



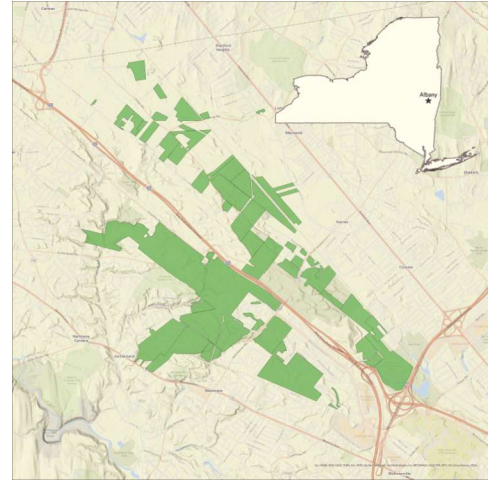
Albany Pine Bush...Not Your Average “Barren” to LANDFIRE

By Sarah Hagen, Megan Dettenmaier

Spanning the two cities of Albany and Schenectady, NY, the 3,400-acre Albany Pine Bush Preserve represents one of the best examples of an intact, inland pitch pine-scrub oak barrens ecosystem in the world. Fire is an essential part of the Albany Pine Bush Preserve, which was formed from the remnants of ice age sand dunes at the edge of Glacial Lake Albany. However, like many other forests, fire has been suppressed there since the early 1900s.

In 1991, The Nature Conservancy and local organizations such as the Albany Pine Bush Preserve Commission reintroduced prescribed fire to this fire-adapted ecosystem. Fire regime data indicates that the Albany Pine Bush would burn on average every 10 years, increasing nutrient availability, facilitating seed germination and dispersal, and maintaining the open stature of the Pine Bush required by many rare wildlife species.

The Nature Conservancy & LANDFIRE Spatial Ecologist, Sarah Hagen, visited this unique ecosystem recently, and what she discovered was promising. She found that overall, LANDFIRE’s data reflected her experience on the Preserve. She also noted a powdery coating of black ash covering large, thriving groves of mature pitch pines, a testament to the positive effects of fire and the need for fire in this fire dependent ecosystem. Pitch pines have serotinous cones, which means they require heat from fire to open and cast their seed.



Albany Pine Bush Preserve



Albany Pine Barrens (Photo: N Gifford, APBPC).

“The Albany Pine Barrens is an amazing example of what proactive protection of a fire dependent ecosystem looks like and the importance of maintaining fire regimes and fire adapted systems.”

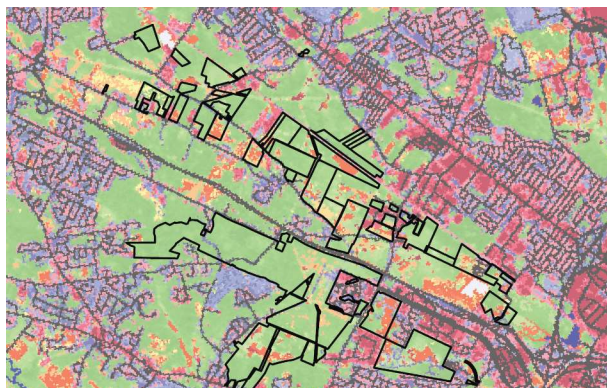
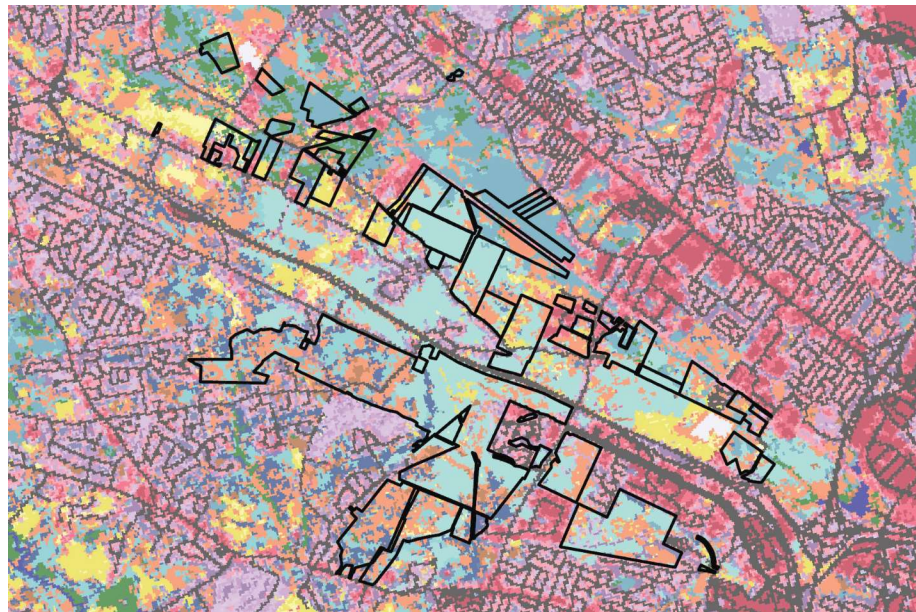
***-Sarah Hagen,
TNC LANDFIRE Spatial Ecologist***



