Massachusetts Department of Conservation and Recreation
Bureau of Forest Fire Control and Forestry
Forest Management Proposal
Name: Freetown Co-peace

Date Posted: **November 27, 2012**
End of Comment Period: **January 11, 2013**

Region:	South
Recreation District:	**South Coast**
Forest Management District:	**Southeast**
State Forest:	**Freetown / Fall River State Forest**
Closest Road:	**Slab Bridge Road / Copicut Road**
Town	**Freetown**

Contact Information:

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Overview:

The Freetown Co-peace Forest Management Project in the Freetown Fall River State Forest is located within the Southeastern Massachusetts Bioreserve which was established to be "managed in a cooperative and consistent manner that preserves the functionality of a large-scale ecosystem and promotes biodiversity, [and other conservation values including sustainable forestry]". The area was selected for forest management at this time because:

- Recent forest management through timber sales has resulted in forest structure that is conducive to implementing multi aged silvicultural systems.
- Timber sale revenues and contractual requirements can be used to repair and prevent damages from illegal off road vehicles (ORV).
- Due to its juxtaposition in Freetown this project offers an excellent opportunity to demonstrate and fulfill objectives for DCR Woodlands.

The Freetown Co-peace Forest Management Project endeavors to:

- Demonstrate a two age silvicultural system and an irregular shelterwood system in white pine stands that have various stages of advanced regeneration.
- Demonstrate harvesting techniques and best management practices that protect forest productivity, soil and water resources.
- Fulfill management approaches for Woodlands as directed by the Forest Futures Visioning Process (2010) and subsequent Management Guidelines (2012).

Stand Description:

Stand 1 (S1) Copicut and Haskal Path; Stand 2 (S2) Makepeace Road and Hathaway Road

S1 is a 17 acre stand with an overstory composed mainly of large white pine trees whose average age is 80 years. The understory regeneration is composed of white pine saplings with a considerable amount of black birch saplings, mostly on the northeast corner of the stand. The regeneration followed a shelterwood establishment cut performed in 2001 where approximately 50% of the trees were cut from the canopy. The white pine regeneration is very dense in most of the stand. There are a few scattered black birch trees in the northern part of the stand. Understory vegetation consists of black huckleberry, bracken fern, low bush blueberry. The soils of S1 are classified as Merrimac fine sandy loam, Hinckley gravelly fine sandy loam, and some Agawam fine sandy loam, with slopes of 3 to 25 percent. The drainage classes are somewhat excessively drained, excessively drained, and well drained, respectively. The stand is composed of gentle to rolling terrain. The western side of the stand faces west towards Rattlesnake Brook. Just west of the stand the slope increases considerably as it falls towards the brook.

S2 is a 31 acre stand comprised of medium and large white pine trees, medium and large black/scarlet oak trees, a scattering of beech trees and some medium black birch trees. The average age of the white pine is 80 years. The understory regeneration is patchy and is made up of white pine saplings. The midstory consists of low vigor oaks, red maples, black gum, and sassafras. Herbaceous vegetation consists mainly of black huckleberry with some low bush blueberry and bracken fern. About 12 acres of S2 was thinned in 1983 and a small 4 acre salvage cut following hurricane Bob in 1992. The soils of S2 are classified mainly as Paxton fine sandy loam, with small amounts of Woodbridge fine sandy loam, of 0 to 8 percent slope. Both soil types are extremely stony. The drainage classes are well drained and moderately well drained, respectively. The stand is composed of level terrain. Evidence of Beech Bark disease is apparent on some of the larger beech trees.

The DCR Management Guidelines of 2012 stated that forest stands will be "classed . . . and considered for silvicultural treatments that generally fit their productivity, structural complexity (or potential thereof) and diversity". An analysis of site history (land use; agriculture/logging) and conditions (soil types, productivity; vegetation cover) for S1 indicates low to moderate soil and forest complexity and therefore points towards using silvicultural systems geared towards even age management. The analysis of site history and conditions of S2 indicates moderately high soil productivity and forest complexity and therefore point towards using silvicultural systems geared towards increasing diversity and complexity.

Both stands have standing dead oak trees as the result of multiple caterpillar infestations over the last few years.

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

Aesthetic:

Existing legal DCR trails will have 50' wide corridors, where timber harvesting activities will occur, and will be designed to promote large-diameter trees, forest structure, forest health, a safe recreation experience, and quality scenery. Slash within 25 feet of forest roads and trails will

be managed to result in a light and natural appearing forest ground cover. Trees will be felled away from trails to minimize any residual damage. The town of Freetown does not have scenic road designation in their by-laws. Any existing American holly trees found in S2 will be protected as much as possible and any competing vegetation will be removed to allow this species to be free to grow and to be more visible.

