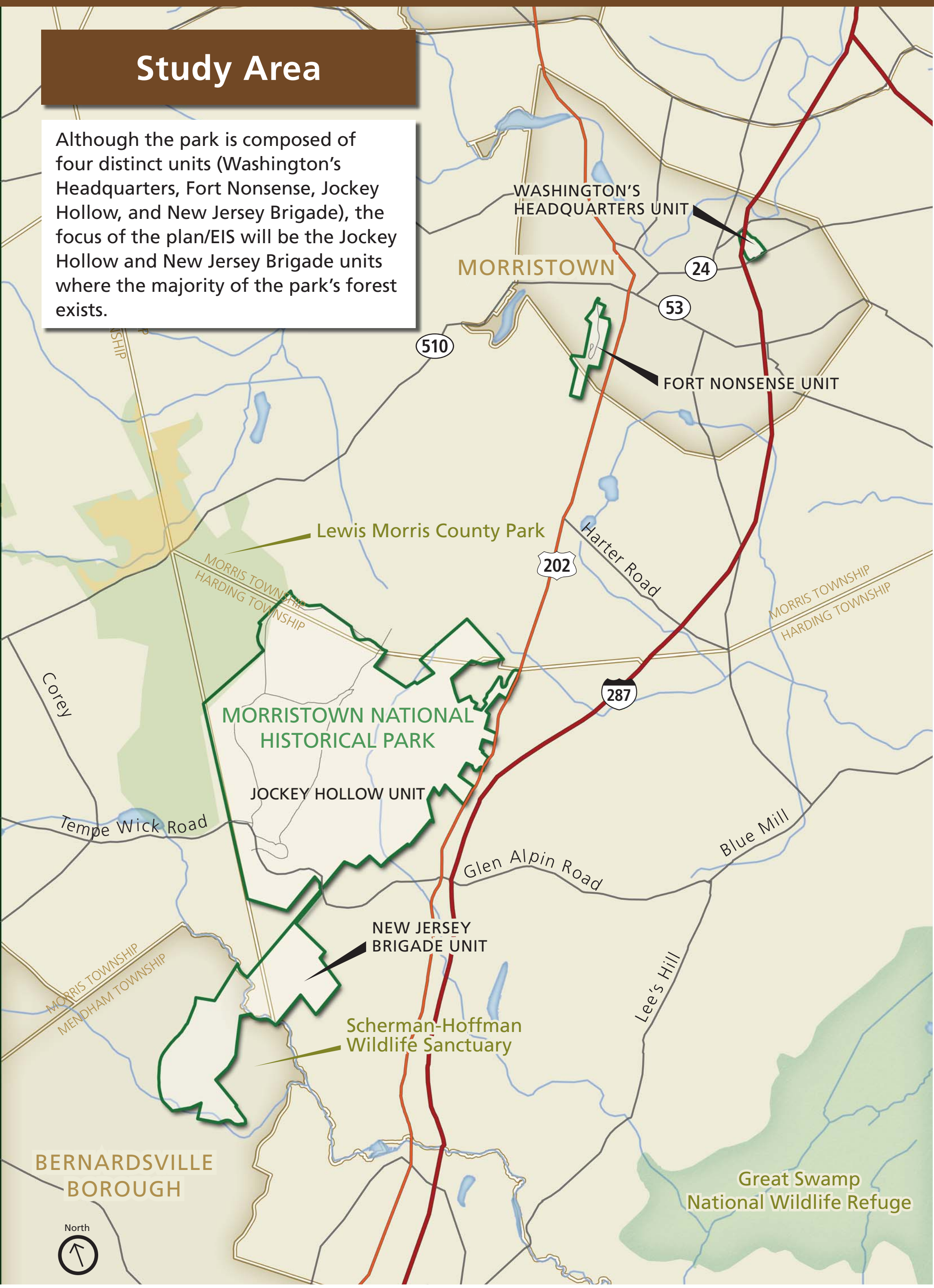
Morristown National Historical Park

Vegetation and White-tailed Deer Management Plan/ Environmental Impact Statement

National Park Service
U.S. Department of the Interior

Study Area

Although the park is composed of four distinct units (Washington's Headquarters, Fort Nonsense, Jockey Hollow, and New Jersey Brigade), the focus of the plan/EIS will be the Jockey Hollow and New Jersey Brigade units where the majority of the park's forest exists.



