



## Southern Pine Beetle Response & Habitat Restoration at Napeague and Hither Hills State Parks



New York State  
Parks, Recreation and  
Historic Preservation

# Overview

- Significance of the Sites
- Southern Pine Beetle Impact & Project History
- Upcoming Management & Restoration Planning
- Discussion & Questions





**Napeague State Park (1419.7 acres)**

Map produced by NYS CRRAP, February 12, 2025.

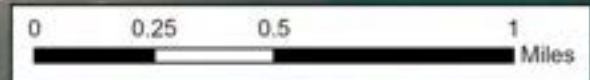


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**Legend**

- Hither Hills State Park
- Pitch Pines
- Trails



# Hither Hills State Park (1419.7 acres)

Map produced by NYS OPRHP, February 12, 2025.


# Significance of the Sites

- Hither Hills ranked **2nd** and Napeague ranked **7th in the state** for globally rare elements of biodiversity (2006) = Natural Heritage Area Designation
- Significant Coastal Fish and Wildlife Habitat (Dept. of State); Designated Bird Conservation Area
- Multiple rare and significant natural communities and species including several only found at these parks in the state
- Annual visitation: 185k (Napeague) and 350k (Hither Hills & Hither Woods) patrons
- 40 miles of trails



# DEC's Environmental Resource Mapper

## Significant Natural Communities



NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION 

### Environmental Resource Mapper

Search

Tools

**Layers and Legend**

 Significant Natural Communities 


Wetland Layers

Reference Layers

Tell Me More...

Need A Permit?

Contacts



Napeague Harbor

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# DEC's Environmental Resource Mapper

## Rare Plants or Animals

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION



## Environmental Resource Mapper

Search

Tools

### Layers and Legend

 Rare Plants or Animals

Wetland Layers

Reference Layers

Tell Me More...

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# Northern Long-Eared Bat

*Myotis septentrionalis* is federally and state endangered and has been documented at Hither Hills and Napeague State Parks.

November 2022: Northern long-eared bat is listed as federally endangered, triggering increased restrictions on tree cutting and other activities.

New restrictions as of March 31, 2023:

- Tree cutting can only occur Dec 1 – Feb 28
- Activity limited June 1 – June 30





# New York Natural Heritage Program's Conservation Guides



NYNHP

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## Maritime Pitch Pine Dune Woodland



