

Climate Resilience through Stewardship

DVRPC Climate Adaptation Forum

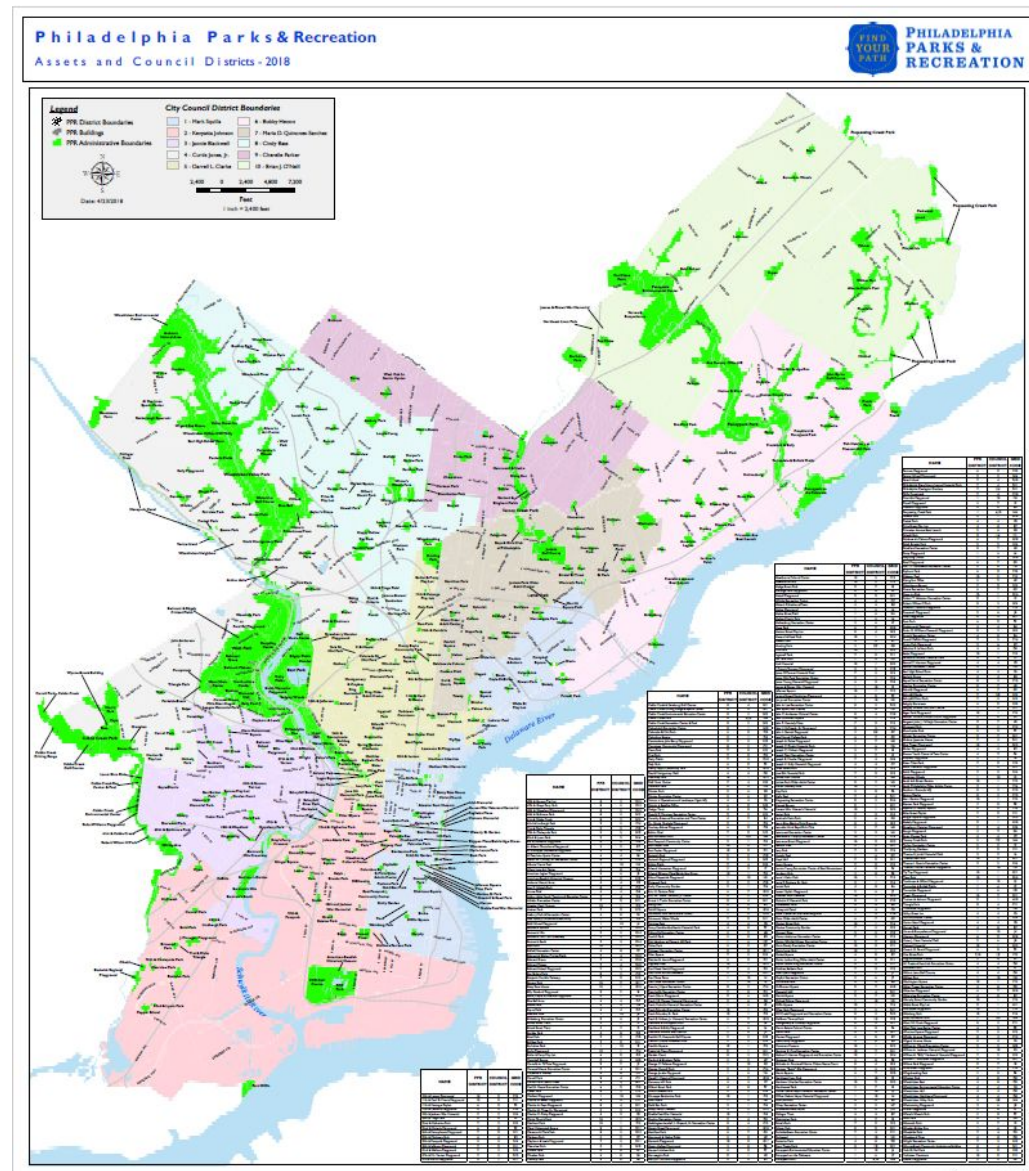


PHILADELPHIA
PARKS & RECREATION

Philadelphia Parks & Recreation

Philadelphia has an equitable and exceptional parks and recreation system that connects people to each other, to enriching experiences, and to the natural world.