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Purpose of Plan

The **purpose** of this plan/EIS is to provide the framework for managing vegetation and white-tailed deer browsing to promote a naturally regenerating hardwood forest with mixed-aged classes of trees that reflect the historic and naturally diverse character of the park.

Need for Plan

Over time, the absence of regeneration will result either in

1. 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.

As a result, action is **needed** to meet the Congressional intent and the park's General Management Plan direction of maintaining a naturally regenerating and sustainable forested landscape.

Plan Goals and Objectives

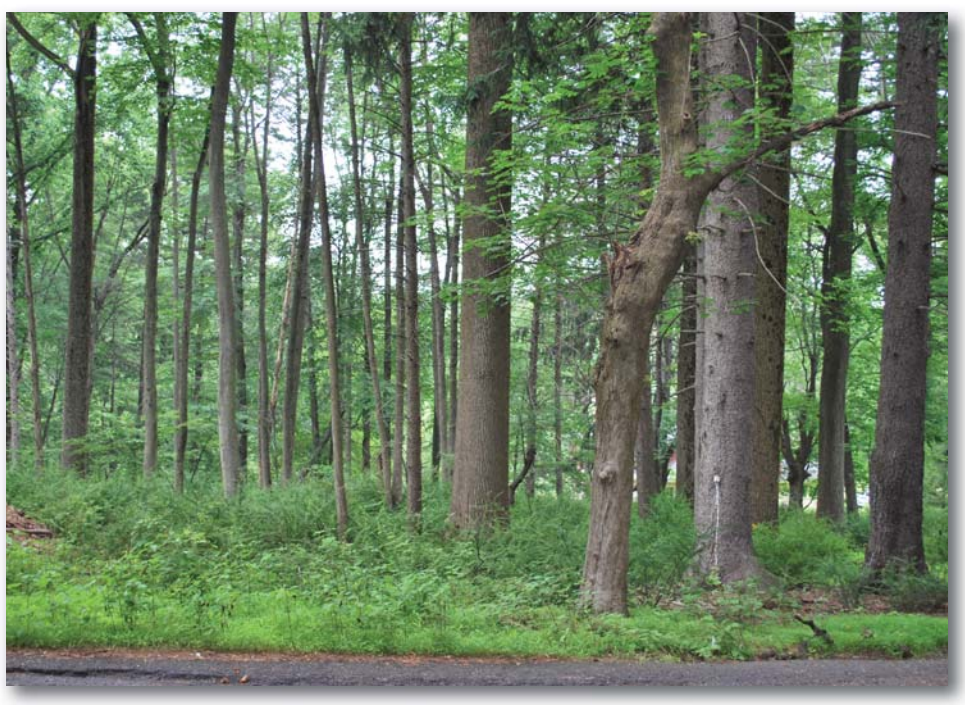
CRITICAL OBJECTIVES

The following objectives must each be met, to a large degree, for an alternative to be considered reasonable and carried forward for analysis in the EIS.

Vegetation

Within the timeframe of the plan (15-20 years), develop an adaptive forest management strategy to preserve and enhance the structure and species composition of the park's forests to reflect historic character, biodiversity, and natural processes by

- reducing the percentage of cover of targeted nonnative invasive species to minimize competition for hardwood regeneration
- increasing the mixed-aged classes of hardwood trees
- measuring the response of the forest resource to potential management actions, natural changes and unanticipated impacts over time to determine if the desired future conditions of forest sustainability are being achieved
- taking action to minimize additional spread or establishment of new nonnative species which could threaten hardwood forests



Plan Goals and Objectives

CRITICAL OBJECTIVES

The following objectives must each be met, to a large degree, for an alternative to be considered reasonable and carried forward for analysis in the EIS.

