing fishing gear and seeking entrance to the park.

Recreation Activities

When the park is at capacity, the entrance gates are closed. Registered campers displaying "hang tags" on their vehicles are allowed to re-enter the park so that they may return to their campsite. Contact station staff identify returning campers, differentiating them from day users awaiting entrance, and allow them to re-enter the park.

The lease for Scusset Beach prohibits camping "at one or more campsites for a period longer than thirty (30) days during any sixty (60) consecutive day period." Because this is less restrictive than DCR occupancy limits (i.e., two weeks), the DCR policy applies.

Public access to portions of the beach is restricted during the plover and tern nesting seasons. Except for service animals, dogs and other pets are prohibited from the beach "from May 1st through September 15th each year, unless otherwise posted" (302 CMR 12.06(12)). Due to the presence of nesting plovers, the closure begins on April 15th.

US Army Corps of Engineers regulations (36 CFR, Chapter II, part 327.4) prohibit the use of unmanned aircraft systems (i.e., drones) above the lands and waters of the Cape Cod Canal. This includes outgranted Corps property under a lease agreement, such as Scusset Beach. Use by public safety officials is exempt from this regulation.

Infrastructure

Boundary

The DCR does not mark the boundaries of the lease area.

In accordance with the lease, DCR is subject to all existing easements on the property and will be notified by the Corps of any proposed new easements.

Buildings

The park's 2019 Groundwater Discharge Permit requires:

- Monitoring and reporting water use
- Maintaining and reporting "on a regular cycle of septic tank pumping, at an interval no longer than three years between pump out"
- Formal inspection of Subsurface Disposal Systems at least once every three years
- Monitoring and analyzing groundwater at one upgradient well and three downgradient wells on a regularly scheduled basis. (Refer to the Groundwater Discharge permit for details on required monitoring and reporting requirements.)

The camping area's septic system is pumped annually. The bathhouse and reservation headquarters are pumped every other year. The dump station's tight tank is pumped twice weekly during the camping season.

Park personnel maintain and the camping area's comfort station, bathhouse bathroom, and headquarters bathroom. The comfort station is closed between 11:00 am and 12:00 pm to allow for cleaning the toilets, sinks, and showers. All other bathrooms are closed for cleaning on an as needed basis.

Seasonal building closures begin within one to two weeks of campground closure; which is typically around Columbus Day weekend. The bathhouse and camping area comfort station are shut for the season, with each building's closure taking approximately one day. These bathrooms are reopened approximately three to four weeks prior to the campground's spring opening. Bathrooms at the reservation headquarters remain open and available to visitors all year long. The closure and reopening of bathrooms are performed by park personnel.

Roads

The following roads are considered high priority for snow removal:

- Scusset Beach Road from the rotary to the Camping Area entrance
- Camping area internal roads. If the campground is open, all campground roads get plowed. If the campground is closed, only the roads in front of and behind the comfort station get plowed.
- Access road between jetty parking lot and canal access road.

Parking Areas

Parking lots are plowed in the following sequence:

- Scusset Beach Road, from rotary to the bathhouse parking lot.
- Fish Pier parking lot.
- Ranger Office parking lot.
- Jetty parking
- Bathhouse parking lot

Trails

Trail maintenance and repair activities are performed by the DCR and the Friends, often as part of a Friends workday. More complex projects are performed by a Student Conservation Association crew.

Kiosks and Signs

Kiosks and signs are updated and maintained on an as needed basis.

7.9. RECOMMENDATIONS

Introduction

This section provides recommendations for the near- and long-term management of Scusset Beach State Reservation. Applied Land Stewardship Zoning recommendations provide general guidance for managing these properties. Future activities and projects should be checked against the zoning map (Figure 7.9.1) for consistency. Management recommendations are all high-priority and should be addressed as soon as resources become available.

Applied Land Stewardship Zoning (Figure 7.9.1)

The following Land Stewardship Zoning is recommended to guide management and any future development.

Zone 1

The following areas of Scusset Beach have been designated Zone 1.

- All dune areas between the foredune and: the dirt road connecting Phillips Road to the west side of the beach lot; the developed footprint of the bathhouse and maintenance building facilities; the beach parking lot; the road connecting the beach parking lot to the jetty lot; and the boardwalk to the canal access road.

Zone 2

The following areas of Scusset Beach State Reservation have been designated Zone 2.

- Moss Hill parcel.
- All other undeveloped, forested areas.
- All other portions of the reservation not identified as Zones 1 or 3.

Zone 3

The following areas of Scusset Beach are currently developed, appropriate for potential future development, or intensively used for recreation. They have been designated Zone 3.

- Park entrance; including contact station, ranger office, parking area, and existing lawn.
- Fish Pier; including parking lot, picnic area, headquarters, and existing lawn.
- Dump Station; including existing lawn
- Camping area; including tent and RV spaces, playground area, and Safari Field.
- Beach operations area; including parking lot, bathhouse, maintenance building, and associated developed footprint
- The beach, from foredune to low tide line. This area is intensively used for swimming and sunbathing, fishing, and fishing access.
- Jetty parking lots.

Significant Feature Overlay

The following Significant Feature Overlay was developed to protect state and federally listed beach-nesting birds:

- **Rare Shorebird Significance Overlay, with NHESP management guidelines.** This overlay covers piping plover nesting and foraging areas, and tern nesting areas. Beach and dune closures within this overlay may occur as needed and may expand or contract over time.

Recreation Guidance

For over 60 years visitors have come to Scusset Beach because of its coastal resources, and the recreational opportunities and experiences that they provide. Since the beginning, emphasis has been placed on beach going and coastal access for passive recreation (e.g., fishing). Camping was added over 40 years ago and is one of the park's key attractions. Future recreation should continue to emphasize these uses and focus on upgrading or replacing existing camping and beach facilities, and the administrative and operations resources needed to run these facilities. Additional recreation facilities (e.g., athletic courts) for the benefit of campers, beach goers, and fisherman may be appropriate if they complement existing uses.

Because the newly acquired Moss Hill parcel is sensitive for natural and cultural resources, recreation infrastructure in the area (including trails) should undergo a comprehensive planning and review process. Ad hoc trail construction is not compatible with resource protection in this area.

Management Recommendations

Nine priority management recommendations were developed for Scusset Beach State Reservation. (Table 7.9.1) Recommendations are considered a high priority if they meet one or more of the following criteria:

- Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.



- Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
 - Improvements consistent with park identity that are needed to support intended park activities.
 - Actions required for regulatory compliance or compliance with legal agreements.
 - Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.
- Additional maintenance and management needs observed during the preparation of this RMP, but not meeting one or more of the above criteria, are not included in this plan.
- All recommendations are of equal priority.

Table 7.9.1. Priority recommendations for Scusset Beach State Reservation.

Category	Recommendation	Implementation ^a
Natural Resources	Continue piping plover and tern management activities to protect populations and ensure compliance with state and federal law.	CTR, ECO, POP
Cultural Resources	The circa 1957 Scusset Beach Pavilion (i.e., Bathhouse and Maintenance Building) should be preserved by rehabilitating the structures for modern use while preserving distinctive architectural features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties.	CTR, OCR
Cultural Resources	Fill under walkways, former playground site, courtyard, and eating terrace at the Bathhouse and Garage/Concession with sand to prevent further collapse.	CTR, ENG, OCR, POP
Recreation	Add accessible tables, grills, and paths to the picnic grove.	CMP, POP, UAP
Infrastructure	Install an accessible surface over the eating terrace at the snack bar to provide universal access to picnic tables.	POP, UAP, VOL
Infrastructure	Identify options to reinforce the boardwalk to beach to accommodate utility vehicle access in emergency situations. If boardwalk cannot reasonably be reinforced, assess purchasing smaller, lighter vehicles that may safely pass over existing boardwalk.	ENG, POP
Infrastructure	Maintain connector road between beach parking lot and Phillips Road to allow use by emergency vehicles.	FOR, POP
Infrastructure	Assess the need for, and feasibility of, reconfiguring the entrance to the park and dump station to increase traffic flow and decrease wait times.	ENG, POP, RFP
Infrastructure	Install security lighting in Fish Pier parking lot and along walkway between the lot and the park headquarters.	CTR, ENG, POP

a. The following codes identify the party or parties responsible for implementing the recommendations: CMP = Camping Program; CTR = Contractor; ECO = Ecology Program; ENG = Design and Engineering; ENV = Environmental and Stormwater; EXT = Office of External Affairs and Partnerships; FOR = Bureau of Forest Fire Control and Forestry; LAQ = Land Acquisition and Protection Program; LGL = Office of the General Counsel; L&P = Lakes and Ponds Program; OCR = Office of Cultural Resources; ODS = Office of Dam Safety; OTH = Other; POP = Park Operations, including regional and district staff; PRT = Partner; PSO = Park Support Operations; RFP = Office of Recreational Facilities Planning; RNG = Bureau of Ranger Services; UAP = Universal Access Program; VOL = Volunteer; and VSP = Visitor Services and Programming. The lead party for implementation is identified in bold.

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Appendix A. Plan Contributors.