Recreation:

Hunting, hiking, X-country skiing, snowmobiling, horseback riding, and seasonal motorcycle riding is allowed in Freetown / Fall River State Forest. S1 has motorcycle/multiple use trails, as well as hiking/skiing trails, unpaved road/snowmobile trials, and abuts the Long Trail. Many of the trails within or abutting S1 have erosion issues. Timber sale revenues along with in-kind services could be used to mitigate existing trail/forest road erosion as well as close any illegal trails within or near the stands, see "Sale Layout section" for additional details. The motorcycle trails especially have ruts that have significant height differences between the center of the trail and the corresponding edge/bank of trail. Stand S2 has motorcycle/multiple use trails within its boundaries. No geocaches currently exist within the stands. A geocache exists just to the west of Rattlesnake Brook about 170 feet west of S1 on the other side of the brook. A geocache exists approximately 200 feet to the west of the middle of S2.

Wetlands:

The proposed timber harvest areas are not within 100 feet of a certified or potential vernal pool according to the Natural Heritage & Endangered Species Program (NHESP) datalayers dated February 2011 and December 2000 respectively, available from MassGIS. Rattlesnake Brook is to the west of S1, approximately 100 feet at its nearest point. Wetlands exist to the west and north of S2 between Makepeace Road and Hathaway Road. They are approximately 20 feet to their nearest point of S2.

Cultural Resources:

S1 contains remnants of stonewalls with only the base stones remaining. Some of the skid roads in the 2001 timber harvest of S1 went over these base stones.

Rare and Endangered Species

The proposed timber harvest areas are not within priority habitats of rare species as those published in the 13th Edition of the Massachusetts Natural Heritage Atlas.

Wildlife

Freetown / Fall River State Forest is an Important Bird Area as designated by Mass Audubon. An Important Bird Area is a site providing essential habitat to one or more species of breeding, wintering, and/or migrating birds. Freetown / Fall River State Forest is also part of the Southeastern Massachusetts Bioreserve. Established in 2002, the Southeastern Massachusetts Bioreserve currently holds approximately 14,000 acres and provides the largest wildlife management area in southeastern Massachusetts. The reserve combines the Freetown / Fall River State Forest, Copicut Wildlife Management Area, The Trustees of Reservations Copicut Woods, and eastern parts of the city of Fall River watershed lands, including the Copicut Reservoir. Existing standing dead trees (snags) will be saved. Exceptions may occur due to removing snags near trails or landings for logger and public safety. There are known populations of deer, turkey,

grouse in the area of the proposed project. It is apparent that the Freetown / Fall River State Forest has a resident large deer population. Browsing deer may have a negative impact on regenerating of hardwood species. Removing existing competition from large living oak trees that have healthy crowns will help increase production of acorns over the years for a variety of animals.

Sale Layout and Harvesting Limitations:

S1 will require a cut-to-length harvesting system coupled with forwarders to reduce harm to the young white pine sapling age class. Haskal Path will need to be widened, as it was in the 2001 timber harvest. Haskal Path will require some amount of road work to stabilize side banks and to level existing dips. Haskal Path will be the main entrance and exit route for the eastern sub-unit. Two landing will be necessary for S1 (see map), and will use similar areas as in the 2001 timber harvest. Most of the skid roads used in the 2001 timber harvest will be utilized whenever possible to lower the amount of residual stand damage. To the west of S1 is a steep sloped area that has extensive off-highway vehicle use, and has resulted in large amounts of sediment being transported down slope and being deposited into Rattlesnake Brook. In-kind services may perhaps be used to lessen the amount of erosion and provide for a joint rehabilitation project with local motorcycle user groups.

S2 will have two landings (see map), one on each end of the stand. Use of Makepeace Road will be encouraged to lessen repeated use of internal skid trails. Signs will be displayed to close the sale area during timber harvesting operations and encourage travelers to use Hathaway Road to traverse through the forest. Makepeace Road will be graded if damage, e.g. ruts, has occurred from timber harvesting operations.

Existing legal DCR trails will have 50' wide corridors where timber harvesting activities will be designed to promote native diverse vegetation, large-diameter trees, and forest structures, a safe recreation experience, and quality scenery.