Effects of White-tailed Deer on Vegetation

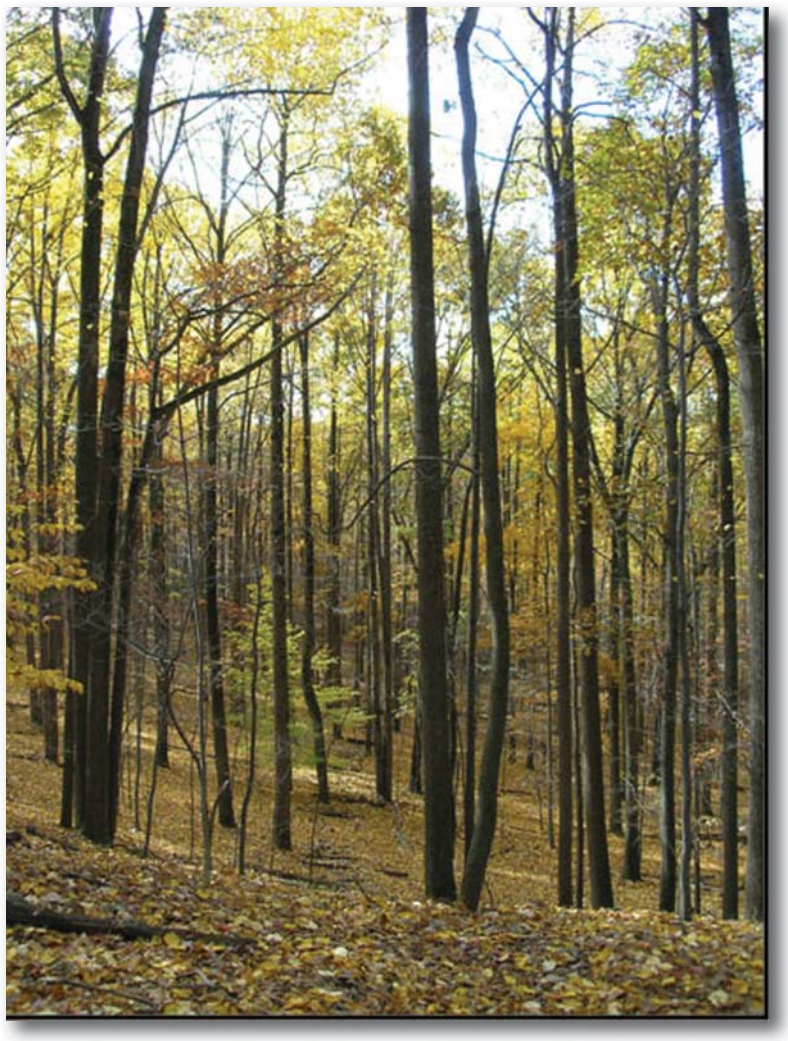
Within the timeframe of the plan (15-20 years), develop an adaptive management strategy for the forest to naturally regenerate by

- reducing the effects of white-tailed deer browsing on the regeneration of mixed hardwood species

Cultural Landscape

Within the time frame of the plan (15-20 years), create the conditions for the forest to naturally regenerate to

