Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Charge Pond Campground Complex Protection Plan

Date Posted: June 30, 2021
End of Comment Period: August 14, 2021

Region:	**South**
Recreation District:	**Cape Cod**
Forest Management District:	**Southeast**
State Forest:	**Myles Standish State Forest**
Closest Road:	**Charge Pond Road**
Town:	**Plymouth**
Contact Information:	**Paul Gregory** **194 Cranberry Road** **P.O. Box 66** **South Carver, MA02366** **(508) 465-9372** **paul.gregory@mass.gov**

Overview:

The principal objective of this project is to protect the campers of the Charge Pond Campground Complex in the event of a wildfire. A wildfire occurring in or near the Complex would require extensive evacuations and protection. The Complex is closely interfaced with pitch pine-scrub oak fuels and only has one access road. A wildfire approaching the Complex has the potential to overwhelm the area rather quickly. By thinning fuels and providing a dedicated safety zone the proposal is designed to reduce hazardous fuel loads and reduce the risk and/or spread of wildfire. An added benefit of the project is restoration of pitch pine (*Pinus rigida*) and scrub oak (*Quercus ilicifolia*) natural communities. These communities are often referred to as 'pine barrens'.

Adjacent to this protection plan proposal is a larger joint project with MassWildlife to restore over 2,000 acres of pine barrens across Myles Standish State Forest, the Camp Cachalot Conservation Easement, Maple Springs Wildlife Management Area, and the Southeast Pine Barrens Wildlife Management Area.

The protection plan proposal was selected for management at this time because:

- The draft Myles Standish Planning Area Fire Management Plan recommends:
    - Creating fire protection for Charge Pond campgrounds;
    - Implementing fuels reduction around campgrounds at Charge Pond; and
    - Improving the safety zone at North Beach (Charge Pond).
- It will build upon ongoing adjacent pine barrens restoration work; and
- High fuel loads exist within and in close proximity to the Charge Pond Campground Complex.

The protection plan endeavors to:

- Mechanically thin highly flammable vegetation between campground loops in the Charge Pond Campground Complex - a 175 acre campground complex imbedded in a fire-dependent ecosystem to reduce high fuel hazards in a high wildfire danger setting. This operation will lessen potential wildfires thereby increasing public safety and providing safe access for firefighters and fire apparatus.
- Create a designated safety zone within the Charge Pond Campground Complex to provide an on-site, clear, and safe area for the public to take refuge in the event of a wildfire.

Project Area Description:

Complex Information:

There are seven campground loops (A; B North; B South; C; D; E; and F) with approximately 250 campsites in total, and a maximum occupancy of approximately 1,250 people in the Charge Pond Campground Complex.

The Complex was burned in a wildfire in May of 1964. As a result, much of the organic layer was burned away leaving a harsh environment tolerable mainly for pitch pine. As such, these areas consist mainly of pole sized pitch pines. Stocking is highly variable ranging from a dense canopy of pitch pine to more open areas of scrub oak and heath species. White pine (*Pinus strobus*) can be found among the pitch pines at variable densities. A 66-foot-wide ditch runs southwest from Charge pond, once serving cranberry bogs down slope. Understory vegetation consists mainly of black huckleberry (*Gaylussacia baccata*), low bush blueberry (*Vaccinium angustifolium*), and scrub oak.

Topography and Soils:

The project area is comprised of gentle terrain in and around the campground loops. There are somewhat steep slopes leading to Charge Pond from the main loop road. The soils are classified mainly as coarse sands that are excessively drained and derived from glacial outwash.

Previous Silvicultural Treatments:

Silvicultural treatments have not occurred since the 1964 wildfire.

Aesthetics, Recreation, Wetlands, Cultural, Rare Species and Wildlife Considerations:

Aesthetics:

Tree density will be reduced to increase spacing between remaining trees to reduce wildfire danger while promoting native pitch pine, scrub oak, and shrubs. As whole tree mulching (and removal in white pine dominated areas) of designated trees will occur, the resulting landscape will have a change in appearance from a high-density forest to a more open woodland and shrubland savanna.

Recreation:

Basketball, bicycling, boating, canoeing/kayaking, dog walking, fishing, geocaching, hiking, horseback riding, hunting, nature study, picnicking, running/jogging, cross-country skiing, snowmobiling, snowshoeing, swimming, and volleyball occur in Myles Standish State Forest throughout the year.

Several paved roads, forest roads, and a paved bike path are abutting or located within the project area. These roads and paths will be closed during harvesting activity.

Extending the existing paved bike path approximately 170 feet to connect to the Safety Zone would be beneficial in getting people to the Safety Zone and will be discussed with Park Operations.

Wetlands:

All required BMPs set forth in the most recent edition of the "Massachusetts Forestry: Best Management Practices Manual" will be implemented across the project area. No wetland resources occur within the project work area. Charge Pond exists south of the safety zone. The proposed area is not within 100 feet of a certified vernal pool according to the Natural Heritage & Endangered Species Program (NHESP) datalayer downloaded November 17, 2020 available from MassGIS.