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation</i>		
Ayub, Jorge	Ecology Program	Coastal ecology
Backman, Andy	RMP Program	Park planning
Baecker, Jim	RMP Program (retired)	2011 Myles Standish RMP
Barletta, Antonio	Government Affairs	Legislative relations
Berkland, Ellen	Office of Cultural Resources (retired)	Archaeological resources
Botelho, Paul	Assistant Chief Engineer (retired)	Capital projects
Byrnes, Dan	Myles Standish State Forest	Interpretation
Cavanagh, Paul	RMP Program	Park planning
Connors, Nicholas	Director of External Affairs and Partnerships	Public meetings
DeCosta, John	Scusset Beach State Reservation (deceased)	Park resources and operations
Fiesinger, Anne	Office of External Affairs (retired)	Public meetings
Fisher, Sean	Office of Cultural Resources	DCR archives, agency history
Geigis, Priscilla	Deputy Commissioner	Agency vision and policy
Greene, Judy	Office of Cultural Resources	DCR archives, plans
Gregory, Paul	Bureau of Forestry	Forest resources and infrastructure
Harris, Jeffrey	Office of Cultural Resources	Historic resources
Hart, Tony	Legal (retired)	Deeds, agency history
Jahnige, Paul	Trails and Greenways Section	Recreation
Kimball, David	GIS Program	GIS, trails
Lahiri, Chandreyee	GIS Program	GIS, metrics
Leandro, Tim	Pilgrim Memorial State Park	Park resources and operations
Lloyd, Nathanael	GIS Program	GIS, maps
Marquardt, Mike	Fire Control District 2	Fire Control facilities
Martin, Julie	Visitor Services and Programming	Park character
McGarty, Pam	South Regional Office (retired)	Staffing
Milano, Susan	Legal	Long-term permits and leases
Montgomery, Jim	Commissioner (formerly)	
Moran, Barbara	Website Information Officer	Web page content
Morris, Allan	Myles Standish State Forest (retired)	Park operations
Nadeau, Don	GIS Program	GIS, maps
Ouellette, Steve	Bureau of Ranger Services	Park regulations and safety
Pastore, Karl	Regional Director, South Region (retired)	Park operations
Pearl, Wendy	Office of Cultural Resources	Historic Resources
Pettine, Allison	South Region Aquatics Coordinator	Beach staffing and safety
Provencher, Shaun	Land Acquisition and Protection	Deeds, acquisitions
Putnam, Nancy	Ecology Program	Park ecology
Robbins, Greg	Waterways Program	Coastal structures
Roberts, John	Myles Standish State Forest	Park resources and operations
Roy, Leo	Commissioner (retired)	Agency vision and policy

Appendix A. Plan Contributors.

Name	Affiliation	Area of Expertise
<i>Department of Conservation and Recreation (continued)</i>		
Scapicchio, Stephen	Revenue Director (retired)	Revenues for parks in Complex
Skalski, Jack	Administration & Finance	RMP printing and distribution
Stabile, Richard	Bureau of Forestry (formerly)	Forestry and park vegetation
Strother, Eve	Deputy General Counsel (formerly)	Long-term permits and leases
Tipton, Nat	RMP Program (formerly)	Park planning
Villamaino, Matt	Pilgrim Memorial State Park (formerly)	Park history
Walsh, Ellen	Myles Standish State Forest	Campground operations
Wilmot, Amy	Regional Interpretive Coordinator	Interpretation
Wysocki, Anita	Camping Coordinator (retired)	Campground data
Yetman, Joe	South Region Engineer	Capital projects
<i>Other Affiliations</i>		
Buelow, Chris	MassWildlife	Ecological restoration
Byrne, Bill	MassWildlife (deceased)	Wildlife photography
DeMoranville, Carolyn	UMass Cranberry Station (retired)	Bog at Myles Standish
Harper, Lynn	MassWildlife – NHESP (retired)	State-listed species conservation
Leibe, Rick	UMass Cranberry Station	Bog management at Myles Standish
Sandler, Hillary	UMass Cranberry Station	Bog at Myles Standish
Stainbrook, David	MassWildlife	Deer ecology and management
Zimmer, Jason	MassWildlife	South District properties

Appendix B. Public Participation.

In accordance with M.G.L. Chapter 21: Section 2F, this Resource Management Plan for the Myles Standish 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 Myles Standish 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 Myles Standish Complex was published in the November 20, 2013 Environmental Monitor (Volume 84, Issue 12). Notices were also posted at the Complex's parks and e-mailed to stakeholders.

An initial public meeting was convened at the Plymouth Public Library on December 10, 2013. Approximately 26 people attended this meeting, which ran from 6:30 to 8:00 P.M.

The initial public comment period ran from December 10, 2013 through January 14, 2014, 15 sets of written comments were received.

Public Comment on Draft RMP

Notice of a public meeting on the draft RMP for the Myles Standish Complex, and of the availability of the plan, was published in the February 23, 2022 Environmental Monitor (Volume 98, Issue 4). Meeting notices were also posted at the Complex's parks and mailed to stakeholders. The meeting was held on March 1, 2022 via Zoom; approximately # people participated.

The public comment period on the draft RMP ran from February 23 through March 25, 2022; # sets of written comments were received, including those from MHC and MassWildlife.

B.2. CHANGES TO THE FINAL DRAFT OF THE MYLES STANDISH COMPLEX RESOURCE MANAGEMENT PLAN

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

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

1. The directive that RMPs "shall provide for the protection and stewardship of natural and cultural resources, and shall ensure consistency between recreation, resource protection, and sustainable forest management" as identified in M.G.L. Chapter 21: Section 2F).
2. A park's Landscape Designation.
3. Whether the proposed recommendation was a priority. To be considered a priority, it must address one or more of the following:
 - Natural resource stewardship and restoration activities consistent with park identity and intended to improve ecological function and connectivity.
 - Cultural resource management activities consistent with park identity and intended to prevent the loss of integrity of significant cultural resources.
 - Improvements consistent with park identity that are needed to support intended park activities.
 - Actions required for regulatory compliance or compliance with legal agreements.
 - Activities that prevent or ameliorate threats to the health and safety of park visitors and employees.

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

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

Executive Summary

To be added following public input.

Section 1. The Myles Standish Complex

To be added following public input.

Section 2. Myles Standish State Forest

To be added following public input.

Section 3. Kingston State Forest

To be added following public input.

Section 4. Ellisville Harbor State Park

To be added following public input.

Section 5. Pilgrim Memorial State Park

To be added following public input.

Section 6. Standish Monument Reservation

To be added following public input.

Section 7. Scusset Beach State Reservation

To be added following public input.

Section 8. Appendices

To be added following public input.

Appendix C. Overview of Coordination Process with MassWildlife.

C.1. BACKGROUND

Since its inception, DCR's Resource Management Planning Program has actively sought and applied the expertise of Mass Wildlife's Natural Heritage and Endangered Species Program (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.** Under the Massachusetts Endangered Species Act (MESA) all "State agencies shall submit to NHESP any draft management plans they prepare for State owned lands on which State listed species are known to occur" (321 CMR 10.05(2)C.2). The internal version of the draft RMP is submitted to the NHESP for formal review in accordance with this requirement. This takes place before the draft plan is released to the public, so that the public review draft includes revisions made in response to comments and recommendations. During this process, other entities within MassWildlife provide review and comment on the internal review draft.
- **Response to Comments.** MassWildlife provides a comment letter on the draft RMP that distinguishes between what must be done (i.e., actions required for compliance under MESA) and additional actions that may be taken to enhance fish and wildlife populations and habitats. As a rule, both types of recommendations are added to the revised draft. [Note: Because the NHESP's recommendations are incorporated into RMPs, each RMP contains a *de facto* management strategy and guidance for all state-listed species within a planning unit.]
- **Submission of Public Draft RMP to NHESP.** The public draft RMP is submitted to the NHESP for formal review and comment under MESA. Again, other entities within MassWildlife review and provide comments on fish and wildlife resources.
- **Response to Comments.** MassWildlife comments are addressed with all others received during the public comment period.
- **Additional Coordination.** MassWildlife 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 MassWildlife began prior to the official start of work on the RMP and continued through review of the internal draft RMP.

- **September 2, 2020.** DCR contacts NHESP to inquire about any records of state listed bats at Myles Standish State Forest. NHESP indicates that there are no confirmed occurrences of state listed bats.
- **July 1, 2019.** DCR enquires about state listed species at the Long Pond/Little Pond boat ramps in Plymouth. NHESP responds the same day with identification of species and associated management concerns.

- **July 20, 2018.** DCR and NHESP resolve discrepancies in the number and identities of state listed species at DCR parks within the Myles Standish Complex. Discrepancies were due to changes in MESA status of some species identified in NHESP's March 21, 2017 list of rare species occurring within the Complex.
- **July 3, 2018.** NHESP provides DCR comments on draft Myles Standish Complex RMP.
- **June 13, 2018.** DCR provides NHESP with link to internal review draft of Myles Standish Complex RMP and requests review and comments.
- **March 10, 2017.** DCR requests information on deer browse, hunter effort, and number of deer taken for Myles Standish State Forest. MassWildlife provides deer browse survey data for Myles Standish State Forest.
- **March 21, 2017.** DCR provides updated shape files for Myles Standish Complex properties to NHESP. NHESP responds the same day, providing rare species, vernal pool, and natural community data for properties.
- **May 10, 2017.** DCR and MassWildlife representatives meet at Southeast District office in Bourne to discuss MassWildlife's activities and interests in DCR properties within the Myles Standish Complex.
- **May 19, 2017.** MassWildlife provides DCR information on annual pheasant, quail, and fish stocking at Myles Standish State Forest.
- **May 3, 2018.** In response to request from DCR, NHESP provides updated information on the rare species, priority natural communities, and vernal pools of properties in the Complex.
- **June 13, 2018.** DCR notifies NHESP of availability of internal draft of RMP for review.
- **July 3, 2018.** NHESP submits formal comments on internal draft of RMP.
- **July 23, 2018.** DCR contacts NHESP regarding comments about proposed Land Stewardship Zoning at Myles Standish State Forest in the internal draft Resource Management Plan.
- **July 24, 2018.** NHESP provides additional comments on proposed Land Stewardship Zoning for Myles Standish State Forest, suggesting additional zoning changes. In response, DCR revised the draft zoning map in accordance with agency guidelines and consistent with NHESP's goal of broad, landscape-level management of pine barrens in and around Myles Standish State Forest. A draft recommendation to restore and maintain a mosaic of fire-influenced natural communities was modified to reflect multi-partner coordination and cooperation in pine barrens management.