- maintain the forested components of the park's cultural landscape



Plan Goals and Objectives

SECONDARY GOALS

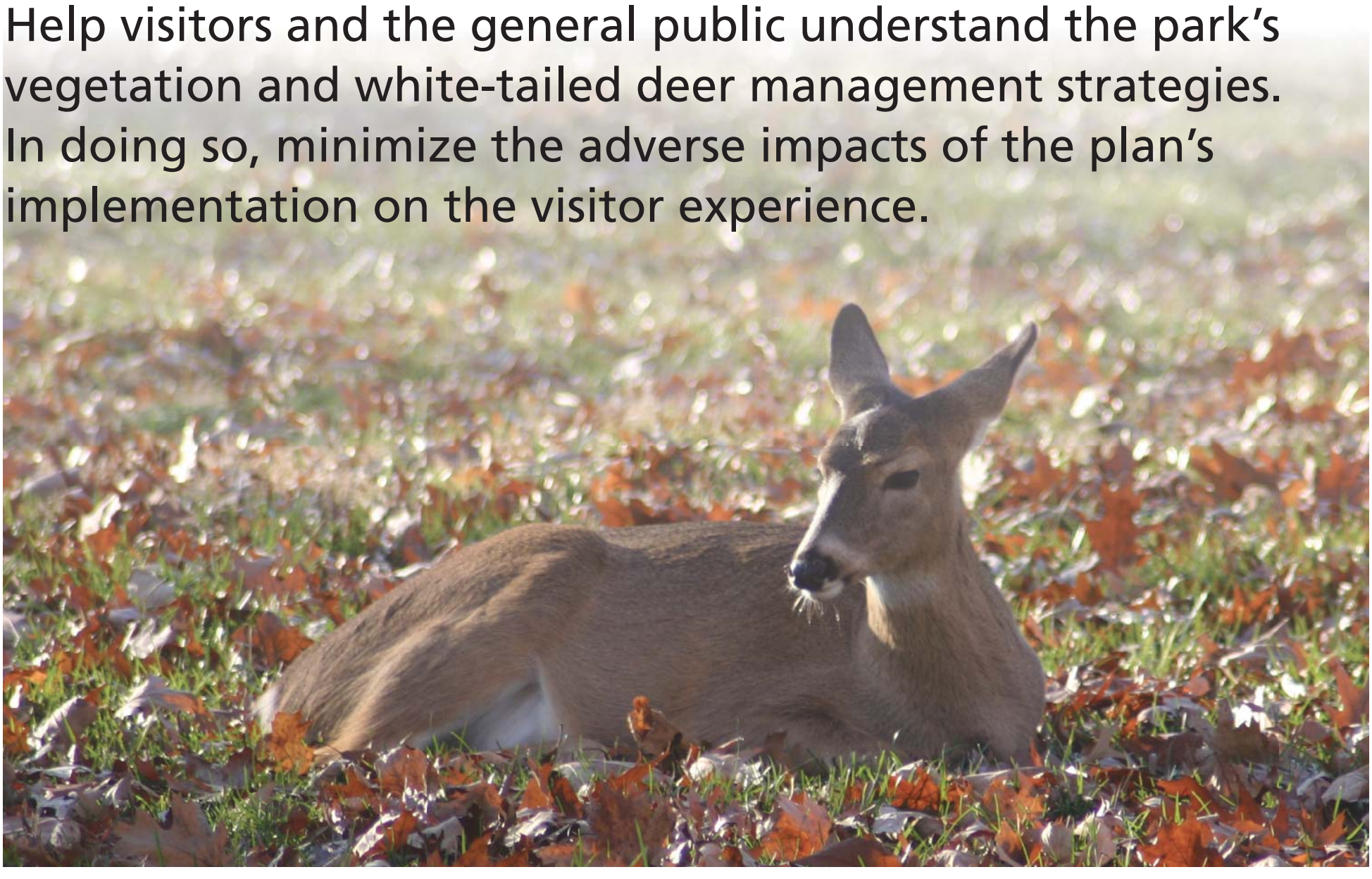
The following goals also will be considered during alternatives development, although they are not critical to the development of a range of reasonable alternatives.

Park Operations and Management

Work with other agencies, adjacent landowners, and interested stakeholders to develop a greater understanding and awareness of continually changing forest conditions to increase the diversity in forest structure and native species composition.

Education

Help visitors and the general public understand the park's vegetation and white-tailed deer management strategies. In doing so, minimize the adverse impacts of the plan's implementation on the visitor experience.



Preliminary Management Strategies

These elements represent preliminary management strategies for potential alternatives. Revisions may occur throughout the plan development process.

Vegetation Management

- removal of invasive species (physical and/or chemical)
- improve conditions, such as selective tree removal, to increase the amount of sunlight that reaches the forest floor to encourage the regeneration of native hardwoods
- soil amendments
- experimental native forest planting
- fence sensitive native vegetation to exclude deer
- use of white-tailed deer repellants

White-tailed Deer Browse Management

- deer fencing in targeted areas
- reproductive control (surgical and/or chemical)
- lethal reduction with firearms
- lethal reduction without firearms

Planning Process and Timeline

What is NEPA?

