DENVER, COLORADO

11%	Urban Tree Canopy (2021)
32%	Possible Planting Area
-0.04%	Change in UTC (2011-2019)
+0.1%	Change in UTC (2019-2021)
+0.5%	Change in UTC (2011-2021)

AN ASSESSMENT OF EXISTING AND POTENTIAL

TREE CANOPY

Denver, the vibrant capital of Colorado, blends stunning Rocky Mountain views with a rich mix of extensive parklands, residential areas, and a dynamic urban center. Denver has been acknowledged as a Tree City USA member for 37 years, which highlights the community's dedication to preserving their trees and natural surroundings. In 2024, a tree canopy assessment was conducted to enhance understanding of the city's canopy infrastructure. This assessment examined the **urban tree canopy (UTC)** and change over time, where new trees can be planted **(Possible Planting Areas - PPA)**, and assessed locations where planting trees isn't feasible. The outcomes provide a comprehensive overview of the current state of the urban forest and its future possibilities that can be viewed in TreePlotter CANOPY (https://pg-cloud.com/DenverCO/).

Using 2021 aerial imagery from the USDA's National Agriculture Imagery Program (NAIP), this study provides a near-current view of land cover throughout Denver. The study utilized machine learning techniques to generate a comprehensive land cover dataset, reducing dependence on human intervention and enhancing the ability to monitor changes in tree canopy coverage over time. The information from this study should be used to develop strategies to protect and expand the urban forest, ensuring accessible, well-maintained, and enjoyable outdoor spaces for all.

DENVER PARKS & RECREATION

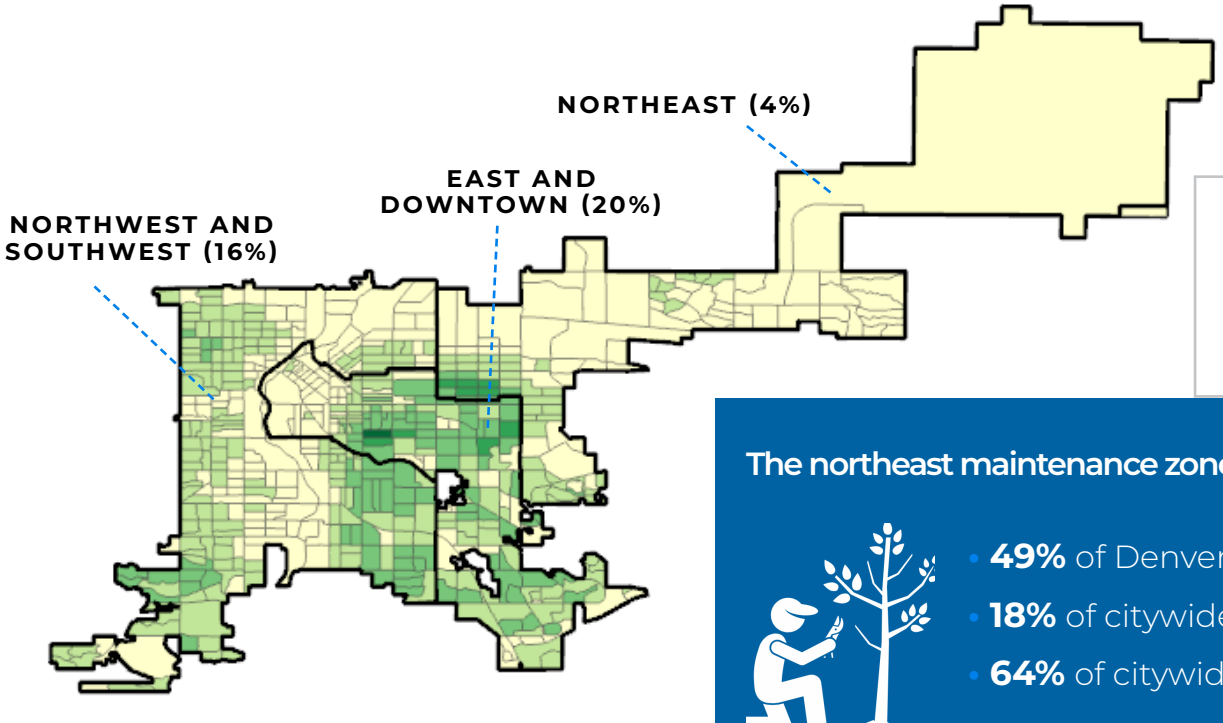

Figure 1. Urban tree canopy by Denver's maintenance districts.

The northeast maintenance zone encompasses:

- **49%** of Denver's land area
- **18%** of citywide canopy
- **64%** of citywide PPA

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PlanITGeo developers of TreePlotter

earthDefine

OVERALL CHANGE IN CANOPY

Urban forests are constantly growing as existing trees mature and new ones are planted. However, their expansion is offset by challenges such as natural disasters, pest infestations, diseases, and urban development. While it's difficult to assess the net effect from the ground, high-resolution aerial imagery can provide a precise analysis of these canopy changes.