MASSACHUSETTS
DIVISION OF
FISHERIES & WILDLIFE

Division of Fisheries & Wildlife
100 Morrissey Blvd., Room 300
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(617) 253-7300/1-800-352-6828

July 2, 2018

Nathaniel Tipton
Resource Management Planner
Massachusetts Dept. of Conservation and Recreation
251 Causeway St., Suite 600
Boston, MA 02114

RE: Internal draft of the *Myles Standish Complex Resource Management Plan*

Dear Mr. Tipton:

The Massachusetts Division of Fisheries and Wildlife is pleased to offer comments on the June, 2018, Internal draft of the *Myles Standish Complex Resource Management Plan*. We appreciate DCR's attention to the conservation of biodiversity on these globally important properties and we look forward to working with our sister agency on implementing the relevant recommendations of this plan.

In general, we support the Resource Management Plan as written, excepting a few concerns. Our concerns are noted below, by page number of draft.

Executive Summary

Our understanding of the complexities involved in the restoration and maintenance of pine barrens communities has evolved since the 2011 *Myles Standish Resource Management Plan*. Thus, our suggestions below clarify some of recommendations included in the 2011 plan.

P. 1(i). For the recommendation that begins, "Develop and implement a plan to remove tree plantations..." the second sentence should be revised to read, "Following cutting, controlled burning should be implemented to restore and maintain important fire-influenced natural communities and rare species habitat." The purpose of controlled burns is not to stimulate sprouting of native pine barrens shrubs.

P. 1(i). For the recommendation that begins, "Avoid bulldozing, harrowing or other soil scarification..." Please add a sentence allowing for the potential for scarification to be used as a restoration and management in some situations, with NHESP oversight.

P. 1(i). For the recommendation that begins, "Develop a mowing plan..." Please allow for the possibility of growing-season mowing to be used in certain situations, with NHESP oversight. Note that, in general, growing-season mowing is inappropriate and has resulted, for example, in the mowing of New England Blazing Star (*Liatris scariosa* var. *novae-angliae*, Special Concern) during the growing season on roadsides in recent years.

MASSACHUSETTS

P. 111. For the recommendation that begins, "Maintain a variety of native grasslands..." Please substitute a broader recommendation: "Restore and maintain a mosaic of fire-influenced natural communities (such as sandplain grasslands, heathlands, scrub oak thickets, frost pockets, and pitch pine-scrub oak woodlands) for state-listed and uncommon bird and invertebrate species such as Eastern Whip-poor-will, Prairie Warblers, Frosted Elf, and Barrens Buckmoth."

P. 111. For the recommendation that begins, "Work with MassWildlife to prepare a new management plan for the Pheasant and Quail Management Areas..." substitute "restore and maintain a mosaic of fire-influenced natural communities" for the phrase "promote native plants."

P. 111. For the recommendation that begins, "Formalize draft agreement with MassWildlife..." please revise this to read, "Formalize draft agreement and define management goals and responsibilities with MassWildlife for the operation of the Quail and Pheasant WMAs."

P. 111. For the recommendation on the "forthcoming fire management plan" for Myles Standish State Forest, we look forward to meeting with DCR and other stakeholders on finalizing this plan and working in partnership to implement this plan, both on the State Forest and on our Wildlife Management Areas. We note that currently there is considerable potential for wildfires at Myles Standish, and that reducing that potential through forest thinning operations and prescribed fire will both reduce the wildfire risk and benefit rare and uncommon species that thrive in the restored habitats.

P. 111. For the recommendation on the "forthcoming Habitat Management Plan" for MSSF, it is still unclear what this covers and so we cannot comment on this recommendation. If it covers only the removal of invasive exotics from the State Forest, which is a plan that our biologists have worked on with Nancy Putnam of DCR, then we have no concerns. If it covers more than that – for example, restoration and management of the pitch pine-scrub oak matrix, or the many issues facing coastal plain ponds – then we would appreciate being included in the development and implementation of this Habitat Management plan. Please inform us as soon as possible as to the scope of this plan.

Section 1. The Myles Standish Complex

P. 1-1. It is worth noting in this introduction that this complex includes one of the most important and globally significant concentrations of natural resources entrusted to the Commonwealth's care. Forty-four MESA-listed species are documented from these properties, thirty-six from MSSF alone, more than 10% of the total of 427 MESA-listed species.

P. 1-10. Table 1.4.2. Number of state-listed species, by type and state rank. Our current numbers are slightly different: our database shows 2 Endangered insects, not 3, and 5 Endangered plants, not 4.

P. 1-10. Figure 1.4.1. Number of state-listed species, by park. Again our current numbers are slightly different: MSSF – 36 species; Ellisville Harbor – 2 species; Pilgrim Memorial – no species; Scusset Beach – 5 species.

P. 1-11. Priority Natural Communities. Our database shows only five types of Priority Natural Communities documented from the Complex: Coastal Plain Pondshore Community, Maritime Forest/Woodland, Pitch Pine-Scrub Oak Community, Sandplain Heathland, and Scrub Oak Shrubland. If DCR has field data on other types of Priority Natural Communities on these properties, please forward the data to us for evaluation.

P. 2-17, Vegetation and Wildlife. The draft Plan notes that there are no management plans covering all of the Complex's vegetation and wildlife. We note that the global importance of the natural resources on Myles Standish State Forest and adjacent Wildlife Management Areas is such that DCR and MassWildlife should work together to devise and continually update a single plan to restore, manage, and ensure the continued viability of the pine barrens and coastal plain ponds on these properties.

Section 2. Myles Standish State Forest

P. 2-6, State-listed species. Our database currently shows 36 MESA-listed species documented from the State Forest. The last sentence of the rare species narrative notes that state-listed dragon and damselflies are associated with the State Forest's coastal plain ponds. Only state-listed damselflies are known from MSSF.

P. 2-6, Table 2.2-4, State-listed species of Myles Standish State Forest. Eastern Box Turtle should be removed from this list. New England Bluet should be New England Bonaset, which is a plant, not an insect. Spinyleaf Bladderwort should be Subulate Bladderwort. Also, Eastern Hognose Snake (*Heterodon platirhinos*) is currently proposed for listing as Special Concern under MESA; this species is documented from the State Forest. If this species is approved for listing, official publication in the regulations would likely take place in early 2019.

P. 2-8, Natural communities. We have only four types of natural communities documented from the State Forest:

- Sandplain Heathland (S1), 4 occurrences
- Pitch Pine-Scrub Oak Community (S2), 2 occurrences
- Scrub Oak Shrubland (S2), 1 occurrence
- Coastal Plain Pondshore Community (S3), 23 occurrences

P. 2-9, Wildlife. In the second paragraph, third sentence, Eastern Whip-poor-will is given as a species in decline. That is certainly true; in fact, they have declined to the point that they are now listed as Special Concern under MESA.

P. 2-41, Applied Land Stewardship Zoning. The Pitch Pine-Scrub Oak Community covers substantially more of the State Forest than is indicated by the Zone 1 areas in Figure 2.9.1 and we ask that DCR revise this figure to reflect that reality. Note that unmanaged occurrences of Pitch Pine-Scrub Oak can often be dominated by tree oaks and/or white pine, reflecting the history of 75 years or more of effective fire suppression, and thus can easily present as not being pine barrens. Please work with our restoration ecologists to refine this figure before the public draft is released.

P. 2-46, Table 2.9.1, Priority recommendations for Myles Standish State Forest. We are pleased to see that the Natural Resources recommendations from the 2011 MMSF Resource Management Plan are carried over to this Plan. Since DCR has had six or seven years to implement those recommendations, it would be useful to note details on the progress towards the recommendations in this current plan, beyond the general notes summarized in Appendix K. These Resource Management Plans are living documents and should note any impediments to progress, where they exist, as well as summarizing where progress on recommendations has been made. Indeed, there should be realistic timelines for implementation of these recommendations (as well as those elsewhere in the plan); as without deadlines, it is difficult to ensure action on these items.

Section 3, Kingston State Forest

~~P. 3-4 and 3-5, Natural Communities.~~ We have no natural communities documented from this park.

Section 4, Ellisville Harbor State Park

~~P. 4-5, Rare Species.~~ Eastern Box Turtle should be removed from this list. Our database indicates that a pair of Piping Plovers did nest in the State Park in 2017, but that the nest failed.

~~P. 4-5, Natural Communities.~~ We have only one type of natural community documented from Ellisville Harbor State Park: Maritime Forest/Woodland.

Section 5, Pilgrim Memorial State Park, including National Monument to the Forefathers

~~P. 5-4, Rare Species.~~ Note that Frazier Memorial State Pier has a small area of Priority Habitat, which is for Least Tern (*Sterna antillarum*, Special Concern).

Section 6, Standish Monument Reservation

No comments.

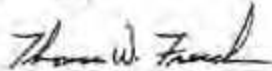
Section 7, Scusset Beach State Reservation

~~P. 7-5, Table 7.2.3, State-listed species of Scusset Beach State Reservation.~~ Eastern Box Turtle should be removed from this list. Note that Piping Plover is listed as Threatened under the federal Endangered Species Act, not Endangered as stated in footnote a.

~~P. 7-6, Natural Communities.~~ We have no natural communities documented from this property.

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

Sincerely,



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

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

To be added following receipt of comments from MHC.

Appendix E. Overview of the Cultural Development of the Myles Standish Complex.

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

Pre-Contact Archaeology

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

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

Paleo-Indian Period

The peopling of New England began shortly after the glaciers receded from this region. The first colonists, Paleo-Indian hunters and gatherers entered a tundra-like landscape and settled near major rivers and lakes. As the climate changed over the next several thousand years, continuously milder conditions encouraged a succession of forest types. The barren landscape was replaced by a spruce parkland/woodland, then by a pine/oak forest, and slowly by the mixed deciduous forest of today. Local wildlife also changed and adjusted to new habitats by moving elsewhere, adapting, or becoming extinct. At the same time, sea levels were continuously rising, and much of the former coastal plain was submerged and estuaries were created along the newly defined coast.

Although Paleo-Indian Period sites are few in New England, it is currently believed that the Paleo-Indian subsistence strategies reflected the high species diversity and unstable post-glacial ecosystems. These ecological conditions favored a

flexible generalist subsistence strategy that focused on a wide range of available food resources, as opposed to exploiting only a few food types.

