



**TECHNICAL MEMORANDUM**

To: James Lamphere  
Town Planner

From: Scott S. Hobson  
Principal Biologist

Date: November 25, 2019

Re: Review of Amended Reforestation Plan for Main Street Solar Farm

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Scott Hobson, principal biologist, has been retained by Crossman Engineering to perform an independent review of the Amended Reforestation Plan prepared by Land Management Services for the solar project.

Mr. Hobson has completed the review and notes the following items.

Although it may seem logical to match reforestation tree and shrub species with those currently present in the understories and overstories of the various on-site settings (as documented in the November 19, 2018, Forest Vegetation Description), the reforestation plan does a nice job of outlining the factors that will affect the effectiveness of reforestation in 2050, or perhaps beyond if the useful life of the arrays should be extended. Recommending cover types with specific species composition in advance is difficult, as the site conditions will be drastically different than the conditions that allowed those cover types to be established initially. We concur that a complete assessment by a qualified forester, perhaps even partnered with a qualified wildlife biologist, will be critical at the time of reforestation.

Consistent with the future degree of disturbance and other site variables inferred above, not all tree species presumed to be well represented currently in the overstory are included in the listing of recommended reforestation species (page 4 of the October 3, 2019 Amended Reforestation Plan). American beech (*Fagus grandifolia*) and black birch (*Betula lenta*) are two (2) such species, and the presence of Beech Bark Disease and *Nectria* cankers likely speaks to both species' absence in the reforestation plan.

One (1) tree species presumed to be currently well represented on site, and a pillar in many southern New England forests, is northern red oak (*Quercus rubra*). It seems that it might establish

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well along the interface of the poorly to moderately-well drained lower slope areas, and we recommend that it be added for consideration in 2050 as may be appropriate. Although numerous shrub species could be added to the plan, we recognize that final selections will be made by a certified forester at the time replanting is needed. A few additional shrub species that might warrant inclusion are black huckleberry (*Gaylussacia baccata*) in the moderately-well drained settings, beaked and/or American hazelnut (*Corylus cornuta/americana*) to provide short-term shrub massing and an added food source for wildlife, and another mast-producing native viburnum such as nannyberry (*Viburnum lentago*) to avoid too much reliance on highbush cranberry (*V. trilobum*), which seems to be rarely common, and to complement the maple-leaved viburnum (*V. acerifolium*) listed.

As noted in the reforestation plan, tree and shrub species will seed in and try to become established in the 30-year timeframe of the active facility. If species to be planted in reforestation efforts are to remain as the dominant constituents in the developing stands, then we offer for consideration that perhaps active management should be included as part of the plan in future years, perhaps in the 5 to 7-year range. Some degree of stand-improvement efforts may be needed to release the target species from undesirable species (i.e., invasives) that have gained a foothold.

**Conclusion:**

Mr. Hobson stated approval the Amended Reforestation Plan as presented without the above species is acceptable. The only item that might require a second look is whether the reforestation plan should include future time for one round of vegetation control to free the plantings from competing “other” vegetation. This should be discussed prior to implementing the reforestation plan in 30 years. It is his opinion the target species aren’t so important, as long as woody vegetation becomes established.

The process of “releasing” planted trees from other brush and tree saplings so they could get just enough of an edge to overtop and outcompete the other unintended vegetation should also be discussed at the future meeting prior to implementing the reforestation plan.