

**Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Emergency Forest Management Proposal
Name: Shawme Crowell – Barnstable Red Pine Buffer Removal**

Date Posted: February 9, 2018
End of Comment Period: February 16, 2018

Region: South
Recreation District: Cape Cod
Forest Management District: Southeast
State Forest: Shawme Crowell State Forest & Barnstable State Forest
Closest Road: Pine Street and Old Stage Road
Town: Sandwich and Barnstable

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Overview:

The red pine stands in Shawme Crowell State Forest and in the Barnstable State Forest are dead and pose a safety hazard as well as a wildfire hazard. The red pine stands were infected by the red pine scale, (*Matsucoccus resinosae*). Complete mortality has been a common occurrence in red pine plantations particularly in southeast Massachusetts. The dead red pine trees will be removed in two locations in Shawme Crowell State Forest and one location in Barnstable State Forest. Trees will be removed that are within 100 feet of trails, roads, and in the case of Barnstable State Forest within 100 feet along our boundary. See the project maps.

The Shawme Crowell - Barnstable Red Pine Buffer Removal Forest Management Project in Shawme Crowell State Forest will occur near the forest headquarters and along Pine Street. Shawme Crowell State Forest is a designated Parkland with approximately 610 acres with 285 campsites. The project in Barnstable State Forest is located within a residential section of Barnstable, Massachusetts. The Barnstable State Forest is an isolated 19 acre “reforestation lot” of mostly red pine and eastern white pine that is surrounded by residential houses and roads.

The areas were selected for forest management at this time because:

- The red pine has died and poses a safety hazard and wildfire hazard.

The Shawme Crowell - Barnstable Red Pine Buffer Removal Forest Management Project endeavors to:

- Protect public safety through the removal of dead red pine trees along roads, forest roads, hiking trails, and along abutting properties.
- Reduce wildfire danger and provide safe access to firefighters and fire apparatus.

- Fulfill management approaches for Parklands and Woodlands as directed by the Forest Futures Visioning Process (2010) and subsequent Management Guidelines (2012). From page 31 of the Guidelines "...Hazardous trees or excessive fuel loads that pose significant risk to public safety may be removed."

The DCR Management Guidelines state that interim proposed timber harvesting summary plans may be posted at any time on an emergency basis. Examples of emergency situations are high mortality due to forest insects and diseases, blowdown, fire, snow and ice damage, rare species habitat needs, and treatment of invasive species infestation.

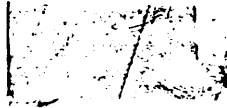
The removal of the remnant non-native conifer plantation from Barnstable State Forest is a priority recommendation in the June 2015 Resource Management Plan for the Nickerson Management Complex.

Stand Description:

The first proposed emergency harvest area is in Shawme Crowell State Forest and is located along Flat Rock Road just south of the main entrance. Two small (0.4 and 0.5 acre) red pine (*Pinus resinosa*) plantations exist with one on each side of the road with both being within 100 feet of the road. The overstory is composed of medium to large dead red pine. The understory is mainly white pine (*Pinus strobus*) saplings with a few pole sized oak (*Quercus* sp.) and white pines growing up to 20 feet tall. There is a scattering of black cherry (*Prunus serotina*), and oak saplings in the understory. Several large rhododendron bushes are growing along the paved road. The ground cover is mainly lowbush blueberry (*Vaccinium angustifolium*), wintergreen (*Gaultheria procumbens*), poison ivy (*Toxicodendron radicans*), bracken fern (*Pteridium aquilinum*), and brier (*Smilax* sp.). Areas of wood chips exist from past tree removal operations by park staff. Asiatic bittersweet (*Celastrus orbiculatus*), and glossy buckthorn (*Frangula alnus*) exist in these small plantations. The soil is classified as Barnstable-Plymouth complex. It is made up of sandy loam and coarse sand. The drainage class for the soil is well drained and excessively drained. The two small stands are composed of mostly level terrain with a slight drop in slope at their northern end. Seven trees are near the park entrance and will also be removed (see the project maps).