The low site frequencies have been interpreted as a result of low Paleo-Indian population densities, with people organized into small, highly mobile groups, possibly familial units, who moved within large territories exploiting seasonally abundant plants and animals. The site frequencies may be partly a function of sample error, as rising sea levels created by the melting glaciers inundated a large extent of former coastal plain on which Paleo hunters and gatherers may have lived.

Evidence for the presence of Paleo-Indians in the vicinity of the Myles Standish Complex is sparse but compelling. One of the larger and better known Paleo sites in New England is located not too far away at Wapanucket, on Assawompsett Pond, in Middleboro. This site featured a comprehensive tool kit of eastern fluted points, graters, scrapers, channel flakes and other flaking debris. Interestingly, most of the raw materials were exotic cherts and jaspers, suggesting long distance trade links. Isolated finds of Paleo-Indian points have been reported from Mansfield, Bridgewater, Wrentham, Carver, and Norwell. A rare recovery of a Paleo-Indian artifact at the well-known Peach Orchard site in Marshfield suggests that coastal, or near coastal zones were occupied at this time.

Archaic Period

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

subsistence activities shifted to the gathering of nuts, berries and seeds; and hunting and trapping mammals, reptiles, and birds in the upland forests.

The Early Archaic Period is also poorly represented in the archaeological record of southern New England, and there is little substantive data on which to make interpretations of Early Archaic lifeways. As with the preceding Paleo-Indian Period, the low frequency of Early Archaic sites is interpreted as a result of low populations. Further, it was believed that Early Archaic activity focused around a few core areas where high site densities have been recognized for years. However, recent research has identified additional clusters, and many more sites with diagnostic bifurcate base points have been found scattered across the landscape as isolated occurrences, including one on East Head Reservoir in Carver and Plymouth. One was also found just north of Myles Standish on Great South Pond, and several miles to the south on Great Herring Pond. The wide variety of habitats in which Early Archaic sites are found suggests a settlement pattern based on the use of many different locations to exploit different types of available foods. The seasonal cyclical settlement pattern was a strategy that persisted throughout prehistory and was probably an adaptive response to the seasonally defined ecosystems of New England.

The exploitation of anadromous fish would continue to be the basis of the indigenous economy. Middle Archaic Period (ca. 8,000–6,000 BP) site types include semi-permanent base camps along rivers, streams, and wetlands; special purpose camps in uplands or near wetlands; stone tool workshops; and quarries. These sites are much more numerous in the region than those of the previous periods, with sites occurring in a wide range of habitats: margins of bogs, swamps, rivers, lakes, and ponds. This diversity has led to the speculation that seasonal scheduling of subsistence activities was well established by this time. The spawning behavior of anadromous fish is also believed to have been reestablished after having been disrupted by the Wisconsin Glacier. The intensified use of estuaries and streams connecting with interior spawning ponds is interpreted as a response to this newly available seasonal resource.

Although the majority of Middle Archaic sites tend to be located at freshwater sites, a few have been

found in what is today a coastal setting. When these sites were occupied these locations were gradually changing from an interior setting to a maritime one, as Plymouth Bay became inundated and the shoreline began to reach its current configuration.

Late Archaic sites (6,000–3,000 BP) are most represented in this region's prehistory. With an increase in population, and settlement into well-defined territories within river drainages, Late Archaic sites were located along riverbanks, and fresh water sources, meadowlands, rock shelters, and quarries. Emphasis was also placed on procuring raw material from quarries within these drainages.

As elsewhere in Massachusetts, more sites in the southeastern part of the state have yielded diagnostic Late Archaic period materials than the preceding periods, and may document a population increase ca. 6,000 to 3,000 BP. Late Archaic sites have been found in the widest range of habitats, and are larger and more complex than earlier periods. Studies that have included reconstructing past climatic conditions in the area suggest that recurrent or long-lasting dry periods greatly reduced available open water, forcing intensive use of the larger and deeper bodies of water. Some very large sites have been identified on the Taunton River and Assawompsett Pond. Elaborate burials, the result of rich ceremonial activities, occurred in some of these interior core areas. By this time the coastline had stabilized, and large shell middens in Kingston, Duxbury and Plymouth indicate a shift to marine resources.

Woodland Period

Stabilization of the coastline, changing artifact types, production of pottery and a shift to horticulture define this time period. With increased sedentism, Woodland Period (3,000–450 BP) sites are often large and along waterways. Coastal resources continued to be exploited and marine mammals, such as seals and whales were either actively hunted or butchered where they became stranded. Interior ponds, wetlands, streams and rivers continued to be occupied; each depending on the season of the year. Wooded sheltered lakes, ponds and wetlands were favored during the winter. Large rivers and streams particularly at falls and rapids became springtime fishing stations, and the estuaries and coastal marshes were occupied during the summer. With the coming of fall, groups began to move back inland getting ready to occupy their winter camps. Hunting

game birds and the migratory fowl that were briefly abundant, and the larger fur bearing animals whose pelts were thickening in their own response to the changing seasons, became the focus of subsistence activities. By winter the groups had split up into smaller family units and they began to draw down on some of the food surpluses that they cached from the previous seasons.

Post-Contact Period

European explorers had been visiting the Atlantic Coast of North America since at least the early sixteenth century. Repeated contacts with Native Americans likely occurred during these voyages. Settlement along the coast began in the early 1500s and continued for over a century. Eastern Massachusetts was settled by the British in the early 1600s. This influence remains evident in the names of many of its towns, counties, and rivers. Most historic resources at Pilgrim Memorial State Park are associated with European settlers, and two of the complex's properties are named after a prominent member of the Plymouth Bay Colony.

The Post-Contact Period began when Europeans first made contact with the local Indigenous Americans, about 500 years ago, and runs almost to the present. At the time of Contact the margins of Plymouth Bay were the central location of the Patuxets, a people thought to have been a cultural and linguistic subgroup of the Wampanoags. During this period core areas were established along major river drainages where local hunters and gatherers made seasonal rounds between the estuaries, its headwaters and associated tributaries, and interior ponds. It is believed that extensive settlement of the area's interior, such as areas of Plymouth and Carver, was discouraged by the presence of rocky uplands and excessively well drained sandy soils (MHC 1982). Such areas appear to have been peripheral to settlement and were probably used most during the fall and winter. Between 1616 and 1619, an epidemic referred to as the "plague" by 17th century writers severely decimated the local Native population by 90 percent.

With the founding of Plymouth in 1620, English settlements expanded along the coast and up several river drainages, primarily to the north of the original colony. The only interior settlement in the early 17th century occurred in present day Taunton, which developed as an agricultural and industrial center.

By 1656, one of New England's earliest iron works was erected in present-day Raynham.

The expansion of English settlement resulted in the displacement of most of the region's remaining Native population from the coast to inland ponds. Myles Standish State Forest was probably largely uninhabited at this time by either colonials or Native Americans, although travel through it occurred on a long-established trail system (Krussell 1971). King Philip's War (1675–1678) was particularly devastating to the local Native American population, as most of their land was confiscated and the survivors were widely dispersed throughout the region; many were sold into slavery in the West Indies. Today, only 0.3% of Plymouth County residents are Native American (<https://www.census.gov/quickfacts/table/PST045215/25023>).

Between 1710 and 1715, the land that comprises Myles Standish was included within a 30,000-acre tract of surveyed land known as the Ten Great Lots. These large plots were granted to individuals, corporations, or held as common land used largely for lumbering. They were long on their North-South axis and narrow on their East-West axis. Seldom were such lands actually occupied, rather they were used for their resources, or used for pasture, particularly for sheep. Later, as the core communities grew, land distributions were made to new settlers for occupancy.

The English population in the Plymouth Bay and North River areas increased dramatically in the 1700s with a focus on the rich marine resources of Cape Cod Bay. By 1774, Plymouth was home to 75 whalers and shipbuilding became important. Among the principal industrial developments within the interior portions of the region was the creation of bog iron production centers in Duxbury, Kingston, and Carver. Generally, however, outside of the principal core areas, settlement remained dispersed across the landscape and the economy was based on modest traditional farming activities.

By the 1770s–1830 several large industrial cities became prominent on the Taunton River and Buzzards Bay, but the area around today's Myles Standish State Forest remained rural and sparsely settled. By this time, use of local bog ore for iron production decreased as superior ores were imported from Europe and the Mid-Atlantic States. The

interior's timber resources were greatly diminished as forests were cut over. These economic trends, combined with associated wildfires, led to development of extensive Pine Barrens habitat.

Two important changes occurred in the region between 1870 and 1915. First was the introduction of cranberry cultivation from Cape Cod. This put the vast bogs back into economic viability after the collapse of the bog iron ore industry. These bogs continue to be prominent features across the region. Second was the establishment of summer homes and cottages around many interior ponds in the region. Such development began in Myles Standish in 1919.

In the 1930s the Civilian Conservation Corps (CCC) was established by President Franklin D. Roosevelt to provide employment opportunities for young men, and to improve the forest and recreational resources of the country. Two CCC Camps were present within Myles Standish from 1933 to 1935. Their efforts focused on forest management and recreation development. Evidence of both may still be seen at Myles Standish. The role of the CCC at other DCR parks in the region (e.g., Kingston State Forest) is less well documented.

Appendix F. Select Massachusetts Regulations Applicable to the Myles Standish Complex.^a

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

Appendix F. Select Regulations.

