



TIER 1 FINAL ENVIRONMENTAL IMPACT STATEMENT
VOLUME 1 (PREFERRED ALTERNATIVE)

7.3 Agricultural Lands (Prime Farmland and Timberland)

7.3 AGRICULTURAL LANDS (PRIME FARMLAND AND TIMBERLAND)

7.3.1 Introduction

Agricultural lands include the nation’s farmlands and timberlands, which are unique natural resources that provide food, fiber, wood, and water. Conversion of agricultural lands to nonagricultural uses, such as a transportation use, results in the loss of these lands for agricultural purposes. This section describes agricultural lands in the NEC FUTURE Study Area (Study Area) and identifies potential impacts on agricultural lands associated with the Preferred Alternative. Also included within this section is a qualitative evaluation of the effects on agricultural lands associated with the No Action Alternative. Refer to Volume 2, Appendix E.03 for the Agricultural Lands detailed methodology.

7.3.2 Resource Overview

Prime farmland and prime timberland are dispersed throughout the Study Area with larger amounts found in Maryland, Delaware, New Jersey, Connecticut, Rhode Island, and Massachusetts. In many instances, greater impacts on agricultural lands are associated with areas where the Preferred Alternative diverges from the Existing NEC + Hartford/Springfield Line and creates new segments or extends off-corridor. Notable impacts on agricultural lands as a result of the Preferred Alternative, as further described in Section 7.3.4, would occur in the following areas:

- ▶ **Maryland:** Cecil and Harford Counties
- ▶ **Delaware:** New Castle County
- ▶ **New Jersey:** Middlesex County
- ▶ **Connecticut:** New Haven, Middlesex, Hartford, and New London Counties
- ▶ **Rhode Island:** Washington County
- ▶ **Massachusetts:** Bristol and Norfolk Counties

Notable impacts on agricultural lands as a result of the Preferred Alternative would not occur in Washington, D.C., Pennsylvania, and New York.

This Tier 1 Final Environmental Impact Statement (EIS) analysis does not identify active or specific farmland or timberland uses.

7.3.3 Affected Environment

Throughout the Affected Environment of the Existing NEC + Hartford/Springfield Line and the Preferred Alternative, prime farmland generally consists of noncontiguous tracts that are similar in size and dispersion. High concentrations (i.e., more than 500 acres) of prime farmland exist within the Affected Environment of the following areas:

- ▶ **Maryland:** Harford and Cecil Counties
- ▶ **New Jersey:** Middlesex County
- ▶ **Connecticut:** Hartford and New London Counties
- ▶ **Rhode Island:** Washington County

High concentrations of prime farmland within the Affected Environment do not exist in Washington, D.C., Delaware, Pennsylvania, New York, and Massachusetts.

High concentrations (i.e., more than 1,000 acres) or large contiguous or uniform tracts of prime timberland exist within the Affected Environment of the following areas:

- ▶ **Maryland:** Anne Arundel, Harford, and Cecil Counties
- ▶ **Delaware:** New Castle County
- ▶ **New Jersey:** Middlesex County
- ▶ **Connecticut:** New Haven, Middlesex, Hartford, and New London Counties
- ▶ **Rhode Island:** Washington County
- ▶ **Massachusetts:** Bristol and Norfolk Counties

High concentrations or large contiguous or uniform tracts of prime timberland do not exist within the Affected Environment of Washington, D.C., Pennsylvania, New Jersey, and New York.

Table 7.3-1 and Table 7.3-2 summarize by geography the acreages of prime farmland and prime timberland, respectively, within the Affected Environments of the Existing NEC + Hartford/Springfield Line and the Preferred Alternative.