Maritime pitch pine dune woodland

Stephen M. Young

### System

Terrestrial

### Subsystem

Barrens And Woodlands

### State Protection

Not Listed ⓘ

### Federal Protection

Not Listed

### State Conservation Status Rank

S1 ⓘ

### Global Conservation Status Rank

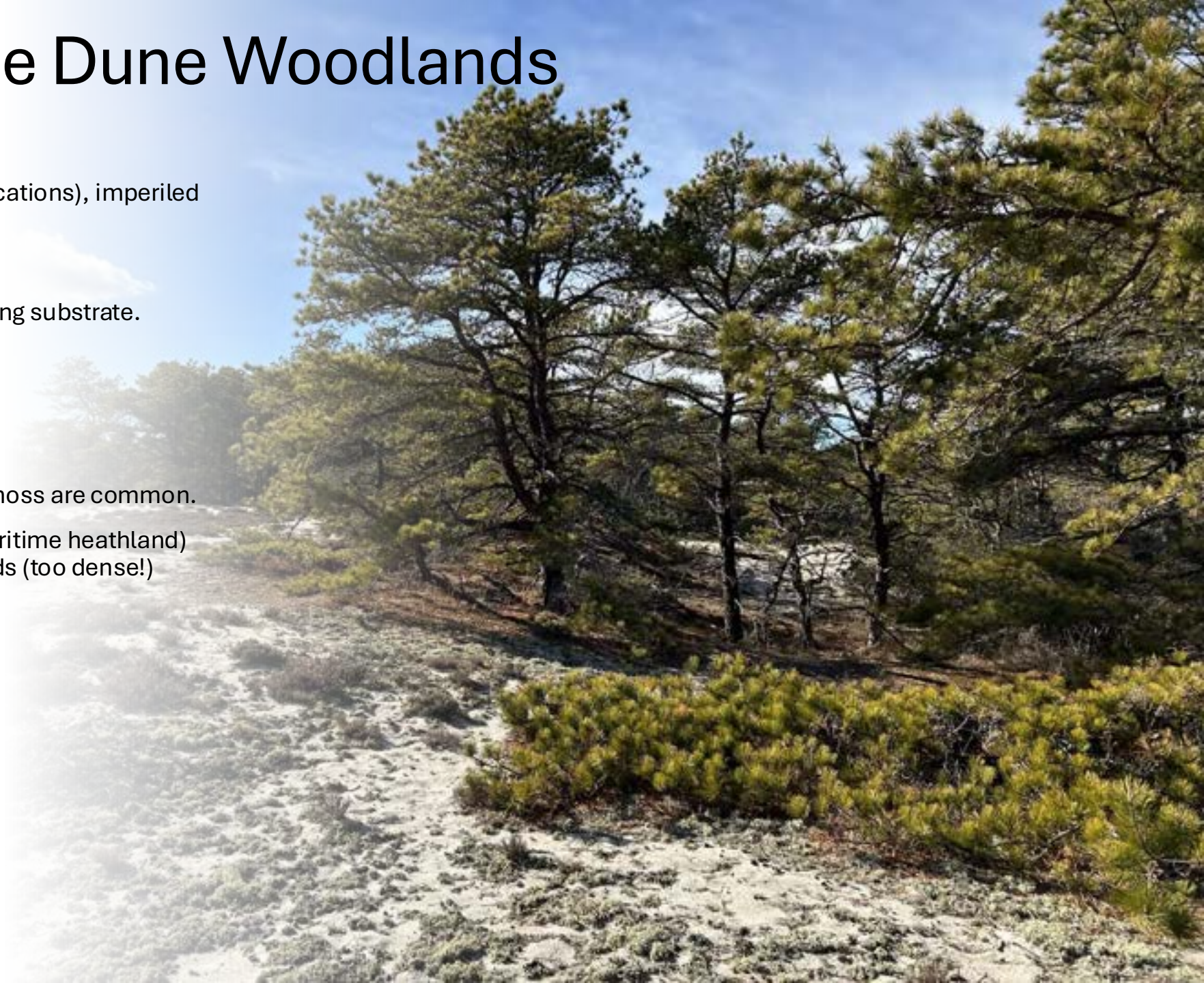
G2G3 ⓘ

### Contents

1. [Summary](#)
2. [Conservation and Management](#)
3. [Range](#)
4. [Identification Comments](#)
5. [Classification](#)
6. [Additional Resources](#)
7. [About This Guide](#)

# Maritime Pitch Pine Dune Woodlands

- Description
  - Critically imperiled in NY (5 or fewer locations), imperiled or vulnerable globally
  - Occurs on dunes and sand plains
  - Exposed to salt spray, winds, and shifting substrate.
  - Trees often stunted in size.
  - Canopy is sparse with some openings.
  - Pitch pine dominant with some oaks
  - Small shrubs, hairgrass, lichens, and moss are common.
- Often intermixed with other habitats (like maritime heathland) but can also form large, dense forested stands (too dense!)



# Maritime Heathland

- Description:
  - Critically imperiled in New York (5 or fewer locations), vulnerable globally
  - Dwarf shrubland found near the ocean
  - Influenced by shore winds and salt spray.
  - Limited number of trees
- Napeague State Park has the largest example in the state.
- Often intermixed with maritime pitch pine dune woodlands.





# **Southern Pine Beetle Impact**

## **& Project History**

# Southern Pine Beetle

- Native to the southern US but has moved north due to climate change
- Infests pine trees, particularly hard pines (pitch pine, red pine, jack pine)
- Larval galleries prevent water and nutrient flow in tree
- Death of tree in 2-4 months
- Dense tree stands can lead to large outbreaks
- Up to 6 generations per year- temperature dependent
- Large infestations may spread at a rate of >120 ft/day
- First detected in Suffolk County in 2014, first detected at Napeague in 2021



August 2023



# Napeague State Park

Southern pine beetle rapidly killed pitch pines near the Promised Land hiking trail