CMR ^b	Title	Comments
310 CMR 10.00	Wetlands Protection Act	Regulates many activities within 100 feet of wetlands and certified vernal pools, and within 200 feet of perennial streams and rivers.
310 CMR 15.00	Title 5: State Environmental Code	Standard requirements for the siting, construction, inspection, upgrade and expansion of on-site sewage treatment and disposal systems for the transport and disposal of septage.
310 CMR 19.00	Solid Waste Management	Regulates the storage, transfer, processing, treatment, disposal, use and reuse of solid waste; including stumps and other organic materials.
310 CMR 22.00	Drinking Water	Includes regulations for Transient Non-community Water Systems, which provide water to 25 or more persons at least 60 days/year.
312 CMR 2.00	Massachusetts Underwater Archaeological Resources	Standardizes procedures for the investigation, exploration, recovery, reporting, and preservation of shipwrecks and other underwater archaeological finds within inland or coastal waters.
314 CMR 4.00	Massachusetts Surface Water Quality Standards	These standards “secure to the Commonwealth the benefits of the Clean Water Act.” They designate the most sensitive uses for which the waters of the Commonwealth shall be enhanced, maintained and protected; prescribe minimum water quality criteria; and contain regulations necessary to achieve designated uses and maintain water quality. These standards include the identification and regulation of Outstanding Resource Waters (ORWs).
314 CMR 9.00	401 Water Quality Certification for Discharge of Dredged or Fill Material, Dredging, and Dredged Material Disposal in Waters of the United States Within the Commonwealth	These regulations establish procedures and criteria for the discharge of dredged or fill material, dredging, and dredged materials in waters of the United States within the Commonwealth.
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. Additional hunting regulations, specific to DCR parks, are identified in 302 CMR 12.00.
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.”
323 CMR 2.00	The Use of Vessels	Regulates the operation of motorboats, canoes, and kayaks. Includes special regulations for select rivers, lakes, and Great Ponds. Also regulates water skiing.
323 CMR 3.00	The Use of Recreation Vehicles and Snow Vehicles	These regulations specify that no person shall operate a snow or recreation vehicle on publicly-owned property except on trails marked and designated for such use; or in a manner that causes damage to...lands owned or managed by the Department of Conservation and Recreation.
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.”

Appendix F. Select Regulations.

CMR^b	Title	Comments
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 swimming pools be accessible; accessible routes through playgrounds; and that at least 5% of picnic facilities and campsites be accessible and dispersed among the recreation facility.
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.
521 CMR 30.00	Public Toilet Rooms	Requires at least one accessible sink and water closet in each adult public toilet room. For portable toilets, requires at least 5% but not less than one accessible toilet at each location.
521 CMR 31	Bathing Rooms	Describes requirements for accessible bathrooms, including that “in each bathing room where a shower or bathtub is provided at least one of each shall be accessible to persons in wheelchairs.”
527 CMR 14.00	Flammable and combustible liquids, flammable solids of flammable gasses.	Regulates the storage and handling of flammable liquids, combustible liquids, flammable solids, and flammable gases. Limits the storage of gasoline without a permit to: buildings not used for habitation nor frequented by the public, provided that the total quantity shall not exceed seven gallons and provided that it is stored in one or more approved containers.
801 CMR 4.02	Fees for Licenses, Permits, and Services to be Charged by State Agencies	Specifies fees for camping; parking; use of picnic pavilions, athletic fields, ice rinks, golf courses; special use permits; timber harvests, forester licensing, well digging, dam safety permits, and other miscellaneous activities.
950 CMR 70.00	Massachusetts Historical Commission	Standardizes procedures for conducting archaeological investigations in Massachusetts by controlling activities that will disturb archaeological properties. Requires a permit from the State Archaeologist for conducting “field investigation activities on any land owned or controlled by the Commonwealth.”
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.
<p>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.</p> <p>b. The Code of Massachusetts Regulations, or CMR, “contains regulations promulgated by state agencies” (Commonwealth of Massachusetts n.d.). These regulations “have the force and effect of law like statutes.”</p>		

Appendix G. DCR Cultural Resources Policy.

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

APPLICABILITY: All Divisions, Departments, Bureaus, and Staff

PROCEDURES:

I. Definitions

The following definitions explain terms used throughout this policy directive:

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

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

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

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

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

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

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

State Register - The State Register of Historic Places includes the following properties:

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

II. Mission Statement - Office of Cultural Resources

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

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

III. Implementation

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

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

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

IV. Regulatory Compliance—Project Planning

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

A. Local Landmarks and Historic Districts

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

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

B. State Register Review

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

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

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

C. Massachusetts Environmental Policy Act (MEPA)

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

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

D. Section 106 Review

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

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

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

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

A. Massachusetts Unmarked Burial Law

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

MGL Ch. 38, Sec. 6

<http://www.mass.gov/legis/laws/mgl/38-6.htm>

MGL Ch. 9, Sec. 26A and 27C

<http://www.mass.gov/legis/laws/mgl/9-26a.htm>

<http://www.mass.gov/legis/laws/mgl/9-27a.htm>

MGL Ch. 7, Sec. 38A

<http://www.mass.gov/legis/laws/mgl/7-38a.htm>

B. Preservation Restrictions

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

MGL Ch. 184, Sec. 31-33

<http://www.mass.gov/legis/laws/mgl/184-31.htm>

<http://www.mass.gov/legis/laws/mgl/184-32.htm>

<http://www.mass.gov/legis/laws/mgl/184-33.htm>

C. Consultation with Massachusetts Native Americans

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

Executive Order 126

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

VI. Resource Management and Planning

A. OCR Program of Inventory and Evaluation

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

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

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

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

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

B. Procedures for Protecting Cultural Resources

1. Acquisition of Land and Conservation/Preservation Restrictions

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

2. Resource Management Plan Development

OCR staff shall provide technical support toward the Resource Management Planning Program to ensure 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 H. Relationship Between Landscape Designations and Land Stewardship Zoning.^a

Landscape Designation Management Guidelines → Land Stewardship Zones ↓	Reserve – The least fragmented forested areas where ecological processes will predominate and inform management, and where commercial timber harvesting is not allowed.	Woodland – Forested areas actively managed for forest health, resource protection, sustainable production of timber, and recreation.	Parkland – Areas providing public recreation opportunities, connections to nature, and protection and appreciation of natural and cultural resources.
Zone 1 – Highly sensitive resources requiring special management approaches.	Rare species habitat, natural communities, archaeological sites, or fragile cultural sites identified as being sensitive to / easily degraded by human activities.		
Zone 2 – Resources that support recreational and management activities appropriate to the site.	Large areas of natural vegetation and associated natural and cultural features, including rare species habitat, that is compatible with dispersed recreation.	Forest stands and associated natural and cultural features, compatible with dispersed recreation and active forest management intended to enhance species and age class diversity.	Stable / hardy natural and cultural landscapes, where a variety of outdoor recreation activities can be provided in a sustainable manner.
Zone 3 – Intensive use areas, such as recreational sites or maintenance areas.	New zone 3s will not be established in Reserves. <u>Exception</u> – an RMP may identify existing intensive use areas missed during designation and not already captured in a Parklands designation area, in which case the application of a zone 3 may be considered.	Intensive recreation and park administration areas currently embedded within the forested landscape.	Areas that require regular maintenance by DCR staff, including altered landscapes in active use, intensive recreation areas, and park administration areas. Sites that may accommodate administrative or intensive recreation areas to meet future demands.

a. This graphic originally presented as Table 1 in DCR (2012).

Appendix I. Seasonal Cottage Campsite Application & Permit.



**DEPARTMENT OF CONSERVATION AND RECREATION
SEASONAL COTTAGE CAMPSITE PROGRAM
2020-2025 SEASONAL COTTAGE CAMPSITE APPLICATION & PERMIT**

Park	Camping Season Full Cottage Access	Off-Season
Ashmere Lake State Park, Hinsdale MA	2020-2021 2 nd Saturday in April – Columbus Day	No off-season cottage access
Myles Standish State Forest, Plymouth MA	2020-2021 2 nd Saturday in April – Columbus Day	2020-2021 January 1 – 2 nd Saturday in April Columbus Day -December 31 st access allowed per Section X of Permit (fee and notice required in case of emergency)
Pedlocks Island, Boston Harbor Islands	2020-2021 2 nd Saturday in April – Columbus Day	No off-season cottage access

REMINDERS:

Our office has provided you with (2) two pre-addressed envelopes:

Please forward payments only to:

Commonwealth of Mass – DCR
P O Box 419254
Boston, MA 02241-9254

Please forward Permit Information and Insurance Certificates only to:

David H. Farrag, Manager
Long Term Permits & Leases
Department of Conservation and Recreation
251 Causeway Street, Suite 600
Boston, MA 02114

- The seasonal cottage campsite must be closed, cleaned and secured in the evenings and for the off-season, including the removal of all furniture, sporting equipment, boats, floats and docks, cars, home décor items, flammables, etc. All Park visitors and staff must have unimpeded access to all park lands and the shoreline at all times.

Appendix I. Seasonal Cottage Campsite Application and Permit.

- Call 911 and notify Park staff ASAP for any lost person, unattended campfire, forest fire, swimmer or boater in distress, injured person, hazardous material or unsafe condition.
- A violation of the Permit provisions may be cause for revocation of the license or exclusion from the program. This permit is not a residential agreement.

ALL DOCUMENTS AND FULL FEE PAYMENT MUST BE RECEIVED BY DCR *BEFORE* YOU OCCUPY YOUR CAMPSITE. A FULLY EXECUTED PERMIT SHOULD BE KEPT ON HAND AT YOUR COTTAGE.

**DCR SEASONAL COTTAGE
PERMIT CONDITIONS AND TERMS**

Pursuant to the authority set forth in Massachusetts General Laws, c. 132A, §§ 2D and 7, c. 92, §§ 33, 37 as amended; Titles 302, 304 and 350 of the Code of Massachusetts Regulations, as amended; and all other enabling and applicable powers, the Commonwealth of Massachusetts, Department of Conservation and Recreation (hereinafter “the Department”) is authorized to issue licenses to maintain, use and occupy a summer seasonal cottage campsite on lands owned by the Commonwealth under the care, custody and control of the Department in accordance with the terms and conditions set forth herein. In order to protect the rights and safety of the general public as well as to ensure the reasonable exercise of the permitted use, the following conditions and provisions shall govern:

- A) In consideration of such use the Permittee shall pay to the Commonwealth a fee in full, as indicated in the fee schedule below, prior to any authorized use and occupancy. Payment shall be paid only in the form of personal check (subject to insufficient fund fees), certified check, or cashier’s check made payable to the Commonwealth of Massachusetts. According to 801 CMR 4.02, the Seasonal Cottage Campsite Program fee schedule is as follows:

Ashmere Lake State Park cottages..... \$ 900

Myles Standish State Forest cottages:

College Pond	\$3800
Curlew Pond	\$3800
Fearing Pond	\$1620
Rocky Pond	\$3800
Widgeon Pond	\$3800

Pedlocks Island cottages \$ 400

Permittees shall remit the required payment in full, the signed permit pages, proof of required insurance and all other documents required or requested to the Department of Conservation and Recreation. For coverage of risks and indemnification, insurance should be obtained and a copy of any certificates of insurance shall be provided prior to the season and actual occupancy; see Section N below for further details.