Table 7.3-1: Affected Environment: Prime Farmland Acreage

Geography	Existing NEC + Hartford/Springfield Line (Acres)	Preferred Alternative (Acres)
D.C.	2	2
MD	2,220	3,590
DE	185	210
PA	115	100
NJ	840	850
NY	4	5
CT	1,910	2,435
RI	1,080	1,280
MA	440	440
TOTAL	6,800	8,910

Source: NEC FUTURE team, 2016

Table 7.3-2: Affected Environment: Prime Timberland Acreage

Geography	Existing NEC + Hartford/Springfield Line (Acres)	Preferred Alternative (Acres)
D.C.	70	70
MD	6,545	9,195
DE	820	1,010
PA	465	450
NJ	1,770	1,805
NY	30	40
CT	10,800	14,280
RI	4,960	6,375
MA	3,410	3,410
TOTAL	28,870	36,635

Source: NEC FUTURE team, 2016

7.3.4 Environmental Consequences

This analysis focuses on identifying the effects of the Preferred Alternative on prime farmland and prime timberland that are not already considered developed land. Table 7.3-3 and Table 7.3-4 present the acreages of prime farmland or prime timberland that lie within the Representative Route of the Preferred Alternative, and thus have the potential to be converted to transportation use. The Preferred Alternative assumes improvements to the Existing NEC; therefore, the data presented include the Environmental Consequences inclusive of improvements to the Existing NEC and any new route option or off-corridor route associated with the Preferred Alternative.

7.3.4.1 No Action Alternative

Impacts to prime farmland and prime timberland as a result of the No Action Alternative will be minimal. Most projects that fall under the No Action Alternative will occur within or adjacent to the Existing NEC + Hartford/Springfield Line, which is largely characterized by developed land already utilized for transportation (i.e., land that cannot again be converted to a transportation use and thus be considered an impact on prime farmland or prime timberland).

7.3.4.2 Preferred Alternative

Table 7.3-3 and Table 7.3-4 present the environmental consequences to agricultural resources for the Existing NEC + Hartford/Springfield Line and the Preferred Alternative.

Table 7.3-3: Environmental Consequences: Representative Route – Prime Farmland

Geography	Existing NEC + Hartford/Springfield Line (Acres)	Preferred Alternative (Acres)
D.C.	0	0
MD	40	200
DE	5	30
PA	0	0
NJ	30	35
NY	0	0
CT	150	180
RI	70	90
MA	20	20
TOTAL	315	555

Source: NEC FUTURE team, 2016

* The Preferred Alternative assumes improvements to the Existing NEC; therefore, the data presented include the Environmental Consequences inclusive of improvements to the Existing NEC and any new route option or off-corridor route associated with the Preferred Alternative.

Table 7.3-4: Environmental Consequences: Representative Route – Prime Timberland

Geography	Existing NEC + Hartford/Springfield Line (Acres)	Preferred Alternative (Acres)
D.C.	0	0
MD	220	545
DE	40	130
PA	10	10
NJ	65	75
NY	0	0
CT	640	870
RI	350	530
MA	245	265
TOTAL	1,570	2,425

Source: NEC FUTURE team, 2016

* The Preferred Alternative assumes improvements to the Existing NEC; therefore, the data presented include the Environmental Consequences inclusive of improvements to the Existing NEC and any new route option or off-corridor route associated with the Preferred Alternative.

Since the Existing NEC + Hartford/Springfield Line is incorporated in whole within the Preferred Alternative, the following describes the effects of new segments proposed under the Preferred Alternative on agricultural resources.

Elements South of New York City

- ▶ **Maryland/Delaware – Bayview to Newport (new segment)** – This new segment of the Preferred Alternative would contain the highest acreages of impacts to prime farmland (approximately 180 acres) and the second highest acreages of impacts to prime timberland (approximately 405 acres). This new segment would contain the largest amount of agricultural resource impacts in the corridor. The majority of these impacts would be located in Harford and Cecil Counties, MD. The majority of impacts in these counties would be from aerial, at-grade, and embankment construction types.
- ▶ **Delaware – Wilmington Segment (bypasses Wilmington Station)** – This segment of the Preferred Alternative would contain a small acreage of impacts to prime timberland (approximately 20 acres). There would be no impacts to prime farmland within this segment.
- ▶ **Pennsylvania – Philadelphia Segments (new segments)** – This new segment of the Preferred Alternative would contain no impacts to either prime farmland or timberland.
- ▶ **New Jersey – New Brunswick to Secaucus (new segment)** – This new segment of the Preferred Alternative would contain small acreages of impact to prime farmland (approximately 5 acres) and prime timberland (approximately 10 acres).
- ▶ **New Jersey – Secaucus/Bergen loop (new segment)** – This new segment of the Preferred Alternative would contain no impacts to either prime farmland or timberland.