Silviculture:

S1 will be managed for white pine in two-aged classes for purposes of structural diversity. The majority of the large white pine trees will be harvested (approximately 75%). A set of reserve mature white pine trees will be held for the entire rotation of the younger sapling age class. The retention of a subset of mature trees will retain habitat elements of the mature forest, lessen the visual impact of the shift in complete removal of overstory trees, and will retain trees to produce large diameter older trees. The timber harvest will demonstrate a shelterwood removal cut with reserves. This silvicultural method is a modification of even-aged methods. The long term desired condition of the stand is having the young trees approach the height of the reserve trees. Future silvicultural treatments could be a patch cut to further progress the stand towards a two-aged structure.

S2 will be managed to increase species diversity and complexity. A mixture of small, medium, and large trees of various species will be harvested. Regeneration will be released in areas of existing advanced regeneration, and areas lacking regeneration will be scarified to allow for generation of seedlings. Existing oaks with large healthy crowns will be released from competing vegetation. Areas within and bordering desired advanced regeneration will be considered as potential gaps to release the regeneration. Size and shape of gaps will be determined by

topography, stand structure, and existing regeneration. Thinning will occur between group openings. The timber harvest will demonstrate an irregular shelterwood using the expanding gap variant. The long term desired condition of the stand is the presence of stems with mixed species, a range of age classes with a multiple layered structure. Future silvicultural treatments could increase existing gaps to further provide diversity, stability, and resilience.

District Forester: Paul Gregory **Date:** 11/1/12

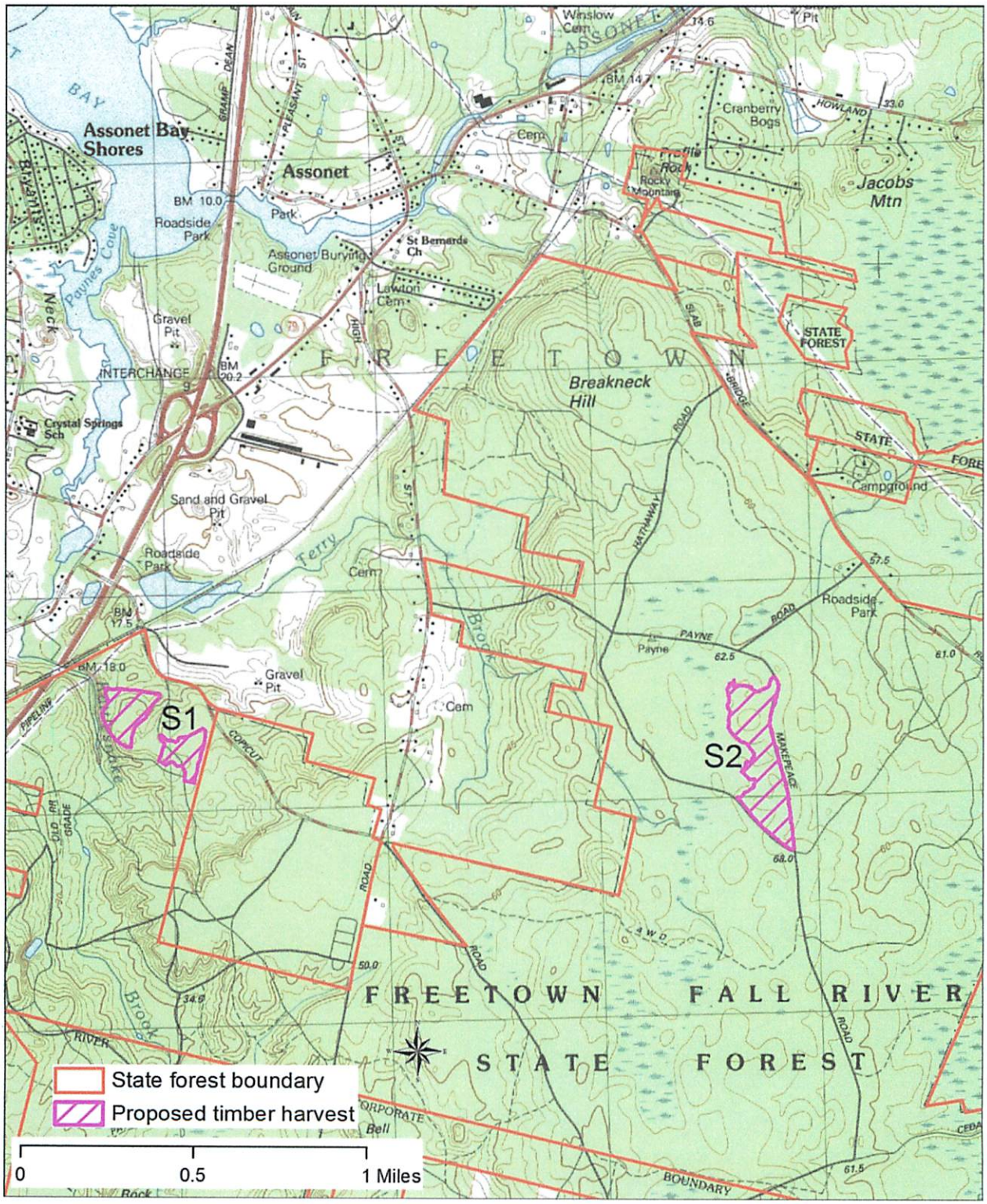
Field Operations Team Leader Or Park Supervisor: _____ **Date:** 11-2-12

