

### Working Lands for Wildlife Wildlife Habitat Evaluation Guide for New England Cottontail

**Background:** This Wildlife Habitat Evaluation Guide (WHEG) is based on the habitat requirements of New England cottontail (*Sylvilagus transitionalis*) and habitat objectives identified in the Conservation Strategy for the New England cottontail (NEC). It is accepted that managing for this species benefits many other young forest and shrubland dependent species such as the common nighthawk, black racer, red bat (59 species of greatest conservation need in New England). This model can be applied to all ecological sites within approved focal areas for the New England cottontail, even if they do not currently occupy the site.

The New England cottontail is a species that requires dense vegetation, sometimes referred to as “thickets” with >10,000 to 20,000 stems per acre in patches >6 acres but ideally >25 acres. Habitat is often found in abandoned farmlands, regenerating timber harvests, shrubby fields, utility corridors, scrub/shrub wetlands, and pine – scrub oak barrens. New England cottontails also require areas with herbaceous vegetation such as seeps, wetland edges and fields close to cover. Winter cover, such as dense thickets of rose, juniper, blackberry, green briar and other similar species is especially important to protect the species from predation.

**Instructions:** If a factor is not applicable do not score that factor. While every factor may not fit every situation, the WHEG should be completed by placing the corresponding score in the "Before Score" column which most closely represents that factor. Planners should carefully assess each factor prior to assigning a score to a particular situation. This score represents the habitat in a benchmark state without improvements implemented. **Interpolate** between values if necessary. All scores are for current year (previous 12 months) unless otherwise stated. The “After Score” is the expected score when the conservation plan or practice is mature, which will vary in time. If a factor is scored as N/A do not count that factor in the final total. In order to achieve quality criteria on a 0-1 scale an “After Score” must equal 0.70 or greater. It is required that a minimum of six (6) acres of contiguous, suitable habitat be available through creation and/or management for breeding New England cottontails.

Owner/Operator:	Field Office:	
County:	Ecological Site Description (if available):	
NRCS Planner:	Acres:	Field(s):
NRCS Biologist:	Evaluation Period:	Date:
Non-NRCS Biologist (If applicable):	Location:	
Notes:		

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### LANDSCAPE LEVEL HABITAT EVALUATION

FACTOR	VALUES	BEFORE SCORE	RECOMMENDED CONSERVATION PRACTICES	AFTER SCORE
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#### 1. Landscape Setting<sup>1</sup> – Distances to known NEC populations (*documented within past 10 years*) from project site.

a) Project site has documented current NEC presence	1.0			
b) Documented site <1000m from project site	0.9			
c) Documented site >1000m and <3000m from project site	0.7			
d) Historic site (>10 years since documentation) or site is >25 ac, will be managed for early successional habitat and has core area available for potential NEC relocation activities	0.5			
e) Project site does not meet above criteria and/or landscape setting makes NEC habitat management impractical	0			

<sup>1</sup>The before and after scores for factor #1 may not be affected by installation of conservation practices.

#### 2. Are sites in Factor 1 above connected to project site by vegetative corridor(s) suitable for NEC movement?

a) Yes	1			
b) No	0			

#### 3. Landscape features on or adjacent (immediately next to) to the project site.

a) Refuges/Conservation land managed for shrublands	1			
b) Shrublands (alders, dogwoods, viburnum, juniper, scrub oak, etc.,)	0.8			
c) Powerlines & railroads	0.5			
d) Shrubby field edges >50 Ft wide	0.3			

#### 4. Landscape features within 1000 meters of the project site.

a) Large blocks (>40ac) of forests less than 40 years old	1			
b) Blocks (20-40ac) of forests less than 40 years old	0.5			
c) Landscape highly fragmented	0			

### PROJECT / SITE SCALE HABITAT EVALUATION

#### 5. Existing and planned suitable habitat at project site.<sup>2</sup>

a) >25 acres	1			
b) >12 acres	0.7			
c) >6 acres	0.4			
d) < 6 acres	0.2			

<sup>2</sup>Suitable habitat can include contiguous habitat on the property or adjacent property that is protected from development.

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FACTOR	VALUES	BEFORE SCORE	RECOMMENDED CONSERVATION PRACTICES	AFTER SCORE
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### 6. Soil – Assign a value for the predominant soil drainage class or condition for the enrolled land.

a) Soils with high site productivity >60 site index or pine – scrub oak barrens	1			
b) Poorly, somewhat poorly drained to moderately well drained	0.75			
c) Other soils, steep slopes > 10%	0			

### 7. Woody vegetative understory of project site.

a) Site's understory is heavily stocked (10,000 to 20,000+ stems/ac) less than 3" in diameter <sup>3</sup>	1.0			
b) Forest canopy closure has begun and understory stem densities are <10,000/ac	0.5			
c) Mature forest with canopy closure and stem densities are <1,000/ac	0.1			
d) Mature forest with canopy closure and little to no understory	0			

<sup>3</sup>This is equal to approximately 23 to 46 stems in a 10X10 foot square area.

