#### **Morristown National Historical Park**

Vegetation and White-tailed Deer Management Plan Environmental Assessment/Assessment of Effect



## Background Information

#### The Park

The park commemorates the sites of General Washington's Continental Army encampments between 1777 and 1782. The project area for this plan is defined within the boundaries of the Jockey Hollow and New Jersey Brigade units where the majority of the park's forests exist.







#### The Forest

Natural hardwood forests rely on mature trees to produce seedlings and saplings that will one day replace aging and dying canopy trees, in a process known as regeneration. This natural process is reliant upon having sufficient seedling and sapling numbers available. As seedlings and sprouts age, they reach a stage called "advanced regeneration." During this stage, young sapling stems are primed and ready to grow rapidly taller once sunlight becomes available from openings created in the canopy.

In the mixed hardwood forest of the park today the natural hardwood landscape is threatened because native tree species are showing little or no advanced regeneration. If no action is taken, the natural diversity of the hardwood forests could be lost as trees die from natural causes.



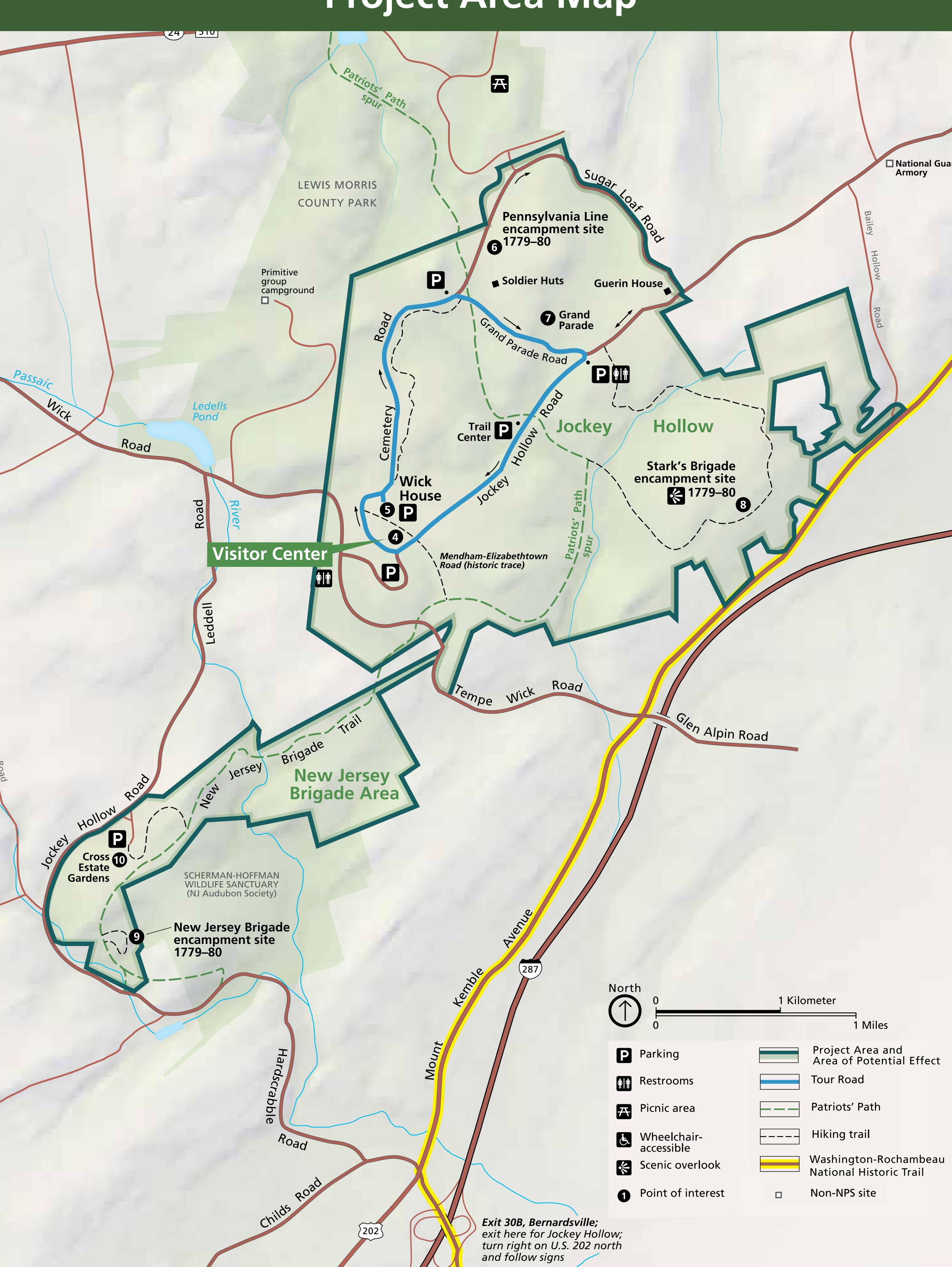




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## Purpose and Need

The purpose of this plan is to promote a naturally regenerating hardwood forest with mixed-aged classes of trees that reflect the historic and naturally diverse character of the park by providing a framework for managing vegetation and the browsing intensity of white-tailed deer. This plan is needed because:

- invasive plant species are outcompeting native species and depressing or eliminating native tree regeneration;
- historically high levels of deer browsing on understory growth contributed to lower tree seedling regeneration rates, and if deer numbers rebound the NPS needs to be able to manage deer browsing appropriately; and
- over time, the absence of forest regeneration will result in either (1) the replacement of forest stands with species that do not reflect the forest's historic character or natural diversity or (2) the disappearance of mixed hardwoods altogether.







#### Goals

#### Primary

- Minimize the establishment of new populations of invasive species
- Increase mixed-aged classes of hardwood trees
- Reduce existing invasive species
- Reduce the impacts of deer browsing on hardwood regeneration
- Maintain forested components of the park's cultural landscape

#### Secondary

- Promote conditions that improve the native understory
- Include other agencies, adjacent landowners, and neighbors to create conditions that promote a naturally regenerating and sustainable forest