The second proposed emergency harvest area is in Shawme Crowell State Forest and is located along Pine Street across from Heritage Gardens. It is 2.9 acres in size and has two forest roads running through it. An additional 0.3 acres is beyond the 100 foot buffer of roads, forest roads, and trails. The overstory is composed of medium to large dead red pine. The understory is white pine, oak, and black cherry saplings growing up to 20 feet tall. The ground cover is comprised of Canada mayflower (*Maianthemum canadense*), brambles (*Rubus*), poison ivy, and brier. Some trees have brier and grape (*Vitis* sp.) vines climbing up them. A few large white oak (*Quercus alba*) trees exist along Pine Street. Asiatic bittersweet, Japanese barberry (*Berberis thunbergii*), garlic mustard (*Alliaria petiolata*), burning bush (*Euonymus alatus*), multiflora rose (*Rosa multiflora*), and Norway maple (*Acer platanoides*) exist in this plantation. Some dead red pine trees were recently removed by Eversource to protect their powerlines. The soil is classified as Barnstable-Plymouth-Nantucket complex. It is made up of sandy loam and coarse sand. The drainage class for the soil is well drained and excessively drained. The stand is composed of mostly level terrain with some rolling terrain on the north side. Some dead red trees have already fallen.

The third proposed emergency harvest area is in Barnstable State Forest and is 6.4 acres (see attached map) and consists mainly of an overstory composed of medium to large dead red pine with



some medium to large eastern white pine. The entire parcel of the Barnstable State Forest is approximately 19 acres. The stand is approximately 82 years old. The understory consists mainly of oak species and eastern white pine saplings with minor amounts of American beech (*Fagus grandifolia*) and American holly (*Ilex opaca*). Ground cover tree species consists mainly of oaks, and eastern white pine. Non-tree ground cover species consist of bracken fern, black huckleberry (*Gaylussacia baccata*), brambles, lowbush blueberry, sheep laurel (*Kalmia angustifolia*), briers, and wintergreen. The stand originated as a reforestation lot acquired in 1913. Some dead red trees have already fallen. The soil is classified as Eastchop loamy fine sand. The drainage class for the soil is excessively drained. The stand is composed of mostly level terrain with a slight drop in slope at the southern end. Glossy buckthorn, honeysuckle (*Lonicera sp.*), Asiatic bittersweet, sycamore maple (*Acer pseudoplatanus*), and potentially invasive English ivy (*Hedera helix*) were found in Barnstable State Forest. Most of the invasives occur along the stand boundary with Skunknet Road. Invasives will be monitored following timber harvest operations.

A 7 acre salvage cut was performed in the Barnstable State Forest following hurricane Bob in 1992. Most of the area treated in 1992 was eastern white pine in the south portion of the forest.

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

Aesthetic:

As whole tree removal will occur, the resulting landscape will have a dramatic change in appearance as large openings will be created. Paved roads, forest roads, and hiking trails adjacent to red pine plantations will be cleared of all debris following operations. Given the objective to enhance public safety, there will be no retention of road or trail buffers so as to reduce future risk of injury from falling dead trees or limbs. Because red pines will be removed to promote native white pine and oak the landscape view will change from a single species forest monoculture to a more diverse and native young forest community.

Pine Street and Old Stage Road are designated scenic roads. An exception will be needed from the 304 CMR 11.00 - Forest Cutting Practices to remove more than 50% of the basal area within 100 feet of a scenic road. All slash will be dealt with that meets or exceeds the Massachusetts Slash Law. The stand boundary instead of individual trees will be marked to minimize the aesthetic impact of tree marking.

Recreation:

Biking, camping, cross-country skiing, dog walking, geocaching, hiking, horseback riding, hunting, ice hockey/ice skating (doughnut Pond), mountain biking, nature study, picnicking, and sledding occur in Shawme Crowell State Forest. A Healthy Heart Trail exists in the state forest.

The most popular recreational activity at Shawme Crowell State Forest is camping and nearly all the forest's infrastructure is dedicated to this activity. There are 285 camp sites arranged into two distinct areas (Camping Area 1 & Camping Area 2).