- 10,000+ acres of public land and waterways
- 156 Rec Centers & Playgrounds
- 154 neighborhood parks
- 74 pools
- 166 miles of trails
- 5 Ice Skating Rinks
- 25 Computer Labs
- 40 Historic Houses
- 3 Environmental Education Centers
- 60 Community Gardens & Orchards
- 600+ athletic fields



Philadelphia Parks & Recreation

Park land accounts for 10% of the city, while providing 40% of tree benefits

- REDUCE STORMWATER
- IMPROVE AIR QUALITY
- REDUCE HEAT ISLANDS
- STORE CARBON
- REDUCE HEATING & COOLING COSTS
- SUSTAIN WILDLIFE

Parks Analysis

Existing and Possible Tree Canopy (TC) was analyzed for the Fairmount Park lands (Figure 6). As expected, these lands have relatively high existing tree canopy, with parks such as Wissahickon Valley Park having over 86% of its land area covered by tree canopy. The assessment does reveal potential opportunities to increase coverage. For example, Pennypack on the Delaware has 87% of its land available for tree planting. While maintaining open spaces for recreation is an important social consideration, there still exists room for establishing new tree canopy.

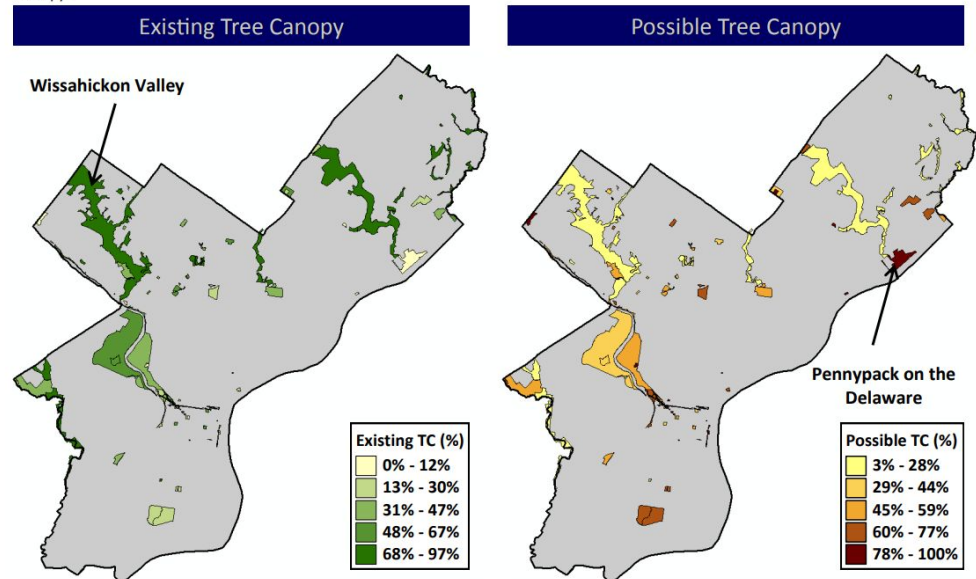


Figure 7 Existing TC (left) and Possible TC (right) as a percentage of land area by park.

O'Neil-Dunne, Jarlath. (2011). *A Report on the City of Philadelphia's Existing and Possible Tree Canopy*.

Threats to Our Forests

If forested parklands are Not Restored

Aggressive non-native vegetation will dominate the urban forest unless removed. In 100 years, the trees will be gone. City officials estimate that potentially billions of dollars in services such as stormwater control will be lost.



PRESENT

Forested parklands are dominated by deciduous trees, mainly big-leaf maples and alders, nearing the end of their life. After decades of neglect, non-native invasive plants, such as English ivy and wild clematis, cover the ground and grow up into the tree canopy.

IN 20 YEARS

Invasive plants outcompete and grow over existing native vegetation, blocking the sunlight plants and trees need to thrive. English ivy now dominates the tree canopy, making the trees weak, top heavy and susceptible to windfall. Eventually, trees die or fall over.

IN 50 YEARS

The trees are gone. Only a few native shrubs struggle to survive the stress of competition with invasive plants.

IN 100 YEARS

The forest is destroyed. Native trees can no longer establish on their own. We are left with a dense "ivy desert." Very few plant species can live, and forest biodiversity is gone. Such conditions provide homes for rats and scarce habitat for more desirable urban wildlife.



Threats to Our Forest



Restoring Our Forests

Managing for change.