The study revealed that Denver's tree canopy decreased by 37 acres from 2011 to 2019. However, from 2019 to 2021, there was an increase of 96 acres. Overall, during the entire study period from 2011 to 2021, Denver experienced a net gain of 59 acres in tree coverage, which translates to a modest 0.5% increase in the urban tree canopy.

From 2011 to 2021, the Lowry Field neighborhood experienced a **4.7% increase** in canopy coverage.

ASSESSING CANOPY LOSS BY NEIGHBORHOOD

Analyzing tree canopy metrics at different scales provides critical insights into how various communities impact and benefit from urban forestry, which is vital for urban planning, environmental management, and resource allocation. The Virginia Village neighborhood experienced the most significant canopy loss, with a decrease of 25 acres over ten years. In contrast, the Gateway - Green Valley Ranch and Central Park neighborhoods saw the largest gains, each adding over 100 acres to their tree canopy. These results suggest that the state of the tree canopy in Denver may largely be dependent on the stewardship of private residents. Encouraging and supporting residential tree care initiatives could be a key strategy in preserving and enhancing the overall tree canopy in the community of Denver.

UTC % CHANGE BY CENSUS BLOCK GROUPS

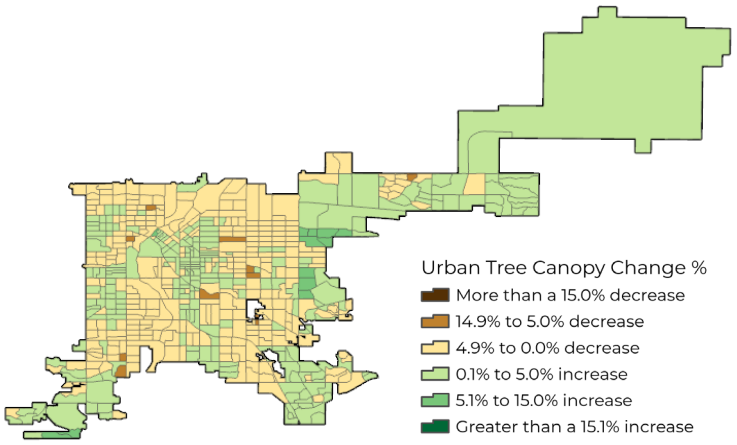

Figure 2. Urban tree canopy change from 2011 to 2021.

UTC CHANGE IN CITY OWNED PROPERTIES (2011-2021)

Largest Canopy Increase:
Greenway Park: +4.0 acres

Largest Canopy Loss:
Washington Park: -5.2 acres

UTC % CHANGE BY NEIGHBORHOOOD

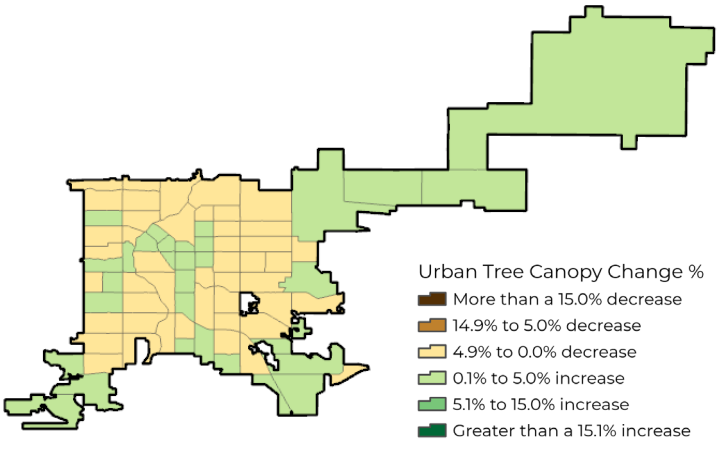

Figure 4. Canopy change in neighborhoods from 2011 to 2021.

TREE CANOPY CHANGE (ACRES)

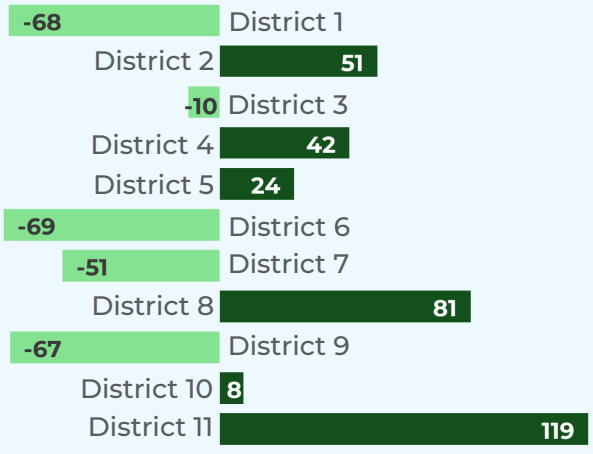

Figure 3. Change in canopy from 2011 to 2021 by City Council Districts.

Tree Canopy	Possible planting area	Total Impervious area
11%	**32%**	**45%**
10,719 ACRES	**30,822 ACRES**	**43,423 ACRES**

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