Shawme Crowell State Forest lacks a formal, planned trail system. However, the combination of trails, forest roads, and utility corridors provides access to the entire park. There are 9.9 miles of trails. There is no forest-wide trail map; a guide exists for the nature trail loop.

The Shawme Crowell State Forest is supported by the Friends of Shawme Crowell State Forest. The Friends provide the majority of volunteer hours. Typical activities include aiding and assisting campers, trimming brush along roads, trail maintenance, and assisting with First Day hikes and Park Serve Day. Two recreation resources, a playground and the Friends' of Shawme Crowell State Forest pavilion area are located in Camping Area 2.

The proposed forest management project will reduce the number of dead and dying trees that could potentially impact safe travel on Flat Rock Road and the adjacent forest roads off of Pine Street. There will be minimum impact to recreational activities within Shawme Crowell State Forest as the project is away from the camping areas. No trails, forest roads, or roads traverse directly through the two small plantations on Flat Rock Road in Shawme Crowell State forest. The 2.9 acre area off of Pine Street has two forest roads dividing the area.

One hiking trail and one small off shoot trail exist in the Barnstable State Forest. Both trails have not been used in quite some time, are hard to distinguish, and are not part of a designed system of recreational trails.

The areas will be closed to the public during active logging operations for safety.

Wetlands:

The proposed timber harvest area is not within 100 feet of a certified or potential vernal pool according to the Natural Heritage & Endangered Species Program (NHESP) datalayers dated December 19, 2017 and December 2000 respectively, available from MassGIS. No wetlands or other hydrographic features are in close proximity to the proposed timber harvest area.

Cultural Resources:

There are no known historical or archeological sites within the project areas. The forest management proposal will be reviewed by DCR's archeologist.

Rare and Endangered Species

According to 14th edition of the Massachusetts Natural Heritage Atlas the project areas in Shawme Crowell State Forest are within priority habitat of rare species. Prior to the start of harvesting operations this project will be reviewed by the Natural Heritage and Endangered Species Program (NHESP), where recommendations will be made in regards to harvesting within priority habitat.

The Barnstable State Forest project area is not within priority habitat of rare species.

Wildlife

The removal of the dead red pine will provide an open canopy and early successional habitat, beneficial to a variety of wildlife. Snags (standing dead trees) will be retained beyond the 100 foot buffer to provide habitat for cavity dwelling species. Cottontail rabbit, black-capped chickadee, downy woodpecker, and northern flicker were seen in the project areas.

Sale Layout and Harvesting Limitations:

The method to remove the red pine plantations will be whole tree harvesting and chipping, with all chips removed from the site. Signs will be displayed to close the sale areas during timber harvesting operations. For the 2.9 acre project area in Shawme Crowell State Forest the forest roads will serve as skid roads. A single landing will be located within each of the three project areas. The