Regional Director: _____ **Date:** 11/2/12

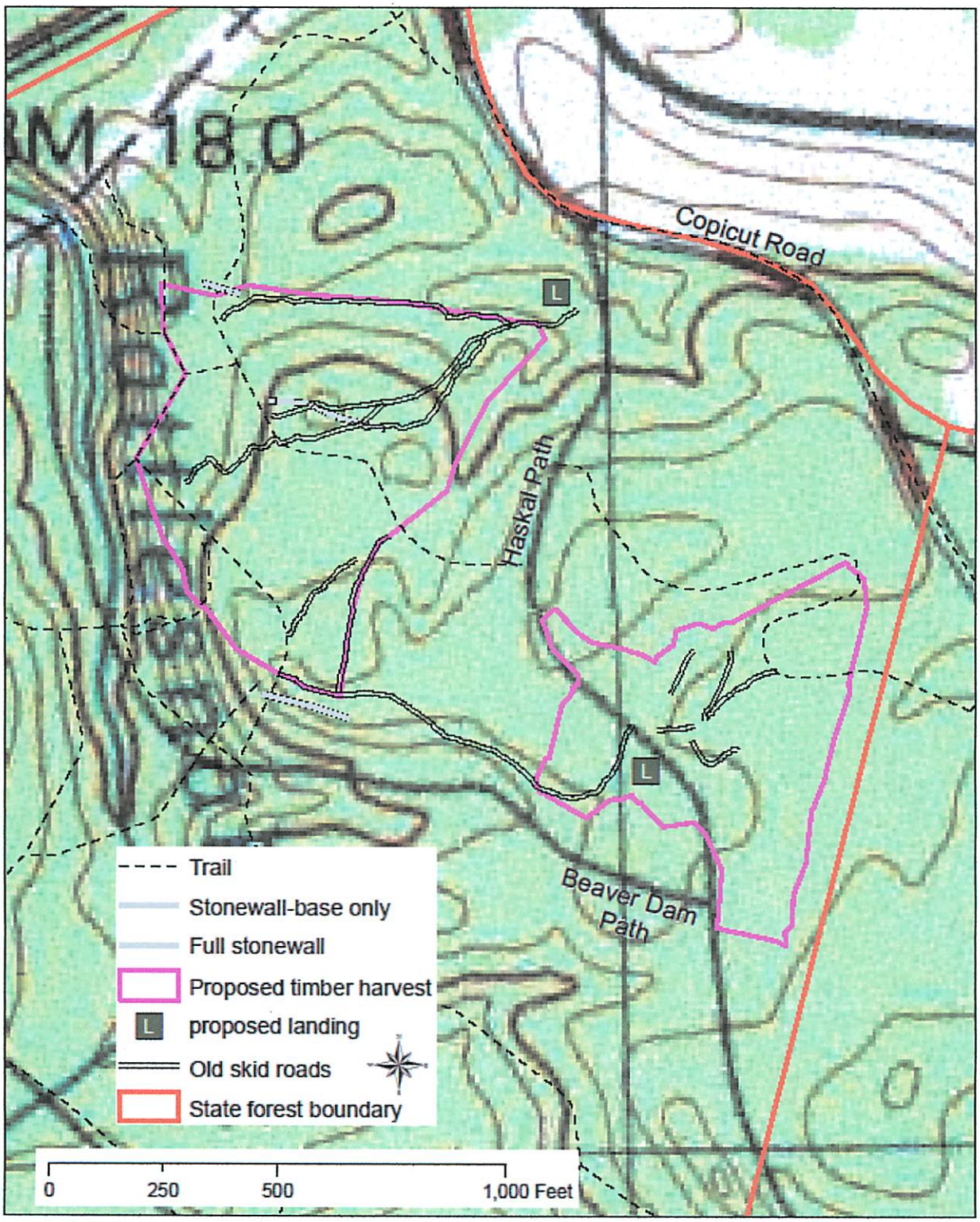
Management Forestry Program Supervisor: _____ **Date:** 11/2/12