February 2024



September 2023



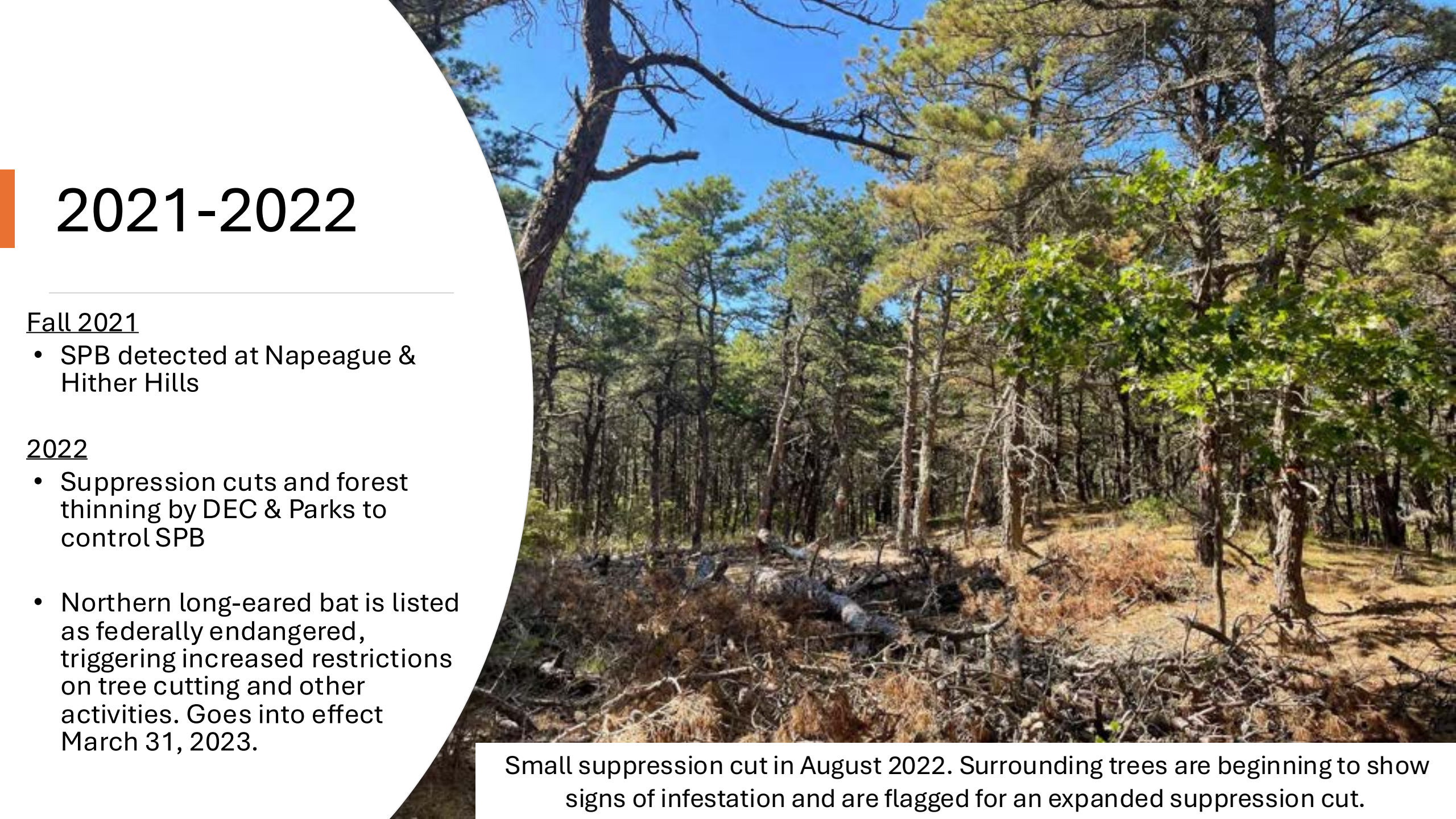
# 2021-2022

## Fall 2021

- SPB detected at Napeague & Hither Hills

## 2022

- Suppression cuts and forest thinning by DEC & Parks to control SPB
- Northern long-eared bat is listed as federally endangered, triggering increased restrictions on tree cutting and other activities. Goes into effect March 31, 2023.



Small suppression cut in August 2022. Surrounding trees are beginning to show signs of infestation and are flagged for an expanded suppression cut.