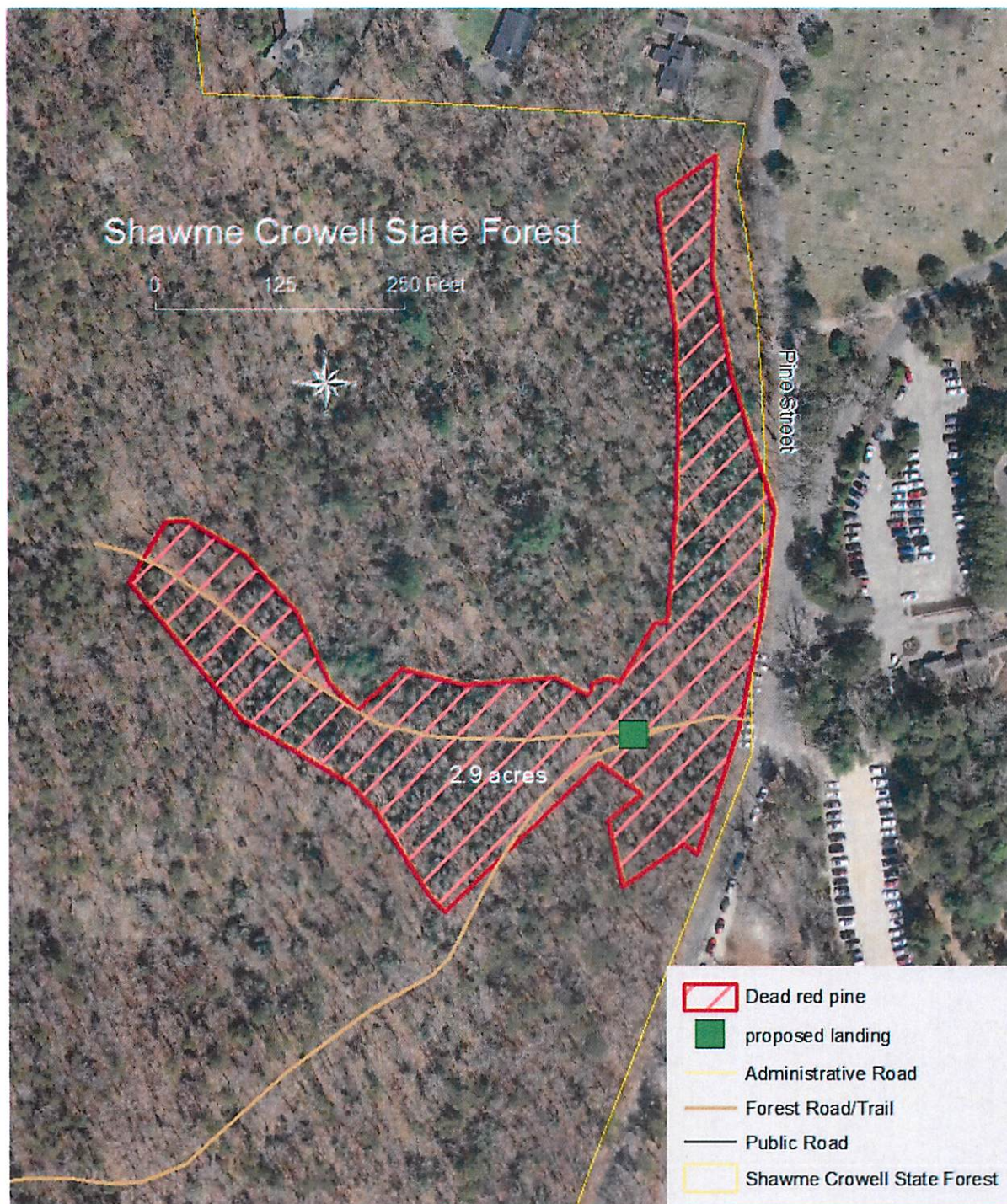
landings will be designed to accommodate a whole tree chipper and chip van trucks. The harvesting operation will utilize whole tree harvesters and grapple skidders to move cut trees to the central landing location for chipping. Primary skid trails will be designated per regulations and Best Management Practices to control operations and protect advanced white pine and hardwood regeneration. The landing and main skid roads will be stabilized and graded at the end of harvesting operations.

Silviculture:

Dead standing red pine will be removed and salvaged. The primary goal is to remove the dead red pine to improve safety conditions. The short-term expected and desired condition is an open canopy of scattered eastern white pine with a mixed understory of eastern white pine and oak species. It is anticipated that remaining live white pine overstory will provide a seed source to sufficiently regenerate the openings within five years.