- B) This Permit is issued with the approval of the Commissioner of the Department under the statutory and regulatory powers provided above and pursuant to which this Permit may be canceled at any time within thirty (30) days after notice of a default, or such additional time as may reasonably be required to correct any such defaults, or for any reason which, in the sole opinion of the Commissioner is in the public best interest. Such cancellation shall become effective within thirty (30) days after mailing a written notice thereof to the Permittee at the address listed in the permit. Thereafter, the Department, its agents, contractors, servants or employees, may remove or cause to be removed the camp or other structure, including the personal property within the permitted area, or may destroy on site said property, whichever is in the best interest of the Commonwealth without further notice or liability therefore against the Commonwealth.
- C) The provisions of paragraph B notwithstanding upon the adoption by the Department of a change in Land Use Policy which would prohibit further issuance of cottage campsite permits, the Department

shall provide Permittee a minimum of three years notice prior to the termination of the program and issuance of permits. This paragraph C does not apply to Peddocks Island permits.

- D) No costs for site improvements such as wells, septic systems, water meters, testing, inspection or reporting required by any law, rule or regulation, etc. will be reimbursed to permit holders for any reason.
- E) No portion of any fee paid on a permit which has been canceled due to Permittee default shall be returned.
- F) All (painted or stained) camps shall be conservative colors and combinations, preferably either brown or green paint, or brown or green stain. Approval of the colors to be used must be given in writing by the Facility Supervisor before painting any camp. Camps shall be kept painted and neat. Cottages on Peddocks Island may remain the current color and when or if repainting occurs, the Cottage must be repainted that same color or painted a conservative brown or green.
- G) It shall be the responsibility of the permit holder to maintain the lot in a neat and satisfactory condition including removal and disposal of any dead trees or shrubs and maintain the driveway or parking area within the respective lot. The removal of standing trees and shrubs shall be subject to the prior written approval of the Facility Supervisor or his designee. Suspected invasive species should not be planted and should be reported to the Facility Supervisor or his designee for proper identification and treatment. No objects may be affixed to any trees or vegetation on Department property. No plantings shall be allowed unless approved by the Facility Supervisor. The building(s) shall be kept in a neat, safe and sanitary condition at all times. No cars, tires, bins, barrels, storage containers, etc., shall be allowed without approval of the Facility Supervisor. Disposal of trash, refuse, or brush clippings shall mean disposal off the premises and off park property. In the case of island locations, refuse must be properly removed off the island on at least a weekly basis.
- H) Cottage owners must remove all personal property including boats, tables, chairs, inflatables, docks, floats, etc., on or before **Columbus Day of each season**, from the campsite and/or store them inside or neatly beneath the Cottage, covered, hidden from view, and secured against animals and storms, or taken off-site. Any items that are left outside the Cottage at the end of the season may be removed and disposed of by the DCR with no further notice or liability therefore. Any cost of removing and disposing of these items will be at the expense of the Cottage owner on the lot where said items were found to be and the Cottage owner may be billed for this expense by the DCR.
- I) No open fires shall be built upon the lot except in existing fireplaces. The design and location of any fireplaces must be approved in writing by the Facility Supervisor. Cottage owners must comply with all local and state regulations applicable to open burning.
- J) The Permittee shall not authorize use of said camp to any other person(s) for compensation of any kind (i.e. no seasonal renting).
- K) The Permit holder shall notify the Facility Supervisor in writing in advance when the campsite permitted is to be used and occupied by persons other than the permittee or their immediate family. Use and occupancy by anyone other than the permit holder, or immediate family of the permit holder, shall be limited to a maximum of ten (10) days during the term of this permit. Permit holders and their guest(s) shall be subject to all rules and regulations governing the Department lands. Off Season overnight use of the cottage campsite is prohibited without an additional camping permit (See Sections T and X herein).

- L) In the event of a fire, a natural disaster, or other casualty, if the Department determines that more than 50% of the total cottage structure, excluding foundations or footings, is destroyed, reconstruction of said structure shall not be allowed. All debris shall be removed by the Permittee within 90 days of said determination. If damage is determined to be less than 50%, the necessary repairs may be made after receipt of written approval by the Department. Any and all repairs must be of a character and design consistent with the original structure using the same footprint, dimensions, and similar materials. All restorations and/or rebuilding must be completed within 12 months of the date of approval to make repairs and a current permit must be paid in full during the construction process. Additional permits may be required by DCR Engineering and some local authorities (e.g. fire, electrical).
- M) The Permit is in no way intended to convey exclusive use to the Permittee of any part of the land used in conjunction with said authorization. The permit does not convey a property right. It is not a lease or rental agreement; it is a revocable license for specific use under specific terms and conditions. Additionally, the exercise of this permitted use shall constitute Permittee's acceptance of complete liability and responsibility for Permittee's use of the property, its actions, and the actions of its members, guest, invitees, agents, contractors and employees upon the site, and an agreement that the Permittee will indemnify, defend and hold harmless the Department against any and all claims that may arise there from. Further, the Permittee will not make any claims against the Department for any injury, loss or damage to persons (including bodily injury or death) or property occurring from any cause arising out of the authorized or unauthorized use by the Permittee, its agents or guests.
- N) The Permittee shall also procure from an insurer licensed to do business within the Commonwealth a general public liability insurance policy with coverage amounts of not less than \$100,000 per occurrence and \$300,000 in aggregate naming the Commonwealth of Massachusetts Department of Conservation and Recreation as an additional insured for liability and notice. Permittee shall notify the Department of cancellations or changes or ensure that a notice endorsement is obtained from the insurer. A current certificate of insurance must be delivered to the Department along with the duly executed Permit and fee.
- O) The lands upon which the seasonal cottage campsite is located are public lands and at all times members of the public shall be allowed free and unimpeded access over and across the lands upon which the seasonal cottage campsite is located. The Commissioner and the Department officers, agents and employees shall have the right-of-way and access over any camp lot at all times for the proper discharge of their duties.
- P) No alterations, non-routine repairs, additions, or new sheds and outbuildings of any kind shall be initiated without the prior written approval of the Commissioner of DCR and designated senior staff. All work shall be done under the direct supervision of the Facility Supervisor and other applicable Department staff. Any and all work that may be authorized by the DCR will be subject to all applicable permitting requirements. Failure to comply with all applicable local building and permitting requirements will result in revocation of the license for use of the campsite. By executing this permit the Permittee declares that to his/her personal knowledge, no unauthorized alterations, repairs or improvements have been made to the cottage herein authorized and acknowledges that misrepresentation will be grounds for permit revocation.
- Q) No trailers or other dwellings, in addition to the one single family summer seasonal cottage herein permitted, shall be allowed on any lot used under a permit. Use of garages, sheds, or other structures for dwelling purposes is prohibited.

- R) No drains from sinks, showers, bathtubs, or septic tanks, shall be allowed to drain or leach into a pond, body of water, shoreline or natural drainage, either above or below the surface.
- S) Effective with the issuance of the 2006 permit and as per 310 CMR 22.02, privately-owned cottages in the DCR Seasonal Cottage Campsite Program formally meet the definition of a Public Water Non-Community System. All active wells have been assigned a Location Code and Location Name. The Permittee is required to comply with Massachusetts Department of Environmental Protection (MassDEP) drinking water requirements. All testing shall be reported to DCR on MassDEP approved forms, and to MassDEP if required by MassDEP regulations/forms, as follows:

1. **Annual Start-up Procedure:** A MassDEP Seasonal Start-up Procedure and Certification form shall be submitted by the Permittee (and signed by the Permittee as “responsible party” within Section C of the form) for each well serving a privately-owned cottage. The Permittee shall submit the form to MassDEP at the address on the form with a copy to DCR and Whitewater Inc. in accordance with Paragraph S(4). The annual Start-up Procedure and Certification must be completed by the Permittee at least 5 days prior to activating the well or occupying the campsite. The form may be found at:

<http://www.mass.gov/eea/docs/dep/water/drinking/alpha/i-thru-z/seasonal-cert.pdf>.

2. **Routine Quarterly Testing:** Each well serving a privately-owned cottage shall be sampled by the Permittee during the 2nd calendar quarter (April – June) for total coliform bacteria and during the 3rd calendar quarter (July – September) for total coliform bacteria and nitrate. This twice quarterly sampling is required to be completed by June 30 (2nd quarter) and September 30 (3rd quarter) during each permitted season of occupancy. The Annual Start-up analysis cannot be used for the quarterly sampling requirement. A new sample must be taken after the well has been in use.

3. **Routine Tri-annual Testing:** Each well serving a privately-owned cottage shall be sampled by the Permittee during the 2nd calendar quarter (April – June) every three years for nitrite, sodium and manganese. This sampling began in 2018.

4. All analyses **shall** be conducted using analytical methods approved for the monitoring of drinking water supplies. All water sampling results shall be sent to:

a.) **WhiteWater Inc.** by e-mail in PDF (preferred) to: EBurkett@Rhwhite.com

If the Permittee does not have access to email, paper submission may be made to:

WhiteWater Inc.
Attn: DCR Cottage Campsite program
253 Worcester Road
Charlton, MA 01507,
T: 888-377-7678 F: 508-248-2895,

AND

b.) **DCR Engineering** by e-mail in PDF (preferred) to: Raul.Silva@mass.gov

If the Permittee does not have access to email, paper submission may be made to:

Department of Conservation and Recreation
Attn: Raul Silva, Deputy Chief Engineer
251 Causeway Street, Suite 600
Boston, MA 02114

The safety and health of all other permittees and users of the forest and waters depend on your compliance.