Elements North of New York City

- ▶ **New York – New Rochelle to Greens Farm (new segment)** – This new loop segment of the Preferred Alternative would contain no impacts to either prime farmland or timberland.

- ▶ **Connecticut/Rhode Island – Old Saybrook-Kenyon (new segment)** – This new segment of the Preferred Alternative would contain the highest acreages of impacts to prime timberland (approximately 415 acres). Additionally, there would be approximately 60 acres of impacts to prime farmland. The majority of these impacts would be located in New London and Washington Counties. Impacts in these counties are mostly from aerial, embankment, trench, and tunnel construction types.
- ▶ **Connecticut/Massachusetts – Hartford/Springfield Line (upgraded track/electrification)** – This portion of the Preferred Alternative would contain the second highest acreages of impacts to prime farmland (approximately 85 acres). Additionally, there would be a large amount of impacts to prime timberland land (approximately 300 acres). Most of these impacts would be located in New Haven and Hartford Counties. Impacts in these counties would be mostly from at-grade construction types.

7.3.5 Stations

The Preferred Alternative includes continued service to existing stations along the NEC, modifications to existing stations—which may increase the station footprint—and new stations. No effects on prime farmland or prime timberland would occur at existing stations where modifications are not proposed. Minimal effects would occur at stations where modifications are proposed and an increase in the station footprint overlaps with small noncontiguous tracts of prime farmland and prime timberland. Greater effects would be associated in areas where new stations are proposed and overlap with prime farmland and prime timberland. Table 7.3-5 and Table 7.3-6 identify those stations associated with the Preferred Alternative that overlap with areas of prime farmland and prime timberland. Volume 2, Appendix E.03, provides a list of all stations for the Preferred Alternative and related effects.

Table 7.3-5: Environmental Consequences: Preferred Alternative – Modified or New Stations – Prime Farmland

State	County	Station ID	Station Type	Station Name	Acres
NJ	Middlesex	62	New	North Brunswick	1
CT	New Haven	189	New	Orange	1
Hartford/Springfield Line					
No effects.					

Source: NEC FUTURE team, 2016

Table 7.3-6: Environmental Consequences: Preferred Alternative – Modified or New Stations – Prime Timberland

State	County	Station ID	Station Type	Station Name	Acres
MD	Anne Arundel	5	Modified	Odenton	10
DE	New Castle	26	New	Newport	1
NJ	Mercer	61	Modified	Princeton Junction	1
CT	New Haven	189	New	Orange	3
	New London	124		Mystic / New London H.S.	10
	New Haven	157		North Haven	2
	Hartford	161		Newington	4
		187		Enfield	3
Hartford/Springfield Line					
No effects.					

Source: NEC FUTURE team, 2016

7.3.6 Prime Farmland and Prime Timberland Land Use Plan Review

In addition to the GIS-based analysis of effects, the FRA reviewed land use planning documents by states and federally mandated metropolitan planning organizations (MPO) to identify goals and objectives that correlate or conflict with impacts to preservation of prime farmland and prime timberland. Five of the states for which impacts are reported have set goals and objectives toward the conservation or preservation of farmlands and rural lands or contain MPO area(s) that have set goals and objectives toward the conservation or preservation of farmlands and rural lands, including Maryland, Delaware, Connecticut, Rhode Island, and Massachusetts. Two of the states, Maryland and Connecticut, have set goals and objectives toward the conservation or preservation of timberlands, forest, and woodlands or contain MPO area(s) that have set goals and objectives toward the conservation or preservation of timberlands, forest, and woodlands. For example, one plan outlines the need to support resource-based industries, such as agriculture and forestry from encroachment of incompatible land uses and the promotion of economic viability of these resources. This support should include the preservation of relatively large contiguous tracts that sustain resources and resource-based industries, such as agriculture.¹ Another plan outlines goals to reinforce existing land use policies that focus development in the region's existing developed corridors that have transportation, employment, and utility infrastructure while conserving the region's land areas that are integral for maintaining the region's agricultural heritage.² Appendix E, Section E.03, summarizes the land use planning documents and the goals and objectives set toward the conservation or preservation of farmlands, rural lands, timberlands, forest, and woodlands that coincide with counties that would have impacts.