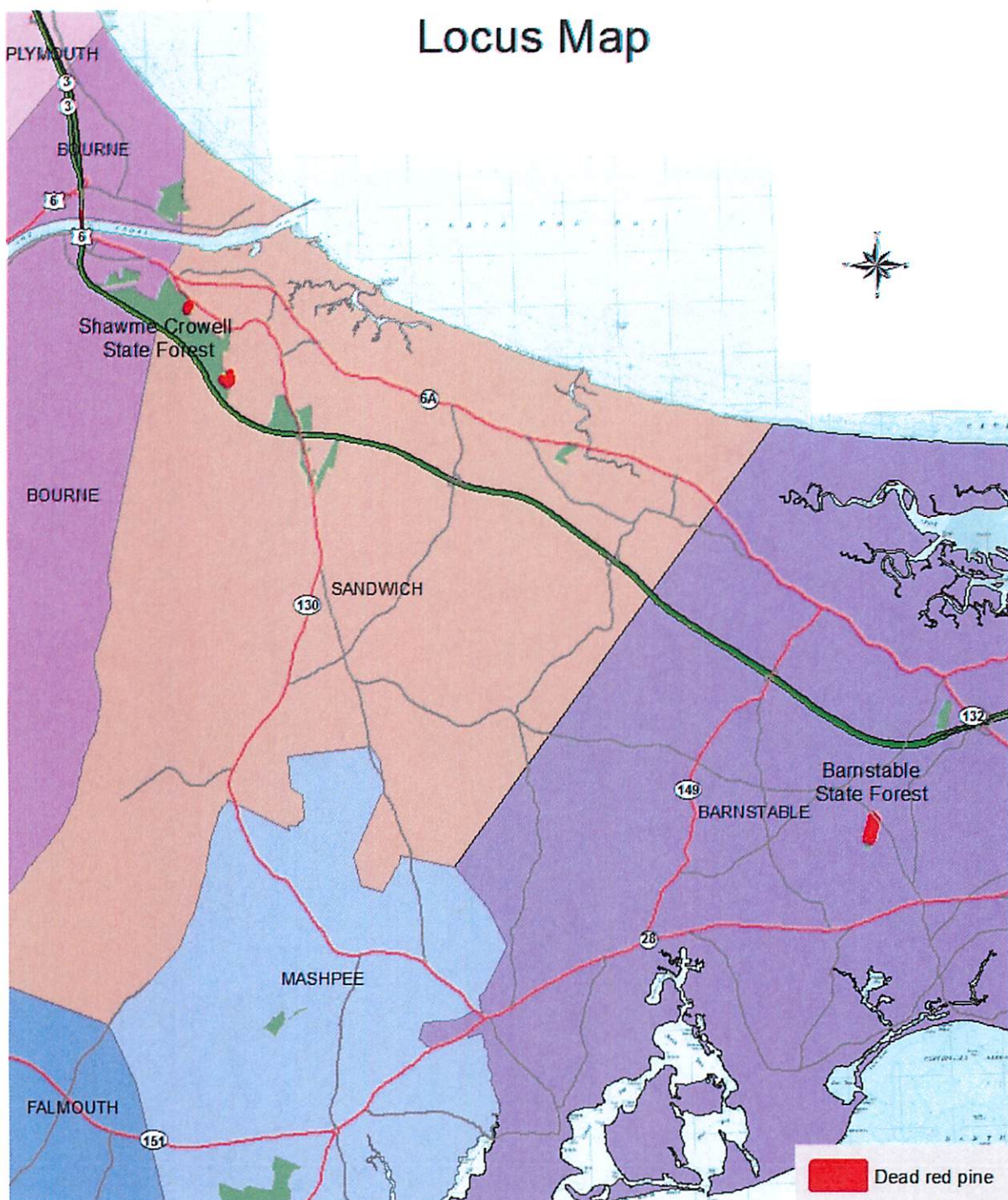
Due to the relatively small size and location of the Barnstable State Forest, future forest management will be limited in scale. Long term expected results of this salvage harvest are a scattered overstory of large mature eastern white pine with an understory of seedling and sapling eastern white pine and hardwoods.







Locus Map



District Forester: Paul Gregory

Date: 12/19/17

Field Operations Team Leader
Or Park Supervisor: Les Perry

Date: 12/19/17

Regional Director: Tom O'Leary

Date: 1/2/18

Management Forestry
Program Supervisor: William H. AO

Date: 1/12/2018

Attached: Topographic map showing project details. Locus map showing project location within regional context.