Cultural Resources:

The project will have an archeological review and evaluation by DCR's archeologist. Any recommendations will be incorporated into the final scope of work.

Rare and Endangered Species & Wildlife

The proposed project area is within priority habitats of rare species as published in the current 14th Edition of the Massachusetts Natural Heritage Atlas. (https://www.mass.gov/service-details/regulatory-maps-priority-estimated-habitats.)

The pitch pine-scrub oak barrens within Myles Standish State Forest provide habitat for a diversity of state-listed animals and plants, including many species of moths and butterflies, tiger beetle species, and plant species. Most of these barrens species rely on a habitat with an open vegetation structure, such as scrub oak shrublands and heathlands.

Refer to pages 165 to 179 of the Massachusetts Wildlife Action plan at: https://www.mass.gov/service-details/state-wildlife-action-plan-swap. This document provides a detailed description of animals found in Pitch pine-Oak Upland forests.

Project Layout and Harvesting Limitations:

Project access: Access will be mainly from Charge Pond Road, with dirt road access from Haynes Road and Stringer Road.
Landings: Landings will be utilized in those areas where large trees (mainly white pine) are to be removed.
Skid Trails: Skid trails will be created and kept to a minimum.
Wetland & Stream Crossing: None anticipated.
Road Buffers: The paved bike path and forest roads will be closed during harvesting activity. The paved roads will be buffered. The paved bike path and unpaved forest roads will not be buffered to reduce wildfire danger and to allow for direct experience of the restored pine barrens.
Equipment limitations: Whole tree harvesting will be required. Timber harvesting equipment will be restricted to its ability to process whole trees. Skidding will be permitted as it provides scarification for pitch pine and scrub oak regeneration.
Excluded areas: A 50 foot (to be confirmed by staff) no-cut buffer will be established from all campground sites and paved roads to reduce direct visual contact with the project area.
Erosion and Sedimentation: All work will be limited to dry, frozen, or otherwise stable soil conditions. Unwanted movement of soil will be controlled by following recommendations in the Massachusetts Forestry: Best Management Practices Manual.
Site Restoration: Upon completion of harvest activity all forest roads, skid roads, skid trails, and landings will be stabilized.
In-kind Services: None anticipated at this time.

Silviculture:

Primary and secondary goals: The primary goal is to reduce the fuel load in and around the Charge Pond Campground Complex to protect campers in the event of a wildfire. Thinning between campground loops will occur and spacing will be based on a tree's diameter. Research conducted at the University of Massachusetts under the direction of Dr. Patterson-Fire Ecologist found a forest with a basal area of 12 square feet/acre and with a wind of 60 mph did not result in a crown fire. This translates to spacing a 12 in. diameter tree 33 ft. from any other tree to restrict a crown fire from occurring.

Thinning between campground loops will occur on approximately 34 acres. The larger joint project with MassWildlife to restore over 2,000 acres of pine barrens will be expanded to include 142 additional acres. The Safety Zone will be approximately 7.4 acres where all trees and shrubs will be removed or mowed/mulched in place. The area of the Safety Zone is based on having 1,250 people 120 feet from the edge of the Safety Zone which will provide protection from a wildfire with a 30 ft. flame height. Each person is given 50 sq. ft. of space. These spacing and distances are based on National Wildfire Coordinating Group recommendations.

The secondary goal is to restore and maintain native pitch pine and scrub oak natural communities with a focus on a savannah condition of individual, larger diameter, full-crowned pitch pine trees in the overstory with an understory of scrub oak and other native shrubs. Reducing the canopy cover will result in an open habitat benefiting a variety of rare, declining, and common species.

Silvicultural Method:

Overstory density will be reduced using the retention/spacing guidelines above by mowing or mulching in place using a forestry mulching head. The largest diameter, most full-crowned pitch pine will be retained.

Areas with large diameter trees: Large diameter trees will be removed to meet the retention/spacing guidelines above by whole-tree harvesting and chipping, with all logs and chips removed from the site to allow for future use of mowing and prescribed fire in maintaining the pine barrens habitat. Removal, rather than mulching in place, of large diameter trees will occur to limit the accumulation of material, as it would inhibit the development of shrubs. Approval from the DCR Commissioner will be required for openings above 1/3 acre that harvest all merchantable trees.

Desired Future Conditions:

The desired future condition is an open canopy of pitch pine above an understory of scrub oak, heath, and grassy glades. The project will reduce wildfire risk to the Charge Pond Campground Complex.

Anticipated Future Treatments:

This project will promote regeneration of pitch pine, scrub oak and heath vegetation. Future treatments will be mowing and/or prescribed fire to kill white pines that typically regenerate in such areas and to stimulate sprouting and growth of native shrubs. Active management will be planned in coordination with NHESP.