### 8. Winter cover and browse at project site – species listed below are just examples, other species may apply.

a) Dense juniper, willow, green briar, rose, blackberry, raspberry patches >12 acres	1.0			
b) Dense juniper, willow, green briar, rose, blackberry, raspberry patches >6 acres and <12 acres	0.5			
c) Dense juniper, willow, green briar, rose, blackberry, raspberry patches >1 acre and <6 acres	0.1			

### 9. Overall capacity for desirable regeneration.

a) Soils, moisture, aspect, and understory species appropriate	1.0			
b) Poor site conditions or undesirable species likely due to management (e.g., prolific white pine regeneration)	0			

### 10. Timber conditions of project site.

a) Poor quality young forest <6" DBH	1.0			
b) Poor quality forest <10 " DBH	0.5			
c) Marketable timber species (oak, sugar maple, etc) >10" DBH	0			

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FACTOR	VALUES	BEFORE SCORE	RECOMMENDED CONSERVATION PRACTICES	AFTER SCORE
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### 11. Non-living escape or thermal cover.

a) Brush piles and root boles frequent (>2 piles or boles per acre); downed woody debris well distributed over the managed area	1.0			
b) Brush piles, root boles, and downed woody debris found occasionally over the managed area but not as described above	0.7			
c) Brush piles, root boles, and downed woody debris very seldom encountered or non-existent over the managed area	0.1			

NECA WHEG SUMMARY TOTAL	BEFORE	AFTER
LANDSCAPE LEVEL HABITAT EVALUATION SUBTOTAL		
PROJECT/SITE SCALE HABITAT EVALUATION SUBTOTAL		
TOTALS		
NUMBER OF FACTORS CONSIDERED		
FINAL SCORE <i>(the total score divided by number of factors)</i> <i>must be <math>\geq 0.70</math> to meet minimum requirements for NEC - WLFW</i>		
PLANNED IMPROVEMENT <i>(After Total – Before Total)</i>		

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<b>Factor(s)</b>	<p style="text-align: center;"><b>Conservation Practices for Resource Concerns<sup>5</sup></b> <i>Projects rating 0.5 or less, consider the following conservation practices</i></p> <p>The following practices have been reviewed and approved by the USFWS and NRCS for New England Cottontail Habitat Management funded through the WLFW.</p>
	<p><b><u>CORE PRACTICES</u></b></p> <p>643 – Restoration of Management of Rare and Declining Habitats - Restoring, conserving, and managing unique or diminishing native terrestrial and aquatic ecosystems.</p> <p>644 – Wetland Wildlife Habitat Management - Retaining, developing or managing wetland habitat for wetland wildlife.</p> <p>645 – Upland Wildlife Habitat Management - Provide and manage upland habitats and connectivity within the landscape for wildlife.</p> <p>647 – Early Successional Habitat Management/Development - Manage plant succession to develop and maintain early successional habitat to benefit desired wildlife and/or natural communities.</p> <p><b><u>FACILITING/SUPPORTING PRACTICES</u></b></p> <p>314 – Brush management - The management or removal of woody (non-herbaceous or succulent) plants including those that are invasive and noxious.</p> <p>315 – Herbaceous Weed Control - The removal or control of herbaceous weeds including invasive, noxious and prohibited plants.</p> <p>327 – Conservation Cover - Establishing and maintaining permanent vegetative cover</p> <p>338 – Prescribed Burning - Controlled fire applied to a predetermined area.</p> <p>340 – Cover Crop - Crops including grasses, legumes, and forbs for seasonal cover and other conservation purposes.</p> <p>342 – Critical Area Planting - Establishing permanent vegetation on sites that have, or are expected to have, high erosion rates, and on sites that have physical, chemical or biological conditions that prevent the establishment of vegetation with normal practices.</p> <p>386 – Field Border - A strip of permanent vegetation established at the edge or around the perimeter of a field.</p> <p>391 – Riparian Forest Buffer - An area predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.</p> <p>394 – Fire Break - A permanent or temporary strip of bare or vegetated land planned to retard fire.</p> <p>422 – Hedgerow Planting - Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.</p>

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472 – Access Control – The temporary or permanent exclusion of animals, people, vehicles, and/or equipment from an area.

484 – Mulching - Establishment of dense vegetation in a linear design to achieve a natural resource conservation purpose.

490 – Tree/Shrub Site Preparation - Treatment of areas to improve site conditions for establishing trees and/or shrubs.

560 – Access Road - A travel-way for equipment and vehicles constructed as part of a conservation plan.

612 – Tree/Shrub Establishment - Establishing woody plants by planting seedlings or cuttings, direct seeding, or natural regeneration.

655 – Forest Trails and Landings - A temporary or infrequently used route, path or cleared area.

657 – Wetland Restoration - The return of a wetland and its functions to a close approximation of its original condition as it existed prior to disturbance on a former or degraded wetland site.

666 – Forest Stand Improvement - The manipulation of species composition, stand structure and stocking by cutting or killing selected trees and understory vegetation.