



In 1913, Joyce Kilmer composed his best-known poem and perhaps the most famous ode to nature ever written. It begins with these lines, memorized countless times by countless schoolchildren:

*I think that I shall never see  
A poem lovely as a tree.*

So it was more than fitting that, 102 years later, a park in New York City named for Joyce Kilmer was the site of a ceremony to cap an eight-year effort to plant 1 million trees across the city. Kilmer would no doubt have smiled.

New York began the MillionTreesNYC initiative under then-Mayor Michael Bloomberg in 2007, and the goal was to finish in 10 years. With the support of Bloomberg and his successor, Bill DeBlasio, the city reached its goal two years early.

The one-millionth tree—an 8-year-old, 25-foot-tall lacebark elm—was planted in Joyce Kilmer Park, a baseball toss from Yankee Stadium in the South Bronx, one of the poorest areas of the city. A half-dozen such neighborhoods, devoid of trees and reporting high rates of asthma, were singled out for mass plantings as a part of the city-wide effort to create new green space and to combat the effects of climate change.

Before launching the million trees initiative, the New York City Department of Parks and Recreation identified neighborhoods most in need of trees by overlaying urban canopy maps with community health survey maps. Unemployment, low incomes, the rate of hospitalization for asthma for children for 14 and younger—all correlated with the absence of trees. From this data, the agency designated six “Trees for Public Health” neighborhoods to receive canopy management plans and targeted planting: Hunts Point and Morrisania (location of Joyce Kilmer Park) in the Bronx, East New York in Brooklyn, East Harlem in Manhattan, Stapleton in Staten Island, and The Rockaways in Queens.

Other cities have set similar goals for planting trees, but have had limited success. Denver abandoned its Mile High Million campaign in 2013, while Los Angeles got less than halfway through its Million Trees LA effort. But in New York, with the help of thousands of volunteers, MillionTreesNYC was able to plant 20,000 saplings a season in forests, restoring 700 acres citywide.

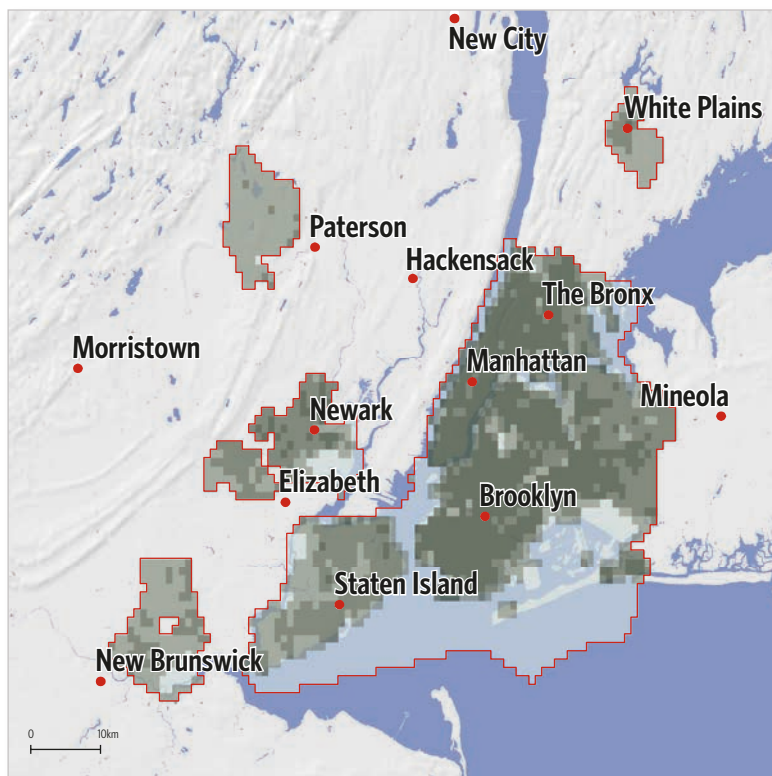
Three-quarters of the trees planted as part of the initiative were added to city property like existing parks, along with 220,000 new street trees in all five boroughs. To get new trees into other public and private space—around hospitals, libraries, churches, public housing developments and in private yards—the city teamed up with the New York Restoration Project, brainchild of actress and singer Bette Midler. Together they raised \$30 million toward the tree plantings. Over the course of the project, the city expanded its number of trees by 20 percent.

New York City now has some 5 million trees. Trees cover almost a quarter of the city, and there are more than 6,000 acres of woodlands in city parks alone. The city will need every one of those trees, and even more. Climate change is coming: Temperatures in New York are expected to jump 4.1 to 5.7 degrees by the 2050s, and by the 2080s, it could be 8.8 degrees hotter than the current average of 54 degrees, according to the study by the New York City Panel on Climate Change, a group of leading scientists assembled by the city.

According to the panel's report, by mid-century, the city could get five to seven heat waves a year, compared to two currently, and the number of days over 90 degrees could double. The mercury is expected to crack 100 three to five days a year, compared to the current rate of less than once every year.

New York has developed a comprehensive plan to deal with the consequences of climate change, particularly the risk of catastrophic floods. Among the initiatives in the plan, A Stronger, More Resilient New York, released in 2013, is a commitment to improve the health and resiliency of the city's urban forest, recognizing the array of health and environmental benefits that trees provide. While New York City has a dense urban core where the ROI of tree planting is high, the farther suburbs and outlying towns have a lower ROI. We estimate that for an additional annual investment of \$12 million in street tree planting and maintenance, more than 2.8 million people could have a reduction of 1.5° C (2.7° F) in summertime temperatures.

## Results from the New York study



Map 24. Neighborhood-level ROI for New York City (temperature reduction).

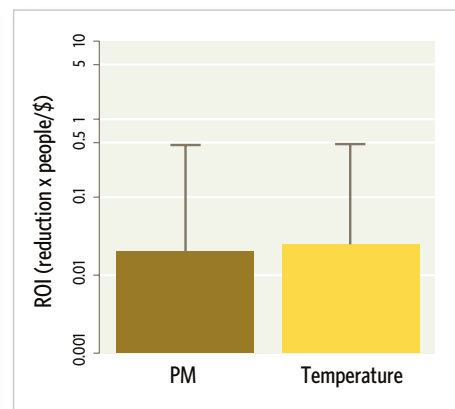


Figure 29. ROI for tree planting for New York City.



Investment	Annual Cost (\$)	> 1 ug/m <sup>2</sup> PM <sub>2.5</sub>	1.5 deg C
10% of sites	12,200,000	2,650,000	2,790,000
20% of sites	24,400,000	3,810,000	4,180,000
Full Investment	85,800,000	5,290,000	5,920,000

Table 17. Temperature and PM reduction benefits under three investment scenarios for New York City.