# Napeague State Park

Large suppression cut & surrounding infestation



Southern pine beetle infestations continued to rapidly expand and over ~40,000 trees were killed within 2 years



# Goals for Management

- Reduce and mitigate threats to public safety
- Protect and promote rare and vulnerable species and natural communities
- Strengthen ecosystem resiliency to pests and disease



# 2023

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- Parks begins long-term SPB response planning
- NYS Department of Transportation (DOT) begins tree removal along highway

## December 2023-February 2024

- Emergency contract installs 2 miles of fuel breaks where pine forest borders private homes





Fuel breaks separating private residences from pitch pine forest.

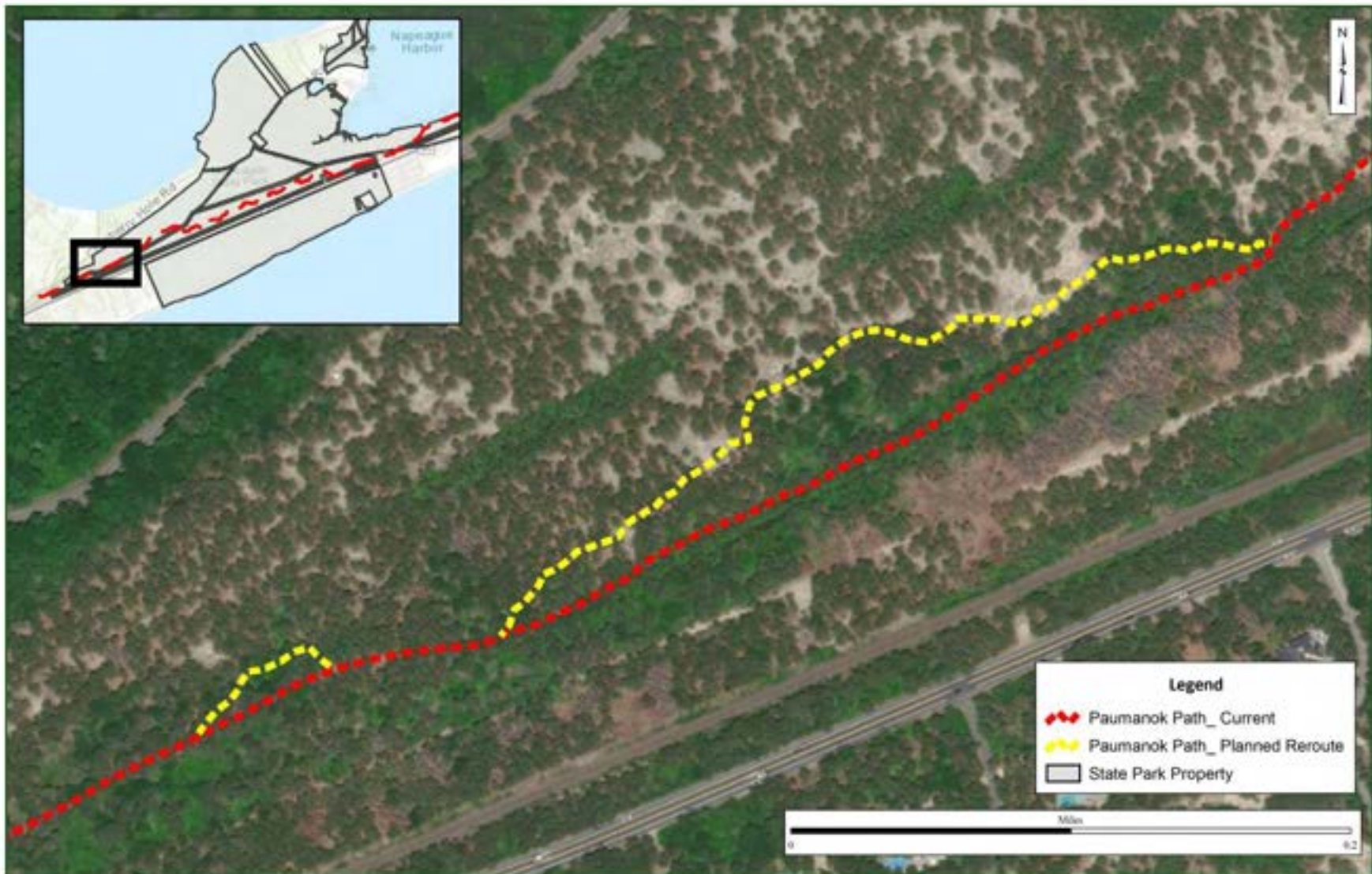
# 2024

- Felling of dead trees along Paumanok Path and Promised Land trails to improve safety and access.
- Shrub management to improve safety and access near Bay View Ave fuel break due to a dense understory and proximity to homes.
- Continued planning for restoration and long-term management.