- Manage forest vegetation and deer browsing based on results of monitoring
- Help the public understand the park's management strategies

For more information, see chapter 1 of the EA

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## Alternative A: No-Action Alternative

### Forest Management

- NPS would continue current passive forest management practices.
- Small-scale herbicide applications or hand tools would continue to be used to treat and remove invasive plant species.
- The park would continue to be a part of an early detection program for invasive and nonnative plants conducted by the Northeast Temperate Network.

#### Deer Management

• NPS would continue current management, which does not include active management of the size or density of the deer population.

### Monitoring, Education, and Cooperation

- Existing monitoring of fenced exclosures to determine effectiveness of deer browsing prevention on regeneration would continue.
- NPS would continue to consult with neighboring agencies and/or landowners when there is a concern about hazard trees or invasive plants or to inform park neighbors of planning efforts.



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## Alternative B: Proposed Action/NPS Preferred

#### Forest Management

- NPS would use an updated integrated pest management approach to remove and prevent the spread of invasive plant species. Removal would be done by chemical (e.g. herbicide) or mechanical (e.g. hand or power tools) means.
- NPS would plant seeds or seedlings in areas where natural seed production from seed trees is not adequate.
- If a combination of other actions is unsuccessful in meeting plan goals, the NPS could implement selective removal of overstory canopy trees and shade-tolerant trees in the midstory to allow sunlight to reach the forest floor.

#### Deer Management

- The deer population would be managed to maintain a population density at or below 20–25 deer per square mile in order to support successful forest regeneration.
- Currently, the deer population is below the target density and so no removal actions would be implemented at this time.
- If the deer population grows above the target density in the future, sharpshooting would be used to reduce and maintain the population at or below the target density.

### Monitoring, Education, and Cooperation

- NPS would continue current monitoring and cooperation actions, as under the no-action alternative.
- Monitoring of baseline conditions would increase for invasive species, deer browsing, and canopy factors to determine if plan goals are met and if management actions should be adjusted.
- Education and cooperation efforts would be implemented to inform the public, partners, and adjacent landowners of NPS management actions.