The National Environmental Policy Act of 1969 (NEPA) sets American environmental policy, goals, and processes for carrying out its principles. NEPA encourages productive and enjoyable harmony between humans and the environment, promotes efforts to eliminate environmental damage and stimulate the health and welfare of the public, and enriches the understanding of nationally important ecological systems and natural and cultural resources. NEPA processes ensure that federal agencies act in good faith during federal undertakings. Understanding public concerns regarding projects is critical to the NEPA process. Public scoping is required by NEPA regulations for an environmental impact statement (EIS) and is used to help inform the purpose, need, objectives, issues, and preliminary alternatives. The Draft EIS that is ultimately developed and circulated for public comment will present the alternatives and analyze their impacts on the human environment (including natural, cultural, and social resources).

Schedule

July 15, 2011	Notice of Intent to Prepare Vegetation and White-tailed Deer Management Plan/EIS Published in the Federal Register
July 27 & 28, 2011	Public Scoping Meetings* **(WE ARE HERE)**
August 14, 2011	Public Scoping Period Concludes
Winter 2011	NPS Reviews Public Scoping Comments, Gathers Data, and Develops Alternatives
Fall 2012	Draft Vegetation and White-tailed Deer Management Plan/ EIS Prepared
Winter 2013	Draft Vegetation and White-tailed Deer Management Plan/ EIS to Public for Review and Comment (60 days)
Winter 2013	Public Meetings for Draft Vegetation and White-tailed Deer Management Plan/EIS
Fall 2013/Winter 2014	NPS Prepares Final Vegetation and White-tailed Deer Management Plan/EIS and Makes Decision

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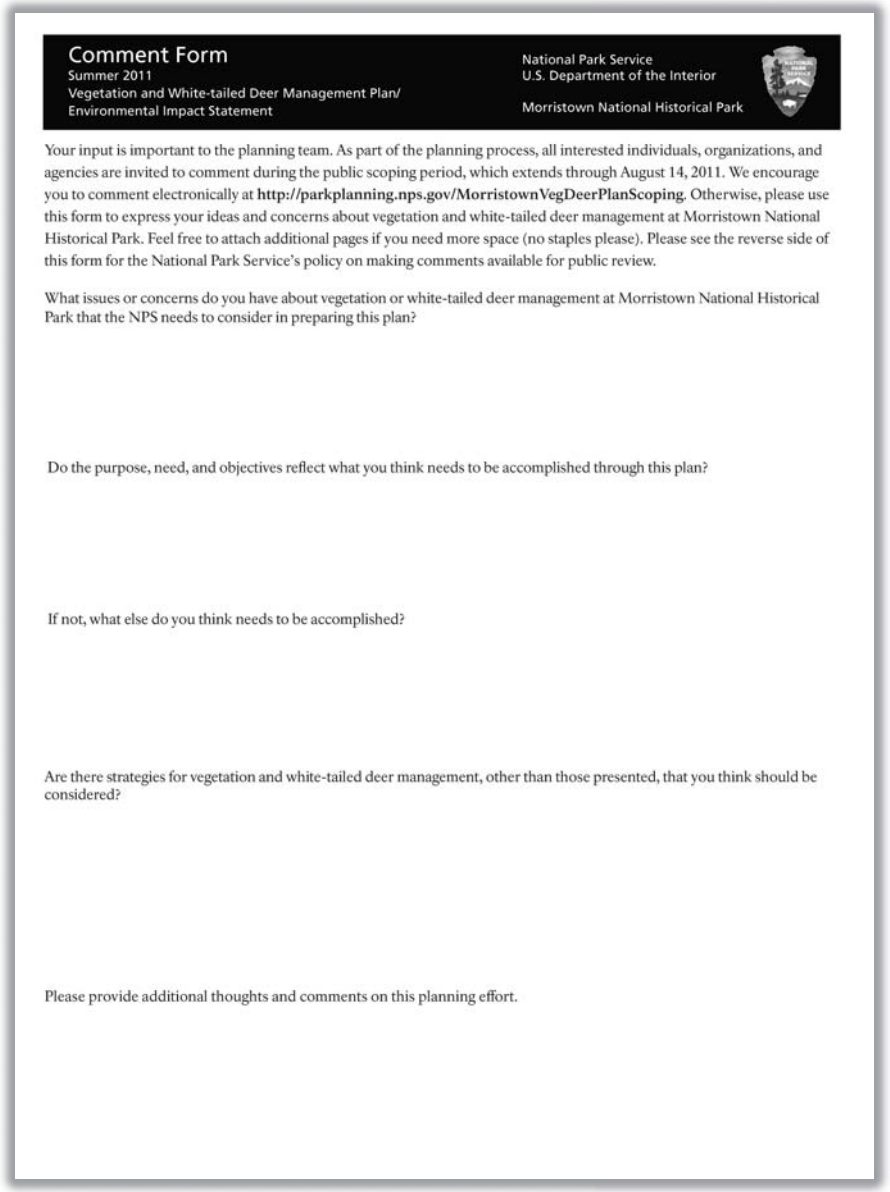
How to Comment Today

