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SOUTHERN PINE BEETLE AND THE PINE BARRENS ROADSIDE

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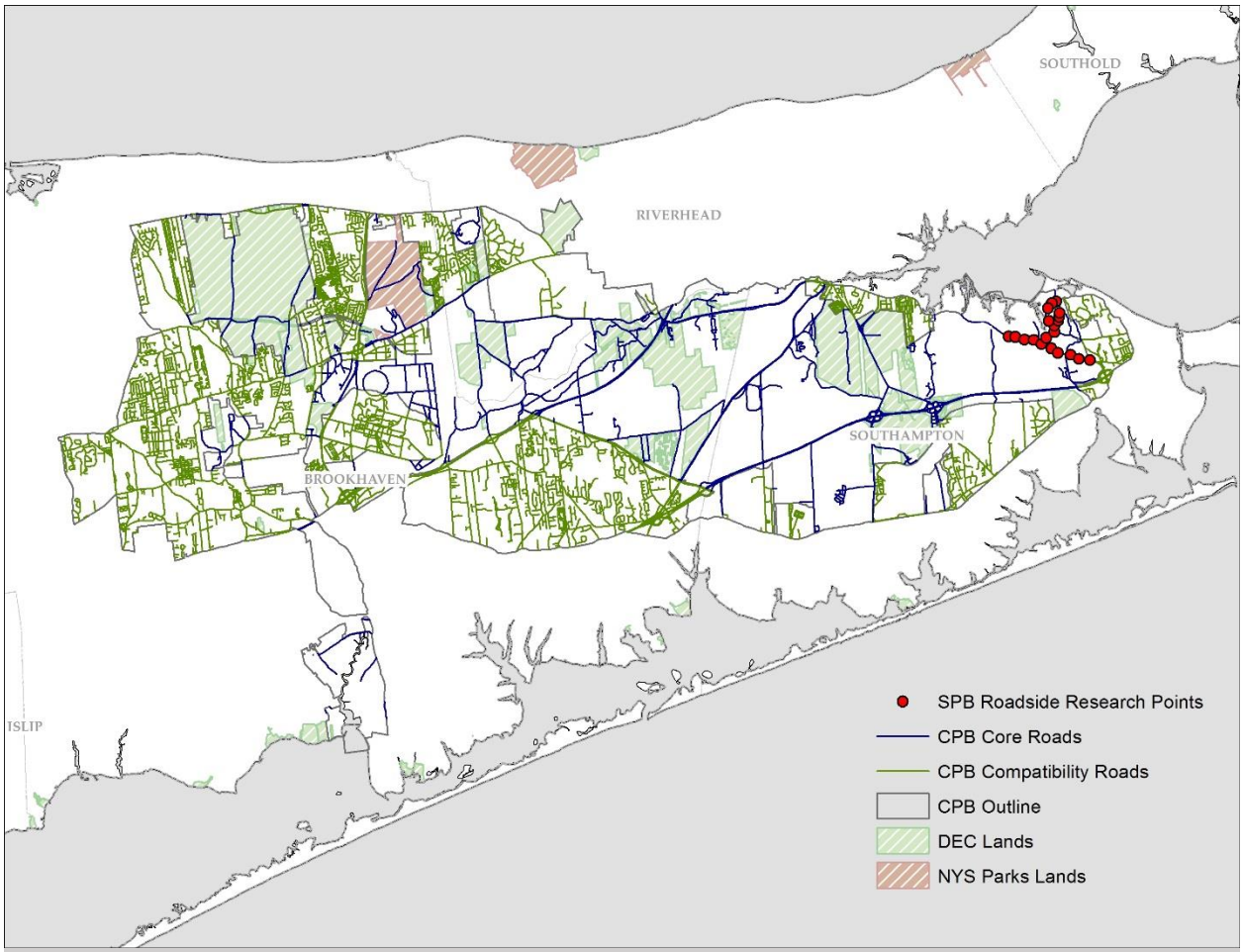
Southern pine beetle (SPB) is killing thousands of pitch pine trees on Long Island. With heavy losses of pitch pine expected for Long Island forests, local road corridors and utilities will be directly impacted. Nearly 800 miles of town, county, and state roads pass through the Central Pine Barrens Core and Compatibility Area alone. The most heavily-impacted roads will be in the Core Preservation area, where there are about 218 miles of roads. There are also several hundred more miles of roads outside the Pine Barrens that will likely be impacted. Due to SPB, there are thousands of standing dead trees that are beginning to weaken and fall. As SPB progresses, there will be more mortality along road corridors and the impact on travel will increase.



Map showing roads in the Central Pine Barrens Core (blue) and Compatibility (green) areas.

Aboveground electrical and communication lines are also present in these areas. However, for this survey, utility impacts were not assessed. It can be assumed that utilities will be impacted in a similar way as road corridors. As seen in the picture to the right, utility poles and lines are well within striking distance of falling pitch pine.

Pitch pine line this road and utility corridor. When these trees become infested and die, they will likely fall through the utility lines and into the road – posing a danger to public safety.

To quantify the impact on road corridors, DEC measured the number of pitch pine in 20 plots along two sections of road. The number of pitch pine per plot was used to calculate the number of pitch pine per acre along these sections of road. The forests along these road sections averaged 115 overstory pitch pine per acre. Based on prior research, the average height of dominant, overstory pitch pine was calculated to be 56 feet. Heights did vary by stand location and ranged from 38 to 76 feet.

Based on the variability in height and the assumption that the trees will not necessarily break off at ground level, 20 feet from the cleared roadside was chosen as the distance in which trees would be most likely to land in the road or cleared roadside. This research determined there to be an average of 106 trees per 1000 feet of road that could potentially impact the road corridor. In the Central Pine Barrens Core Preservation Area, there are about 121,807 trees that could potentially impact the road corridor. Since road rights-of-way vary, the estimated number of trees given refers to trees that could fall into the road, the cleared area adjacent to the road, or both. In areas with wider cleared areas, not all trees will fall into the road, but will still impact areas where vegetation management occurs.

As can be seen in the picture to the right, roads with narrower cleared areas and leaning trees will be impacted the most. Once they fall, the trees pictured will completely block the road and result in about 2.5 cubic yards each of material that will need to be removed. In the Core Preservation Area, this will result in about 305,000 cubic yards of material.

Leaning pitch pine over a road are a cause concern for public safety and infrastructure.

Many of the roads in the Central Pine Barrens have low speed limits. However, some of the roads, such as the road shown in the picture to the right, have a higher speed limit. The trees lining this road are close enough that, if they are killed by SPB, they will likely fall into the road. Trees in these higher-speed areas may pose a higher danger to public safety as drivers may not have time to react to trees falling into the road.

A dense stand of pitch pine line this road. When these trees die from SPB infestations, they will likely fall into the road. This will pose a danger to public safety, especially in this

As SPB spreads and continues to kill trees, thousands of trees will be at risk of falling into roads or cleared areas. In prioritizing management for roads lined with dead pitch pine, consideration may be given to the road's speed limit, and the road's traffic use. If not managed properly, SPB-killed trees will pose a major safety risk and will greatly impact road corridors and utilities.