

PREVENTATIVE FOREST THINNING AS A TOOL TO SLOW SOUTHERN PINE BEETLE



Division of
Lands and
Forests

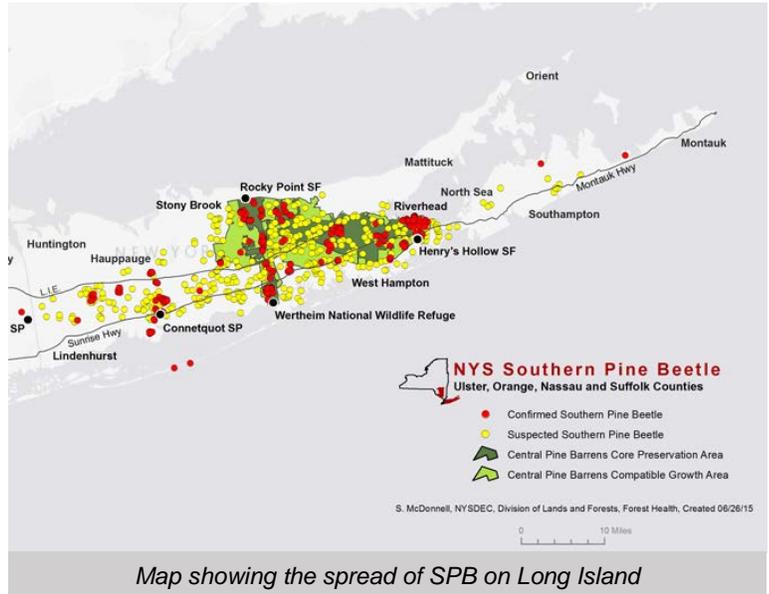
A Sound, Scientific and Proven Forest Management Method

What is preventative thinning?

Preventative thinning is a forest health management technique that removes a portion of trees from an overgrown forest to help the remaining trees in the forest survive and grow to be healthier. Thinning forest stands increases the distance between trees, which opens the forest canopy and allows individual trees to receive more light, nutrients, and water due to lowered competition from other trees. The trees that are left from thinning have more energy to resist attack from pests, such as the southern pine beetle (SPB). Preventative thinning is used to prevent SPB infestations in forests with no SPB-infested trees.

Why is DEC proposing preventative thinning for Southern Pine Beetle?

Long Island's Central Pine Barrens are under attack! SPB infestation is threatening the Pine Barrens and their unique wildlife habitats. Healthier pitch pine trees in stands that are preventatively thinned are more resistant to SPB, which helps slow the spread of SPB. Thinned stands also slow the spread of SPB because the more open forest allows air to flow through it. This disrupts the beetle's ability to communicate using pheromones, making them unable to attack trees in high numbers. Preventative thinning has been successfully used to manage SPB by the U.S. Forest Service as well as states such as New Jersey. Based on scientific research from other organizations, DEC is proposing preventative thinning in order to slow the spread of SPB in Rocky Point Pine Barrens State Forest.



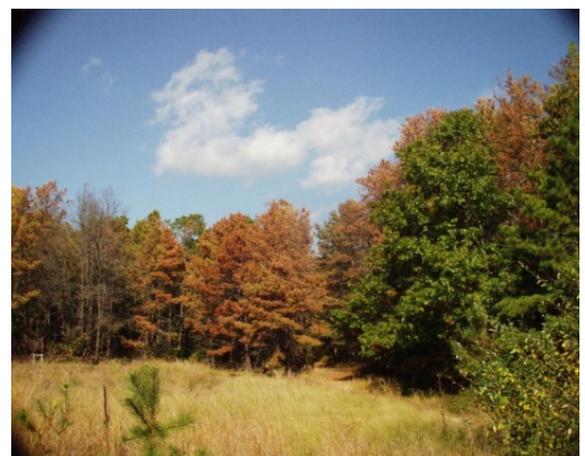
Map showing the spread of SPB on Long Island

If SPB is a pine pest, why remove oaks too?

Inside an overgrown forest, all trees are competing for light, nutrients, and water. If only pitch pines are thinned, the remaining pitch pines would be at a disadvantage to more numerous species. In Rocky Point Pine Barrens State Forest, oak trees are one of the more prevalent tree species. For pitch pine to have a fighting chance, some oak trees need to be removed.

Why was DEC looking to do a timber sale and not just remove trees?

A timber sale allows the thinning to be done by a private contractor under strict DEC supervision. Only trees that DEC has marked as suitable for harvesting are removed. Timber sales are conducted by DEC upstate for a variety of reasons, including increasing individual tree health and resistance of trees to pests. The U.S. Forest Service conducts similar cutting operations on lands under their jurisdiction as a management technique to prevent and slow SPB.



Rust colored dead and dying pitch pines

How were the forest stands to be thinned chosen?

DEC reviewed the current scientific literature and conducted months of aerial and ground surveys inventorying and analyzing forest stands in Rocky Point Pine Barrens State Forest. The surveys were used to develop a hazard model for predicting which stands were most susceptible to SPB attack. Using the hazard model, DEC prescribed which stands of pitch pine and oak species should be removed to prevent the spread of SPB infestation.

How does preventative thinning reduce wildfire risk?

Thinning and removing trees from dense stands reduces the amount of wood fuel available for a wildfire. This helps protect people and their homes and businesses, and lowers the chance of a large fire occurring, such as the one that hit the Rocky Point area in 2012. DEC partners with federal, state, county and local volunteer fire districts to develop wildfire prevention and resiliency plans that include timber harvesting.

How will forest thinning affect unique and endangered species?

Thinning promotes biodiversity, and supports unique, rare and endangered plants and animals in a variety of ways. Endangered and threatened plants, like showy aster and sandplain wild flax, benefit from the openings created by thinning. The coastal barrens buckmoth and eastern spadefoot toad, two NY species of special concern, will benefit from an increase in habitat quality and quantity. These are just a few examples of how thinning will protect existing biodiversity and further enhance the functional integrity of the Pine Barrens ecosystem.



Coastal barrens buckmoth

Photo: Matthew Schlesinger, NY Natural Heritage Program

Won't thinning upset the area's natural system?

The Pine Barrens ecosystem is composed of species that are adapted to and dependent on fire. Fire increases the resiliency of fire-adapted tree species, like pitch pine, to pests and reduces competition from invading plants by naturally thinning the forest. Because Long Island is so populated, fires are suppressed, so mechanical thinning is necessary to maintain the Pine Barrens ecosystem and the health of pitch pines.

Does thinning conform to Rocky Point Pine Barrens State Forest Unit Management Plan?

Use of preventative thinning for SPB helps to accomplish DEC's forest management goals for Rocky Point Pine Barrens State Forest, as stated in the property's Unit Management Plan (UMP). It will protect, preserve and manage the declining but still ecologically important pitch pine resources, while helping to reach other goals, such as enhancing the rare biological diversity and functional integrity of the Pine Barrens ecosystem.

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