**Environmental Assessment/Assessment of Effect** 



## Alternative Elements Considered but Dismissed

The following elements were considered but ultimately dismissed from the alternatives:

- Public deer hunting
- Large-scale fencing to exclude deer from the park or areas of the park
- Reintroducing or increasing deer predators in the park
- Live transfer (translocation) of deer to locations outside the park
- Alternate lethal removal techniques (i.e. capturing, tranquilizing, and euthanizing)
- Contraceptives for deer fertility control
- Surgical sterilization of deer for fertility control
- Large-scale hazing to keep deer away from regenerating hardwood areas
- Creation of large clear cuts of the forest of up to 20 acres



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## Impact Topics

### Forest Vegetation

The dense forest landscapes of the Jockey Hollow and New Jersey Brigade units are important aspects of the park's natural diversity, natural processes, and historic character.







#### White-Tailed Deer

Diverse, native plant species are an important part of quality habitat for the local white-tailed deer population. White-tailed deer are an important part of the forest ecosystem in the park.

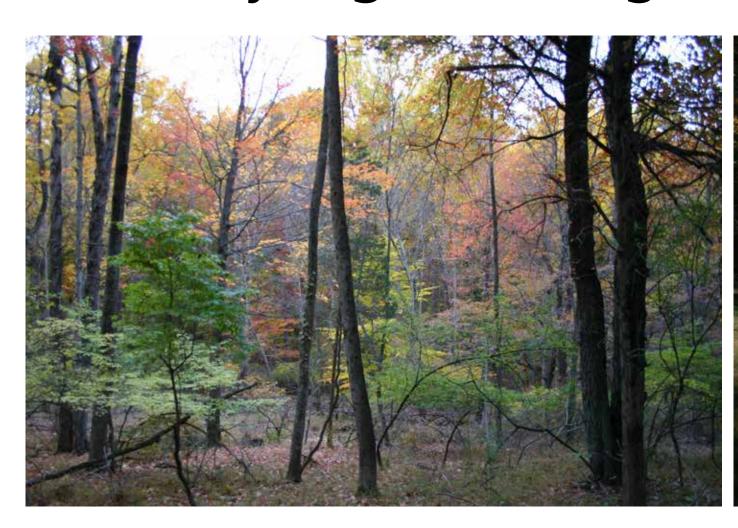






### **Cultural Landscape**

The cultural landscape of the Jockey Hollow and New Jersey Brigade units encompasses approximately 1,660 acres that were utilized by the Continental Army between 1777 and 1782. An important piece of this landscape is the naturally regenerating mixed hardwood forest.









### The NEPA Process

### **Steps Completed to Date**

- Project Initiation and Internal Scoping
- Public and Agency Scoping Period
- Analysis of Public Comments
- Alternatives Development
- Release of planning process update newsletter
- Preparation of the Vegetation and White-Tailed Deer Management Plan Environmental Assessment/Assessment of Effect

#### We Are Here

 Public Review of the Vegetation and White-Tailed Deer Management Plan Environmental Assessment/Assessment of Effect – Summer 2017

### **Next Steps**

- Analysis of Public Comments Summer/Fall 2017
- Preparation of Decision Document Fall 2017
- Announcement of Decision Fall/Winter 2017

Note: Items in blue represent opportunities for public involvement







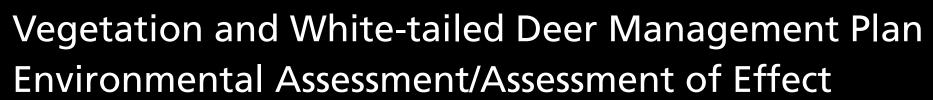
#### **How to Comment**

You are encouraged to provide comments in a number of ways:

- We prefer that comments be submitted online at http://parkplanning.nps.gov/morr
- Complete a comment form and submit it in person tonight
- You can send a written comment form or letter to:

Morristown National Historical Park Superintendent 30 Washington Place Morristown, NJ 07960

Please provide comments by September 7, 2017





# Forest Type and Canopy Gap