Standing dead trees within 10 feet of the Paumanok Path & Promised Land Trails were cut



## Napeague State Park Planned Reroute of Paumanok Path

Map updated by WTS-DPR/NR, February 11, 2025.



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Before & after shrubs along a fuel break were mowed in fall 2024.



Example shrub mowing and canopy thinning pictured above (left) and untreated stand (right).  
Photos taken of DEC's management of Sarnoff Preserve in October 2023.





**Fire Management Access Proposal for Napeague SP**

Map produced by NYS OTHSP, January 31, 2025.

# **Upcoming Management & Restoration Planning**



# Fuel Reduction

- Cut trees will be piled-  
Improve access & create  
space between fuels
- Burn plan will be  
developed & piles burned to  
remove the fuel from site



# Fuel Mitigation & Fire Management Plan

A certified burn boss will be hired to create a fuel mitigation & fire management plan for both parks.

- Assess hazards and current fuels across the parks
- Propose and prioritize treatments for fuel mitigation and fire management

Consultation and planning with local fire departments, the DEC, and partners will be integral for plan development and implementation.



The plan will:

- inform the development of targeted burn plans for pile burning and potential future prescribed fire
- be written and implemented by a certified burn boss and approved by the DEC
- be updated through time to accurately represent current fuel conditions

# Tree Cutting

- Dead trees will continue to be cut & piled over the course of several winters
- Dead trees will be left standing in some areas that are environmentally sensitive & not near houses or other infrastructure



# Management of Sensitive Habitat and Rare Species

## Management Considerations:

- Rare natural communities, some are very sensitive to disturbance
- Many rare species across the sites
- Limited actions will be taken in sensitive dune and wetland habitats to reduce impacts
- Limited tree felling by hand & only where necessary. Dead trees will be left standing in other areas.
- Ongoing monitoring
- Detailed management and restoration plans will be developed where needed



# Maritime Pitch Pine Dune Woodland Restoration

## Management Considerations:

- Fuel reduction
- Promote pitch pine regeneration & health using various tools:
  - Prescribed fire and/or other disturbance
  - Tree planting
  - Deer protection
  - Invasive species control
- Maintain a healthy stand density and restore a fire / disturbance regime to improve long-term stand resiliency to SPB and climate change



# Mixed Oak-Pine Forest Restoration

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## Management Considerations:

- Fuel reduction
- Promote pitch pine and oak regeneration & health using various tools:
  - Prescribed fire and/or other disturbance
  - Plantings with deer protection
  - Invasive species control
  - Other methods, as needed
- Create a “shifting mosaic” of habitat to increase long-term resiliency to SPB, spongy moth, and climate change





# Summary

- **2021:** SPB detected
- **2022:** Suppression cuts and tree thinning to control SPB
- **2023:** Shift to longer-term response and management. Creation of fuel breaks.
- **2024:** Continuation of long-term management & restoration planning. Dead trees cut along trails.
- **2025:** Continuation of long-term management & restoration planning. Continued dead tree removal. Creation of slash piles.
- **2026 & beyond:** Continued fuel reduction; maintenance of reduced fuel levels; restoration of healthy & resilient habitats

For questions or more information, please contact Park Manager:  
Timothy Watson @ (631) 668-5000

# Additional Resources

DEC Website: Southern Pine Beetle

<https://dec.ny.gov/nature/animals-fish-plants/southern-pine-beetle>

DEC Environmental Resource Mapper

<https://gisservices.dec.ny.gov/gis/erm/>

New York Natural Heritage Program  
Ecological Community Guides

[guides.nynhp.org/communities/](https://guides.nynhp.org/communities/)



A photograph of a pine forest with sunlight filtering through the trees. The sun is visible in the upper right quadrant, creating a lens flare effect. The trees are tall and thin, with dense foliage. The ground is covered with low-lying vegetation and fallen leaves.

## Questions & Discussion



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## Napeague State Park

Park Boundary

Map produced by NYS DPRHP, October 24, 2024



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## Hither Hills State Park

Park Boundary

Map produced by NYS Office of Parks, Recreation and Historic Preservation, October 23, 2024