If any test determines the presence of Total Coliform or exceedance of any drinking water standard, the Permittee must cease use of the well, notify DCR and Whitewater immediately and prior to the treatment or changes to the well, and ensure that such immediate notification be made both to Whitewater at (888) 377-7678 or EBurkett@Rhwhite.com and DCR Deputy Chief Engineer Raul Silva at (617) 626-1392 or Raul.Silva@mass.gov. Follow up sampling of the well within 24 hours will likely be required.

Should a well be contaminated or otherwise in non-compliance with law, it may be subject to closure sealing and other action by the Permittee to comply with law, including MassDEP regulations.

- T) As of January 1, 2006, no transfer of a summer seasonal campsite permit will be authorized or approved by DCR.
- U) The premises herein permitted shall be subject to a minimum of one pre-season exterior inspection to determine compliance with the aforementioned conditions, as well as with local health and safety standards. The Permittee may be required at the request of the DCR to submit a completed campsite inspection report on a form to be provided by the DCR, and subsequently verified by the DCR. Owners of cottages found to be out of compliance will be notified of the discrepancies and given a time by which the situation must be corrected. If discrepancies are not corrected within that time, permits will either not be issued the following year or may be revoked.
- V) Any and all driveway barriers, gates or similar devices are prohibited. No Permittee shall erect, maintain or cause to be erected any sign, fence, perimeter barrier or impediment to public access at any site governed by this permit.
- W) At Myles Standish State Forest, no more than five (5) actively used vehicles may be parked at or adjacent to any campsite after 8:00 pm unless approved in writing by the Director of the Division of State Parks and Recreation or the Facility Supervisor. At island properties, motorized vehicles are prohibited unless a written approval permit is issued by the DCR. All vehicles at any park should be removed by the end of the season.
- X) This is an annually issued permit. Cottage occupancy and access follows the annual Program Schedule (See Page 1 above) according to Permit Terms. Payment for the permit must be received by the Department in full no later than: i) the due date listed on the DCR permit application; or ii) the permittee's first day of cottage occupancy for that year. It is understood that the Department may exercise its discretion to cancel the permit or to refuse to issue succeeding permits as per sub paragraphs B and C herein. At Myles Standish State Forest and Ashmere Lake State Park, overnight occupancy of the permit premises is allowed during the following period and shall not exceed (179) days annually: the Friday of Patriots Day weekend through Columbus Day for all campsite owners. By special request Myles Standish State Forest campsite users may stay overnight during the off-season for up to three (3) consecutive nights at a time (for no more than six (6) consecutive nights total per stay) beyond the period stated above. The procedure to be followed is: 1) permittee must notify and request approval

from the Park Facility Supervisor at least two days prior to planned arrival or stay (by giving the Park Facility Supervisor your name, camp lot number, pond name and stating how long you seek to stay; and 2) upon arrival, you must check in at the Park Headquarters, register, and pay the established winter camping fee for the intended length of your use. Failure to notify the Park Facility Supervisor of your intent to occupy the premises overnight and failure to make payment of the applicable fee in a timely manner shall be considered reason for revocation or future non-issuance of the camp permit. For off-season day use at MSSF, permittees are encouraged to phone or stop by Headquarters to advise Park staff of cottage use. All permittees are encouraged to advise local Park staff when opening and closing their cottage for the camping season. Peddocks Island occupancy periods remain unchanged.

- Y) No generated electricity will be allowed at any of the cottage camp sites without the written permission of the Facility Supervisor.
- Z) At Myles Standish State Forest, piers, floats (solid or inflatable) and buoys are not permitted to be installed or utilized, temporarily and or permanently, on or in the ponds. A temporary dock or mooring permit will be considered or granted via a permit for each Cottage Campsite that had a permit for a dock or mooring during the prior season. Permits may be requested by writing to the Park Supervisor. Please include a copy of your prior dock or mooring permit with your request. Piers, floats and buoys are not permitted on Peddocks Island.
- AA) In the event, due to the exercise of this permit, a tax or fee is levied on the premises during the year in which the permit is in force, the Permittee agrees to pay such tax or fee when due and shall make no claim against the DCR or the Commonwealth of Massachusetts.
- BB) DCR Parks contain numerous sites of archaeological significance and therefore no digging, excavation, or soil disturbance of any kind shall be allowed except by a pre-approved Special Use Permit which has its own fee schedule and approval process. Soil activity shall be conducted under the site supervision and approval of the Department archaeologist or other appropriate personnel designated by the Department, and in compliance with the Massachusetts Historic Commission regulations. Existing gardens at Peddocks Island, with established history of soil disturbance, may continue to be used providing there is no increase in their overall size, depth, or configuration. Requests for approval of continued use of such gardens, or any other soil disturbance, must be requested annually, in writing, from the Facility Supervisor.
- CC) A Cottage Campsite Permit holder who happens upon or is notified of a lost person, an unattended campfire, any possible forest fire, a swimmer or boater in distress, an injured person, hazardous material or condition shall make this situation known to the Facility Supervisor, his designee and emergency services agencies as soon as possible. A Cottage Campsite Permit conveys no authority for the Cottage Campsite Permit holder to act as a Department Host Camper, agent, or employee at any Department Campground or property.

This Permit may not be changed in any way by the Permittee to qualify for approval. All terms and conditions set by the Department are final.

Questions may be addressed in writing to DCR Permits at the above address or by e-mail: DCR.permits@mass.gov. Telephone inquiries must be reasonable and may be answered in writing. Occupancy may only commence upon receipt of all required documents and full payment by the Department. Permittees may be required to show a fully executed permit in hand.



DEPARTMENT OF CONSERVATION AND RECREATION
SEASONAL COTTAGE CAMPSITE PROGRAM



20 - 2021 SEASONAL COTTAGE CAMPSITE PERMIT – SIGNATURE PAGE #1

COTTAGE LOCATION:

Cottage Number: _____

Check One: ☐ Ashmere Lake ☐ Peddocks Island ☐ MSSF- Pond: _____

Authorized Permittee(s) as of 2006 _____

Permit Fee: \$ _____

Please check to acknowledge:

- ☐ Insurance Requirements (Section N)
- ☐ Water Testing requirements (Section S)
- ☐ Occupancy requirements (Section X)

AUTHORIZED PERMITTEE SIGNATURE: Applicant and Witness, please sign below:

I have read the conditions and provisions above, and I approve and agree to these permit terms.

Authorized Permittee Signature

Date

Print Name

Date of Birth

DCR AUTHORIZED APPROVAL:

Jim Montgomery, Commissioner

Date

**Please return BOTH SIGNATURE PAGES WITH ALL OTHER DOCUMENTS.
One fully executed copy of the Signature Page will be returned to you by mail or E-Mail.**



DEPARTMENT OF CONSERVATION AND RECREATION
SEASONAL COTTAGE CAMPSITE PROGRAM



2020-2021 SEASONAL COTTAGE CAMPSITE PERMIT – SIGNATURE PAGE #2

COTTAGE LOCATION:

Cottage Number: _____

Check One: ☐ Ashmere Lake ☐ Peddocks Island ☐ MSSF- Pond: _____

Authorized Permittee(s) as of 2006 _____

Permit Fee: \$ _____

Please check to acknowledge acceptance of:

- ☐ Insurance Requirements (Section N)
- ☐ Water Testing requirements (Section S)
- ☐ Occupancy requirements (Section X)

PERMITTEE SIGNATURE: Applicant and Witness, please sign below:

I have read the conditions and provisions above, and I approve and agree to these permit terms.

Authorized Permittee Signature

Date

Print Name

Date of Birth

DCR AUTHORIZED APPROVAL:

Jim Montgomery, Commissioner

Date

**Please return BOTH SIGNATURE PAGES WITH ALL OTHER DOCUMENTS.
One fully executed copy of the Signature Page will be returned to you by mail or E-Mail.**

Appendix J. GIS Supplemental Information.

J.1. METHODS

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

Property Boundaries

The quality of digital boundaries for each property within the Myles Standish Complex can, based on source data, be described with three categories: highly accurate; reasonably accurate (for planning purposes); and accuracy undetermined. Measured by length approximately 60% of the digital boundaries are based on highly accurate data, such as most real estate surveys and deeds; and interpreted orthoimagery, such as for hydrographic features and building footprints. About 25% are based on reasonably accurate data, such as digital assessor parcel data. The remaining 15% are based on data of lower precision, such as US Geological Survey (USGS) topographic quadrangles; or of varying or undetermined accuracy such as sketches, sources lacking metadata about their precision or overall accuracy, or undocumented sources.

As part of the planning process, DCR GIS analysts edited the digital representations of boundaries for several properties in this RMP. New roads, driveways, and trails relevant to this plan; or those existing relevant ways that had not already been digitized; were digitized from best available sources, such as orthoimagery and global positioning system (GPS) tracks for trails.

Edits of note include:

Myles Standish State Forest - A representation of the DCR right of way to Federal Furnace Road was corrected. Many abutting and other associated recently protected openspace parcels or openspace parcels not represented in the MassGIS Openspace database were digitized from readily available sources, mostly the MassGIS Assessor Parcel dataset. They are reasonably accurate for resource management planning purposes.

Kingston State Forest - All boundaries represented in MassDOT survey plans for the highway layouts

and for land transferred to the care and control of DCR were fit as-is (i.e., not distorted) into the existing MassGIS Openspace “fabric” (continuous feature layer). Adjacent boundary lines were adjusted to “best fit,” minimizing variance and resulting in highly accurate boundary lines for the site. The several MassDOT easements depicted were then delineated the same way.

Ellisville Harbor State Park - Boundaries are based on DEM Order of Taking, Book 12893 Page 68 *et seq.*, including Subdivision Approval-Not-Required (ANR) registered land survey plan by The BSC Group, July 10, 1991; Plan Bk 34 P 550.