Attached: Topographic maps and Locus Map showing location of Forest Products Sale Area

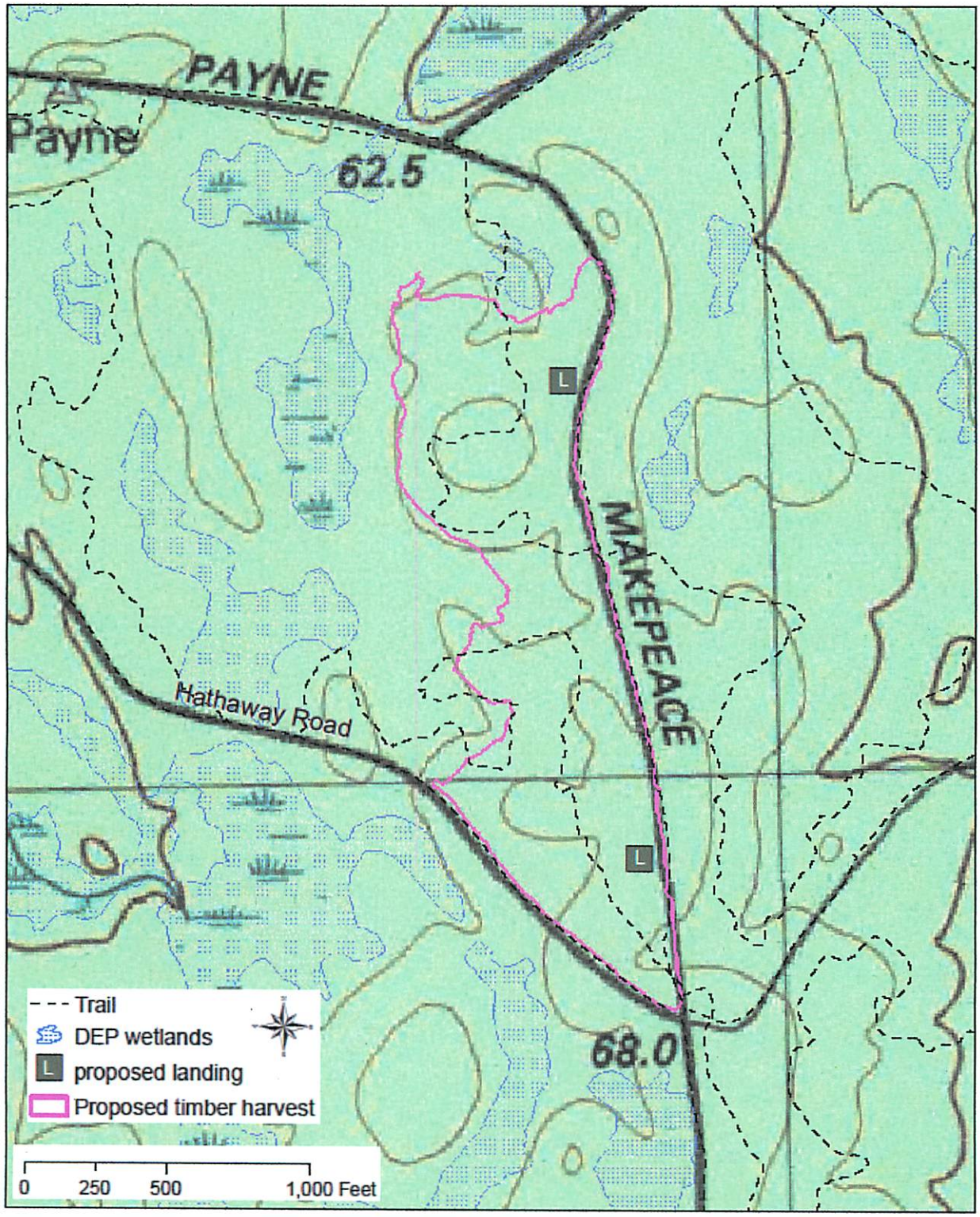
Proposed Timber Harvest

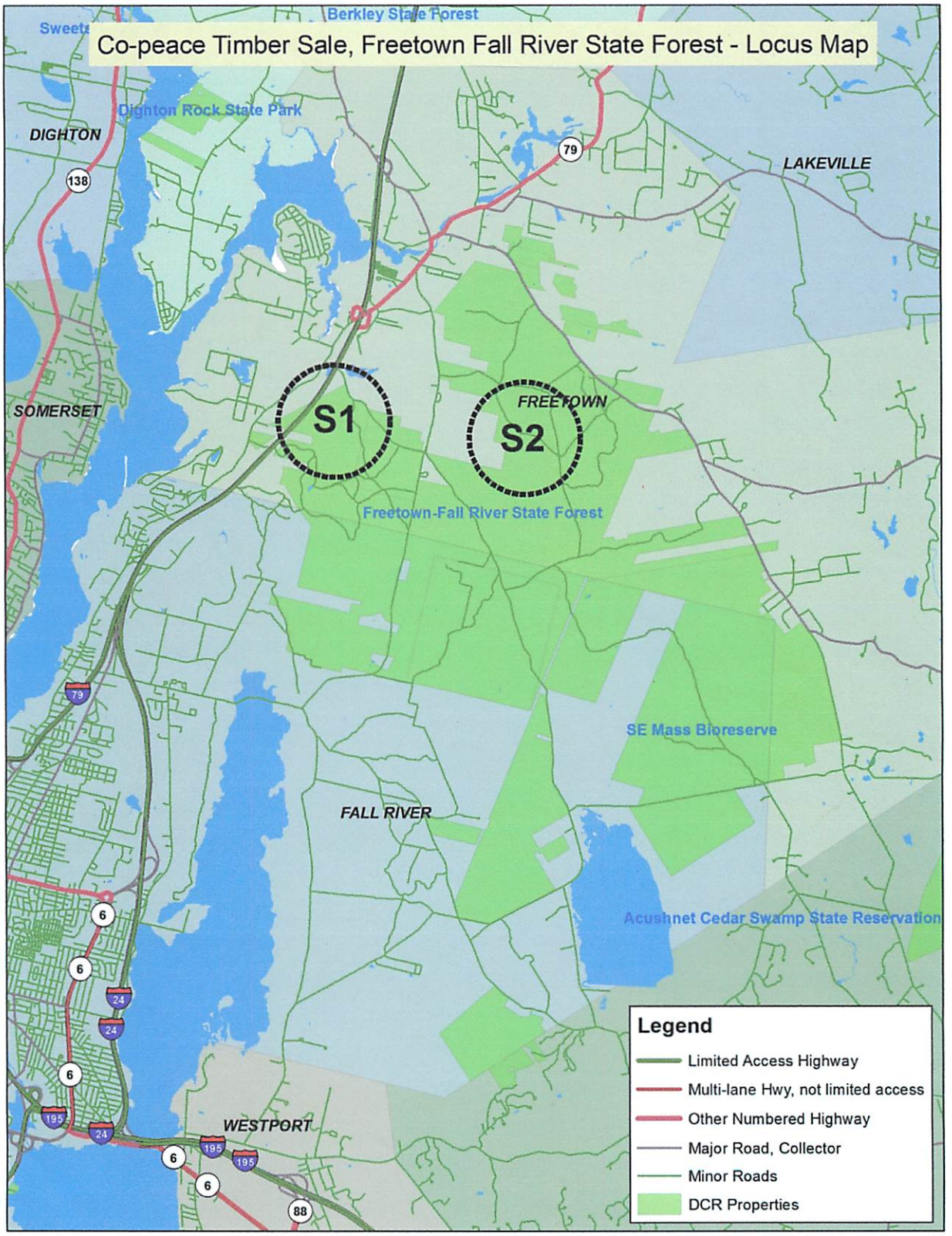


Proposed Timber Harvest S1



Proposed Timber Harvest S2




Co-peace Timber Sale, Freetown Fall River State Forest - Locus Map
Berkley State Forest
Sweets
Dighton Rock State Park
DIGHTON
138
79
LAKEVILLE
SOMERSET
S1
S2
FREETOWN
Freetown-Fall River State Forest
SE Mass Bioreserve
FALL RIVER
Acushnet Cedar Swamp State Reservation
WESTPORT
6
24
195
88
Legend
Limited Access Highway
Multi-lane Hwy, not limited access
Other Numbered Highway
Major Road, Collector
Minor Roads
DCR Properties