In addition, all states, with the exception of the District of Columbia, have programs dedicated to agricultural land conservation. Each state promotes conservation through various mechanisms such as preservation easements and tax incentive programs.

¹ Maryland Department of Planning. (2011). *Plan Maryland: A Sustainable Growth Plan for the 21st Century*. Baltimore: Maryland Department of Planning.

² South Central Regional Council of Governments. (Amended 2009). *Plan of Conservation and Development – South Central Region*. North Haven: South Central Regional Council of Governments.

7.3.7 Context Area

Conditions within the Context Area are similar to the Affected Environments for both prime farmland and prime timberland. No particular agricultural resource of special concern was noted.

7.3.8 Comparison to the Action Alternatives

The Affected Environment of the Preferred Alternative is generally consistent and comparable in size and dispersion with the Affected Environments of the Action Alternatives described in Volume 2. The Preferred Alternative would contain more acres of prime farmland within its Affected Environment than Alternative 1, but less than Alternatives 2 and 3 and more acres of prime timberland within its Affected Environment than Alternatives 1 and 2, but less than Alternative 3. The Preferred Alternative notably does not include a route through Long Island, New York, and certain areas of Connecticut, which are rich in prime timberland resources.

Under the Preferred Alternative, there would be no notable agricultural resources potentially affected in New York, which is similar and consistent with Alternatives 1 and 2 but different from Alternative 3, which includes more routes off the Existing NEC, including the New York City to Hartford via Long Island route segment. Under the Action Alternatives, there would be notable agricultural resources potentially affected in Anne Arundel County, MD; Mercer County, NJ; Tolland and Windham Counties, CT; Providence County, RI; and Worcester and Middlesex Counties, MA. However, under the Preferred Alternative, there would be no notable resources potentially affected within these counties.

Environmental Consequences of the Preferred Alternative would be generally consistent and comparable in size and dispersion with the Environmental Consequences for the Action Alternatives described in Volume 2. In Maryland, the Preferred Alternative would affect more acreages of prime farmland than Alternatives 1 and 2, but less than Alternative 3.

In Maryland, the Preferred Alternative would affect more acreages of prime timberland than Alternatives 1 and 2, but less than Alternative 3. In Connecticut, the Preferred Alternative would affect less acreages of prime timberland than Alternatives 2 and 3, but more than Alternative 1. In Rhode Island, the Preferred Alternative is comparable to Alternative 1 in affected acreages.

7.3.9 Potential Mitigation Strategies

An example of a programmatic mitigation measure for agricultural lands could include providing equipment access via rights-of-way. Where large, contiguous tracts of agricultural land might be bisected, coordination and arrangements with the landowner will occur to mitigate for access constraints. This could occur through monetary compensation or through a land swap.

During Tier 2 studies, coordination with the Natural Resources Conservation Service (as applicable under the Farmland Protection Policy Act) to perform land evaluation and site assessments will establish a farmland conversion impact rating score. This score will determine if potential adverse impacts on the agricultural land exceed the recommended allowable level. If so, then the following mitigation strategy will be considered during Tier 2 processes:

- ▶ Slightly shifting the location of the analyzed alignment when there is an occurrence where the proposed alignment runs along the edge of a large contiguous tract
- ▶ Majorly shifting the location of the proposed alignment when there is a large, contiguous tract that may be bisected

7.3.10 Subsequent Tier 2 Analysis

For the counties identified in Section 7.3.2, more-detailed analysis and coordination with local land use and zoning agencies will be conducted during the various Tier 2 project studies. In addition, Tier 2 project studies will coordinate further with states identified in Section 7.3.6 that have programs dedicated to agricultural land conservation or have set goals and objectives toward the conservation or preservation of agricultural land. Additional coordination at the state and local levels will help to ascertain where agricultural lands (e.g., farmlands of statewide importance) are located, further define the actual acreage of agricultural lands, evaluate potential for farmland fragmentation, identify lands actively used or preserved for agricultural purposes, and will also help to identify local land use and zoning restrictions.