The mean high water (MHW) line boundary was established by first overlaying in the state coordinate system projection on MassGIS Openspace data the cited survey plan. Then the MassGIS-scanned NOAA nautical chart of the harbor, and the MassGIS town lines based on registered land survey points were added. MassGIS orthoimagery overlays and separately, oblique aerial imagery, were also reviewed for the process; especially in regard to the jetty's locus.

The centerline of creek boundary was established from the Trust for Public Land survey plan, Plan Book 34 Page 550, including the property line point agreed upon in the August 2001 settlement agreement with Ellisville Harbor Conservation Trust.

The Harlow Farm House Lease area was digitized from the DCR December 2009 lease boundary survey plan.

The tidal zone gifted to the Commonwealth by the Ellisville Harbor Conservation Trust, Book 21339 Pages 347–348, was digitized from the trust survey plan. The mismatch between its MHW line and the existing line was then filled and planarized to remove gaps and overlaps, and the seam was deleted to create a single property shape extending to the survey's mean low water (MLW) line.

The roadway from the state highway “Center Hill Road” is delineated on the 1991 BSC plan and labeled as an “Existing Cart Path” and “Right Of Way” extending to “120 feet +/-” from “Mean High

Water”. The roadway line was digitized to extend to that point.

Pilgrim Memorial State Park - This map includes a locus map and inset map showing the National Monument to the Forefathers. The tideland under the pier is treated as part of the park for resource management purposes, so is shown within the park; the boundary extends along the seaward edge of the pier, as viewed in the MassGIS aerial orthoimages and oblique aerial imagery.

A narrow, variable width sidewalk utility easement to the town along the west edge of the property was digitized visually from the governing easement sketch. It is of lower quality and is represented here only for resource management planning purposes. Note that the sketch shows bearings and distances, but the easement is variable width and adjustable, as needed for the purpose; so the sketch is only generally representative of the terms of the easement. The National Monument to the Forefathers site contains a five-foot-wide utility pole easement near its southern boundary that is not mapped.

Standish Monument Reservation - The driveway was digitized from MassGIS aerial orthoimagery and pictometry oblique imagery, informed by DCR GPS trail data. In the imagery, tree cover obscures the driveway (and most of the parking lots), so the map is only generally representative and is for resource management purposes only. A sketch represents the utility easement that extends between the property and Myles View Drive.

Scusset Beach State Reservation - The lease area is based on the Army Corps of Engineers (USACE) lease. It does not include tideland, so the MassGIS coastal wetlands physical beach feature was added for orientation. Also, DCR GPS trail lines to represent the Cape Cod Canal fish pier adjacent to the lease area were added for orientation, but no land under the pier was added to the representation of the reservation. The MassDOT functional replacement land feature was updated to show DCR care and control and the full extent of the property transfer and is based on MassGIS assessor parcel data.

Coastal Storm Data and Land Elevations

Coastal storm data were provided by MassGIS from the Massachusetts Executive Office of Energy and Environmental Affairs Office of Coastal Zone

Management (CZM)

(<https://www.mass.gov/service-details/massachusetts-ocean-resource-information-system-moris>). Data are based on raster data, which at the spatial resolutions of the site maps display as fairly coarse color-coded grid squares (similar in appearance to floor tiles). At the geographic scales of the coastal site maps the data have serrated edges. The MassGIS land elevation and hill-shading data also are based on a relatively coarse grid, so the map overlays have similar jagged edges along the seaward edge of the coastal site maps.

Land Stewardship Zoning

A DCR GIS analyst digitized the Zone 1, Zone 2, Zone 3, and Significant Feature Overlay (SFO) areas in ArcGIS. To make the areas more easily identifiable on site for management, physical features - such as trails or streams - and dimensional offsets (i.e. buffers) and straight-line connections were used to form the boundary for each zone or SFO.

Myles Standish State Forest - Zoning in this RMP is based largely on that presented in the previous Myles Standish Planning Unit RMP (DCR 2011). Changes in zoning were made to reflect changes in operations or physical conditions, the Forest’s designation as a Reserve, and to address comments from NHESP. The changes are summarized below.

The major zoning change is a very large increase in Zone 1 area from previous zoning; it now comprises 70% of the state forest. The Zone 3 area at Bumps Pond was extended south to Halfway Pond Road, and at Barrett Pond it was extended north to the same road, and in the headquarters area it was reshaped.

The SFO for the Pheasant Management Area was extended south to the next intersection, and an SFO was added over the state forest’s extensive multi-use path network.

More information on the Myles Standish State Forest’s zoning is presented in Section 2.9.

Kingston State Forest - The Forest is Zone 2, except for a Zone 1 buffer around Great Mink Hole, and Zone 3 areas for parking lots on both sides of Route 80 and all MassDOT maintenance easements along both highways.

More information on Kingston State Forest's zoning is presented in Section 3.9.

Ellisville Harbor State Park - About half of the Park (i.e., the bog, marsh, and barrier beach dunes) is Zone 1. The Historic Curatorship lease area and adjacent access and parking lot, the Wing House grounds, and the beach are Zone 3. The beach and southern dunes have an SFO.

More information on Ellisville Harbor State Park's zoning is presented in Section 4.9.

Pilgrim Memorial State Park - The Park and its satellite are Zone 2. The Cole's Hill parcel and the radius encompassing the circumferential path around the National Monument to the Forefathers have SFOs.

More information on Pilgrim Memorial State Park's zoning is presented in Section 5.9.

Standish Monument Reservation - The Reservation is Zone 2; except for a Zone 3 area encompassing

the loop in the driveway and the area it encloses, parking, the lawn area, and the pavilion.

More information on Standish Monument Reservation's zoning is presented in Section 6.9.

Scusset Beach State Reservation - The reservation is Zone 2; except the area seaward of all driveways is Zone 1; and all areas enclosed by driveways, and the yards south of the entrance, and around the headquarters complex, and at the dump station are Zone 3. The adjacent beach has a significant feature overlay and is also Zone 3.

More information on Scusset Beach State Reservation's zoning is presented in Section 7.9.

J.2. MAJOR DATA SOURCES

A summary of the major data sources used by the DCR GIS Program to generate and display data within the Myles Standish Complex RMP is presented in Table J.1.

Table J.1. Summary of major data sources used to create the Myles Standish 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/dctrails.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
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

Appendix J. GIS Supplemental Information.

Datalayer Name	Additional Information
MassDOT Highway Layout Maps	http://gis.massdot.state.ma.us/maptemplate/statehighwaylayouts/
MassDOT Geodetic Control Points	http://gis.massdot.state.ma.us/maptemplate/geodeticcontrol/
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
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
Elevation Imagery (Street Level) (various years) Color Google	https://www.google.com/maps/
Oblique Imagery (2002-2004, 2008, 2015, 2017) Color Pictometry	https://explorer.pictometry.com/index.php (requires account)
Ortho Imagery (1990s) 1:5,000 Black and White	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/oqdesc.html
Ortho Imagery (2001, 2003) 1:5,000 Color	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2001.html
Ortho Imagery (2005) 1:5,000 Color	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2005.html
Ortho Imagery (2008/2009) Color USGS	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2008.html
Ortho Imagery (2013/2014) Color USGS	http://www.mass.gov/anf/research-and-tech/it-serv-and-support/application-serv/office-of-geographic-information-massgis/datalayers/colororthos2013.html
Ortho Imagery (c. 2018) Color Pictometry (with other providers)	https://explorer.pictometry.com/index.php (requires account)
Ortho Imagery (c. 2018) Color Google	https://www.google.com/maps/

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 K. Photo Credits.

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

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

Page	Photo	Photographer	Source ^a	Modifications ^b	Creative Commons ^c	Terms of Use
Cover	Plymouth Rock portico	Matt Villamaino	Photographer	C	No	A
1-1	Plymouth Rock	John Hartnup	Flickr	C, R	Yes	A, N, S
1-6	Hanover Branch Rail Trail	John Phelan	Wikimedia	C, R	Yes	A, S
2-7	Northern red-bellied cooter	Bill Byrne via USFWS	Flickr	C, R	Yes	A
2-9	Eastern towhee	Bill Thompson USFWS	Flickr	C, R	Yes	A
2-17	Fearing Pond bathhouse	Unknown	DCR Archives	B, C, R	No	-
3-4	Plymouth gentian	Kristine Paulus	Flickr	C, R	Yes	A
4-14	Aerial view of former Harlow Farm Stand	-	Oliver	A, C, R	No	A
4-15	Multiple trails	-	Oliver	A, C, R	No	A
5-1	Portico at sunrise	Matt Villamaino	Photographer	C	No	A
5-4	Portico at high storm tide	Matt Villamaino	Photographer	C	No	A
5-18	Roving interpreter	Matt Villamaino	Photographer	C	No	A
5-21	Restoration of Forefathers Monument	Matt Villamaino	Photographer	C	No	A
6-4	Standish Monument, 1922	Leon Abdalian via BPL	Flickr	B, C, R	Yes	A
7-4	Predicted flooding	-	Oliver	A, C, R	No	A
7-11	Scusset Beach ca. 1960	Unknown	DCR Archives	A, B, C, R	No	-

- Sources of photographs include: Flickr = Flickr via Creative Commons (<http://creativecommons.org/>); MassGIS = created in ArcMap using MassGIS data layers; Oliver = MassGIS's Online Mapping Tool, [follow links](#) to corresponding maps used to generate images; and Wikimedia = Wikimedia Commons (https://commons.wikimedia.org/wiki/Main_Page).
- Modifications include: A = Auto Smart Fix in Photo Shop Elements 6.0; B = Convert to black and white; C = Cropping to either 3.25 x 2.4 inches or 7 x 3.5 inches; F = Manually adjusted using Adobe Camera Raw filter in Photoshop CC 2018 and Camera Raw CC; 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 are identified with a "Yes;" they are hot linked to their associated Creative Commons license(s).
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