Funding:

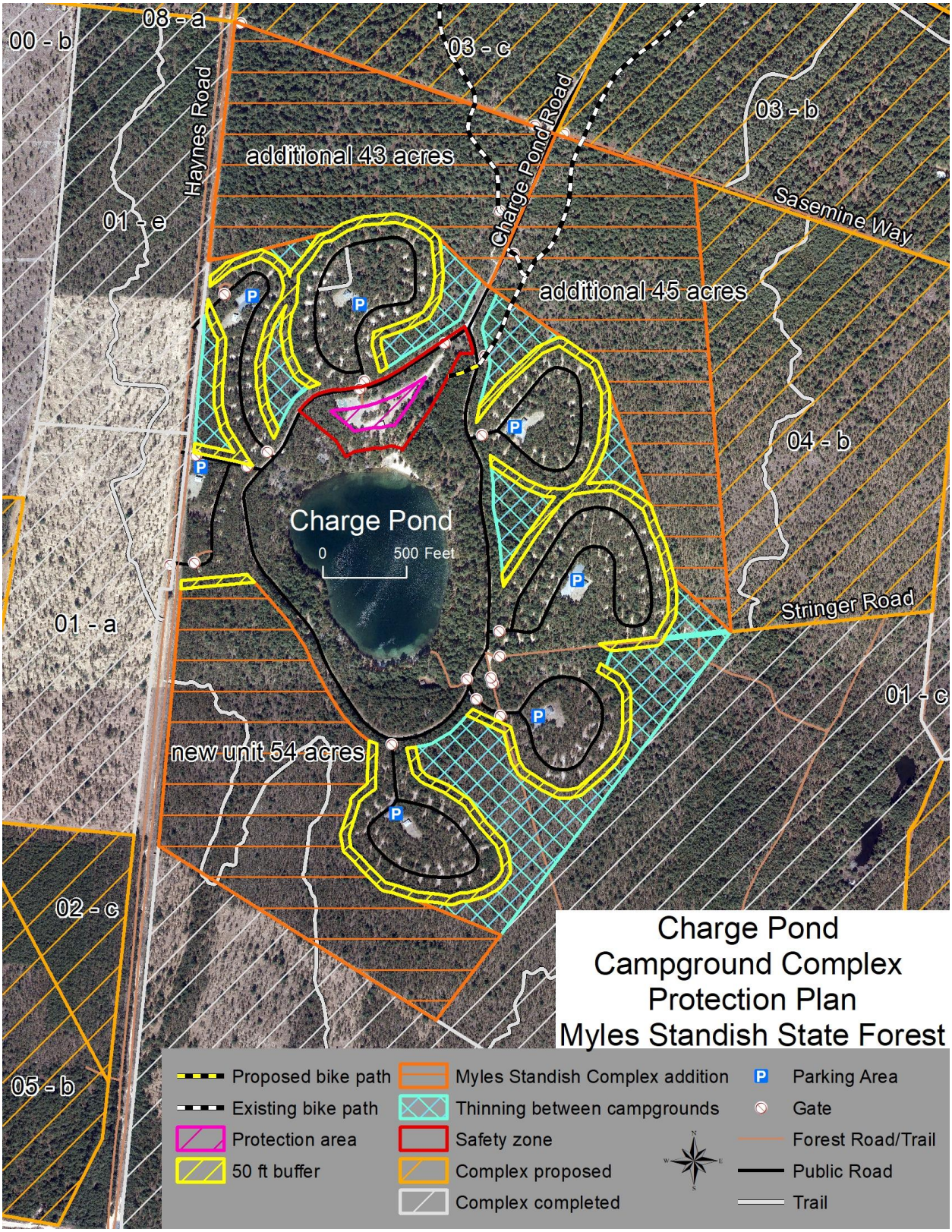
Available through a US Forest Service Wildfire Risk Reduction grant.

District Forester: Paul Gregory **Date:** 6/14/21

Field Operations Team Leader Or Park Supervisor: John Roberts **Date:** 6/14/21

Regional Director: [signature] **Date:** 6/14/21

Management Forestry Program Supervisor: [signature] **Date:** 6/16/21


08 - a
00 - b
03 - c
Haynes Road
Charge Pond Road
03 - b
additional 43 acres
Sasemine Way
01 - e
additional 45 acres
04 - b
Charge Pond
0
500 Feet
Stringer Road
01 - a
01 - c
new unit 54 acres
02 - c
05 - b
Charge Pond
Campground Complex
Protection Plan
Myles Standish State Forest
Proposed bike path
Existing bike path
Protection area
50 ft buffer
Myles Standish Complex addition
Thinning between campgrounds
Safety zone
Complex proposed
Complex completed
Parking Area
Gate
Forest Road/Trail
Public Road
Trail

Charge Pond Campground Complex Protection Plan
Myles Standish State Forest - Locus Map