Due to the reintroduction of fire to the Preserve, hundreds of small, pitch pine trees can be found throughout the landscape.

Sarah compared her on the ground account of the landscape against LANDFIRE 2020's Existing Vegetation Type (EVT), Existing Vegetation Cover (EVC), Existing Vegetation Height (EVH) layers. The boundary for the Albany Pine Barrens is outlined in black for the following maps.

LANDFIRE EVT is overwhelmingly mapped as Northeastern Interior Pine Barrens (the lighter teal), which matches up with what Sarah found on the ground. LANDFIRE EVT mapped nearby areas as North-Central Interior and Appalachian Rich Swamp (darker teal), Laurentian-Acadian Freshwater Marsh (orange), and a few areas of ruderal grassland (peach) and Eastern Cool Temperate Pasture and Hayland (yellow). Sarah did not personally visit these areas to confirm whether they were also correct, but it's a minimal amount of the area and mainly directly next to major highways so it's likely accurate.



LANDFIRE EVH shows predominant tree cover, with trees between 15 – 25 meters tall. There may be some areas with trees taller than this, but overall, LANDFIRE did a good job mapping EVH here. Herbaceous areas are present throughout the preserve, which mirrors Sarah's experience with patches of very open understory and small tree regrowth (Photo: S. Hagen, right).



LANDFIRE EVC shows the area with mainly 35 – 75% tree cover and a few patches of predominantly herbaceous cover, which mirrors Sarah's on the ground experience. Much of the area is 50-60% tree cover, which is typical in pine barrens, providing the understory is very open and there are still some herbaceous openings for trees to regrow. (Photo: N. Gifford, APBPC).

In his tenure as Conservation Director of the Albany Pine Bush Preserve Commission, Neil Gifford has championed a holistic approach to the reintroduction of fire on the preserve that has included research, education, scientific rigor, and community engagement. This approach has led to community-wide support for the protection and preservation of this dynamic landscape.

"Thirty years of fire regime restoration has transformed this landscape, reducing volatile fuels, fully recovering the local population of an endangered butterfly, and resetting the stage for high frequency, low severity maintenance fires. According to Cornell University Center for Conservation Social Sciences, this work has also generated significant community support for prescribed fire in this complicated Wildland Urban Interface."

Neil Gifford, APBPC Conservation Director

Reintroducing fire to the Albany Pine Bush Barrens has multiplied the benefits for the ecosystem, showing how proactive land management can enhance ecosystem health. LANDFIRE products can provide key inputs for prescribed fire professionals and help inform decision frameworks for natural resource practitioners.

To learn more about the Albany Pine Bush Preserve, [check out their website](#).

To learn more about LANDFIRE, sign up for our monthly [2-minute newsletter](#), check out www.landfire.gov or visit us on [YouTube](#).

All maps: Courtesy Sarah Hagen



Albany Pine Bush prescribed fire along I-90 (Photo: Gary Gold)