Restoring

- biodiversity
- ecosystem function
- forest regeneration

Southern Species Experiment Plants

Latin Name	Common Name	Hardiness Zone
<i>Callicarpa americana</i>	Beautyberry	6 to 10
<i>Calycanthus floridus</i>	Carolina allspice	5 to 10
<i>Cladrastis lutea</i>	Yellow wood	4 to 8
<i>Fothergilla major</i>	Tall Fothergilla	4 to 8
<i>Halesia carolina</i>	Carolina silverbell	5 to 8
<i>Hydrangea quercifolia</i>	Oakleaf hydrangea	5 to 9
<i>Itea virginica</i>	Virginia sweetspire	5 to 9
<i>Leucothoe fontanesiana</i>	Fetterbush	6 to 8
<i>Morella cerifera</i>	Wax myrtle	7 to 11
<i>Pinus taeda</i>	Loblolly pine	6 to 9
<i>Quercus falcata</i>	Southern red oak	7 to 9



Building Our Canopy

Select & distribute species that are...

Adapted to hardiness zones
8 to 10+

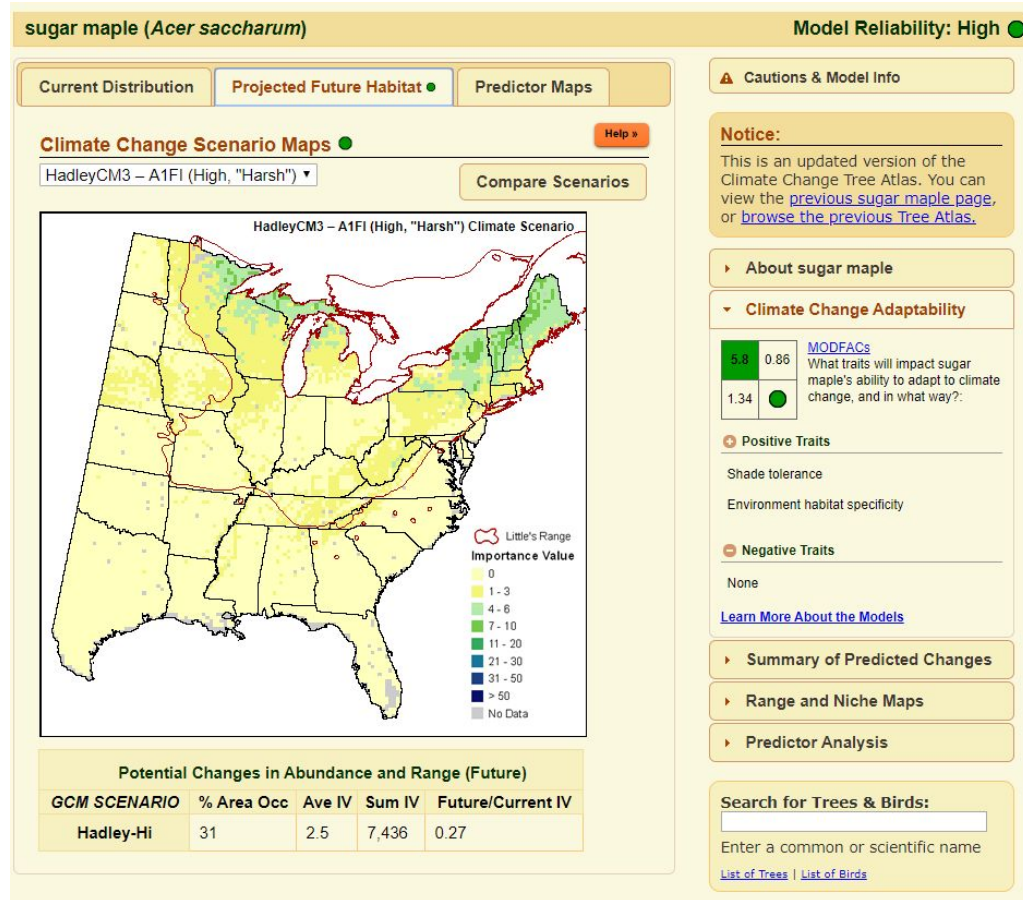
- *Nyssa sylvatica*
- *Quercus falcata*

Resistant to extreme winds
& weather events

- *Taxodium Distichum*

Thrive in Southern cities

- *Magnolia grandiflora*





Building Our Canopy



Stewardship as Education





Park Stewardship





A scenic view of a park with a tennis court in the foreground, surrounded by trees with autumn foliage. In the background, the Philadelphia skyline is visible under a clear blue sky.

Thank you!



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