Complete a comment form and place it in the comment box or give it to an NPS employee at the meeting.

Provide verbal comments at the small group discussions. Facilitators and recorders will document your comments on the flip chart.

Provide comments electronically at the computer stations set up in the auditorium.



Comment Form
Summer 2011
Vegetation and White-tailed Deer Management Plan/
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Morristown National Historical Park

Your input is important to the planning team. As part of the planning process, all interested individuals, organizations, and agencies are invited to comment during the public scoping period, which extends through August 14, 2011. We encourage you to comment electronically at **http://parkplanning.nps.gov/MorristownVegDeerPlanScoping**. Otherwise, please use this form to express your ideas and concerns about vegetation and white-tailed deer management at Morristown National Historical Park. Feel free to attach additional pages if you need more space (no staples please). Please see the reverse side of this form for the National Park Service's policy on making comments available for public review.

What issues or concerns do you have about vegetation or white-tailed deer management at Morristown National Historical Park that the NPS needs to consider in preparing this plan?

Do the purpose, need, and objectives reflect what you think needs to be accomplished through this plan?

If not, what else do you think needs to be accomplished?

Are there strategies for vegetation and white-tailed deer management, other than those presented, that you think should be considered?

Please provide additional thoughts and comments on this planning effort.

How to Comment Later

Comment electronically at http://parkplanning.nps.gov/MorristownVegDeerPlanScoping.

Complete a comment form and mail it to the address below.

Mail a letter to the address below.

Mail comments to:
Mr. Robert Masson, Biologist
Morristown National Historical Park
30 Washington Place
Morristown, NJ 07960

To be most helpful to the planning process, please mail us your comments by August 14, 2011.

**Before including your address, phone number, e-mail address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

Purpose, Need, Objectives, and Preliminary Management Strategies

Purpose

The **purpose** of this plan/EIS is to provide the framework for managing vegetation and white-tailed deer browsing to promote a naturally regenerating hardwood forest with mixed-aged classes of trees that reflect the historic and naturally diverse character of the park.

Need

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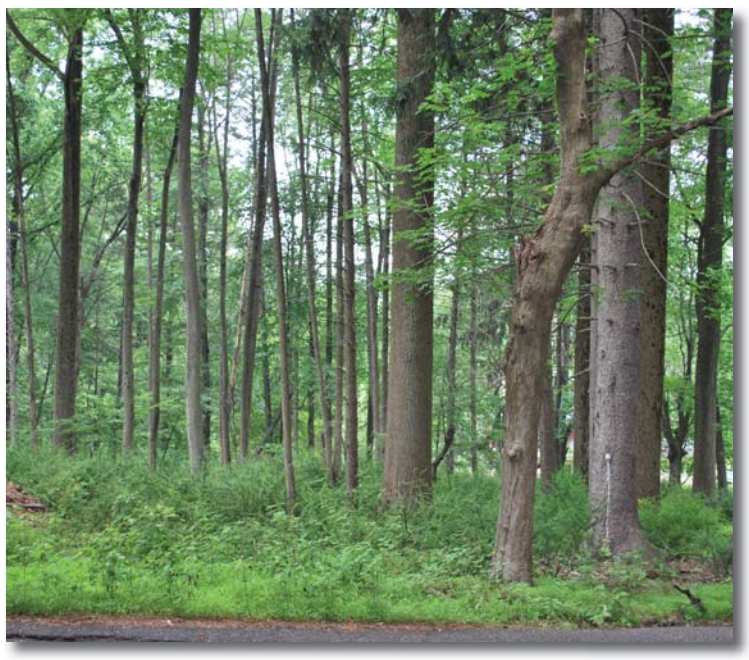

The nonnative plant Japanese Barberry replaces native vegetation in the forest understory.

Critical Objectives

Vegetation

Within the timeframe of the plan (15-20 years), develop an adaptive forest management strategy to preserve and enhance the structure and species composition of the park's forests to reflect historic character, biodiversity, and natural processes by

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Cultural Landscapes

Within the time frame of the plan (15-20 years), create the conditions for the forest to naturally regenerate to

- maintain the forested components of the park's cultural landscape

Secondary Goals

Park Operations and Management

Work with other agencies, adjacent landowners, and interested stakeholders to develop a greater understanding and awareness of continually changing forest conditions to increase the diversity in forest structure and native species composition.

Education

Help visitors and the general public understand the park's vegetation and white-tailed deer management strategies. In doing so, minimize the adverse impacts of the plan's implementation on the visitor experience.

Preliminary Management Strategies

Vegetation

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- lethal reduction without firearms

Deer Population Monitoring

1977 Deer densities were reported to be in balance with available resources.

1980s An explosion in the density of deer in and around the park appears to have occurred.

Fall 1985 – Spring 1986 Deer densities within the Jockey Hollow Unit were estimated using the line-transect method.

- 165 deer per square mile (fall 1985)
- 130 deer per square mile (spring 1986)

This study also found that

- deer movement within the park was limited
- fields were heavily used for grazing year-round, except when snow covered

1990-2002 Park staff conducted deer spotlighting, which provided a relative index of population size.

1996 Deer hunting program established in the adjacent Lewis Morris County Park.

Fall 1996 – Spring 1998 Deer densities in Jockey Hollow were estimated (*Underwood and Salmon*) using the distance sampling method.

- 151 deer per square mile (fall 1996)
- 59 deer per square mile (fall 1998)

1999-2010 The distance sampling method is currently used to estimate deer density in the Jockey Hollow and New Jersey Brigade units.

Deer densities have averaged approximately 50-70 deer per square mile.

White-tailed Deer Distance Sampling Density Estimates with 95% Confidence Intervals at Morristown National Historical Park 1999-2010

Vegetation Monitoring and Impacts

Winter 1779-1780 Much of Jockey Hollow cleared by soldiers to make way for building log huts and for procuring fuel for cooking and heat.

- Dominant forest species were oak, hickory, and chestnut
- Cleared land used for farming post Revolutionary War

Early 1900s Farms abandoned and forest regeneration began.

1977 No browse line apparent in the park.

1987 First exclosure constructed in the park.

1988 Deer browsing resulted in

- a decrease in native woody species diversity within the park's understory
- an increase in diversity of less palatable herbaceous species

2006 NPS Northeast Temperate Monitoring Network established forest vegetation monitoring plots within the park and found

- seedling and sapling densities are well below levels required to adequately restock the forest canopy
- average cover of nonnative species is considerably greater than native species cover

2011 Park is dominated by hardwoods from the mid-1800s to mid-1900s including oak, hickory, beech, tulip poplar, white ash, black birch, and red maple. Deer browse, insect damage, and understory shade are the primary factors inhibiting seedling survival in the park.