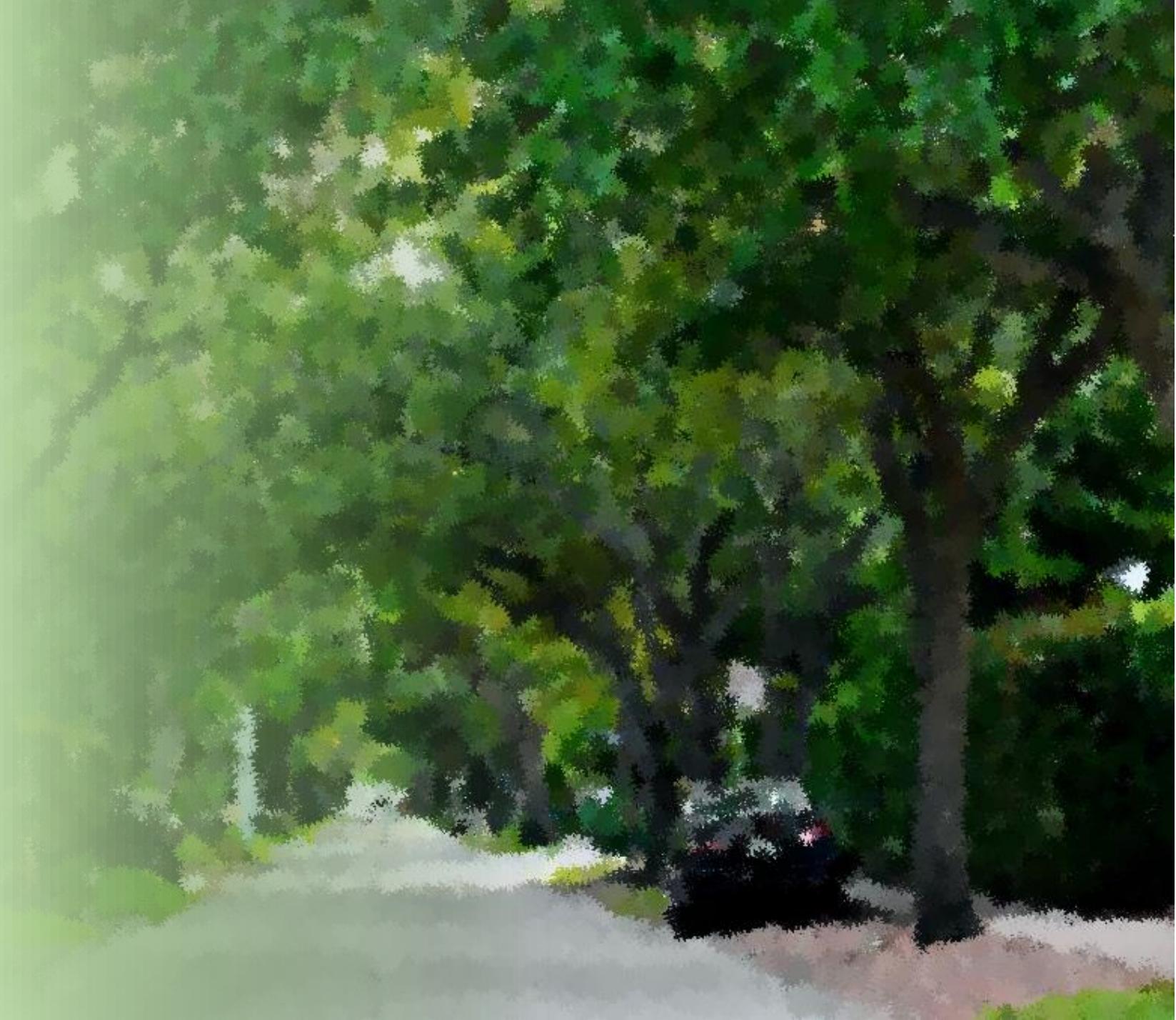
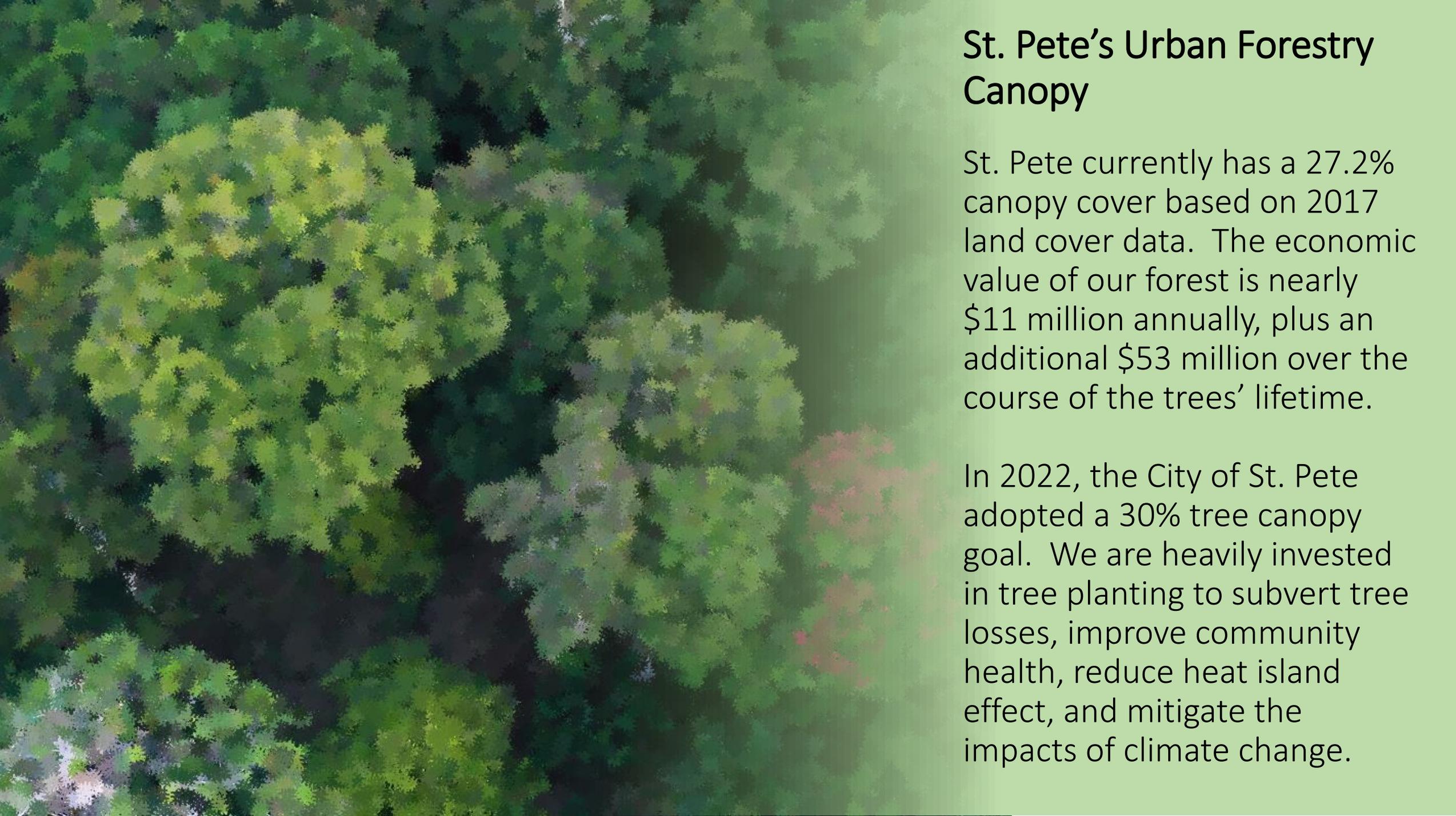


St Pete Community Tree Inventory

2023 Annual Report

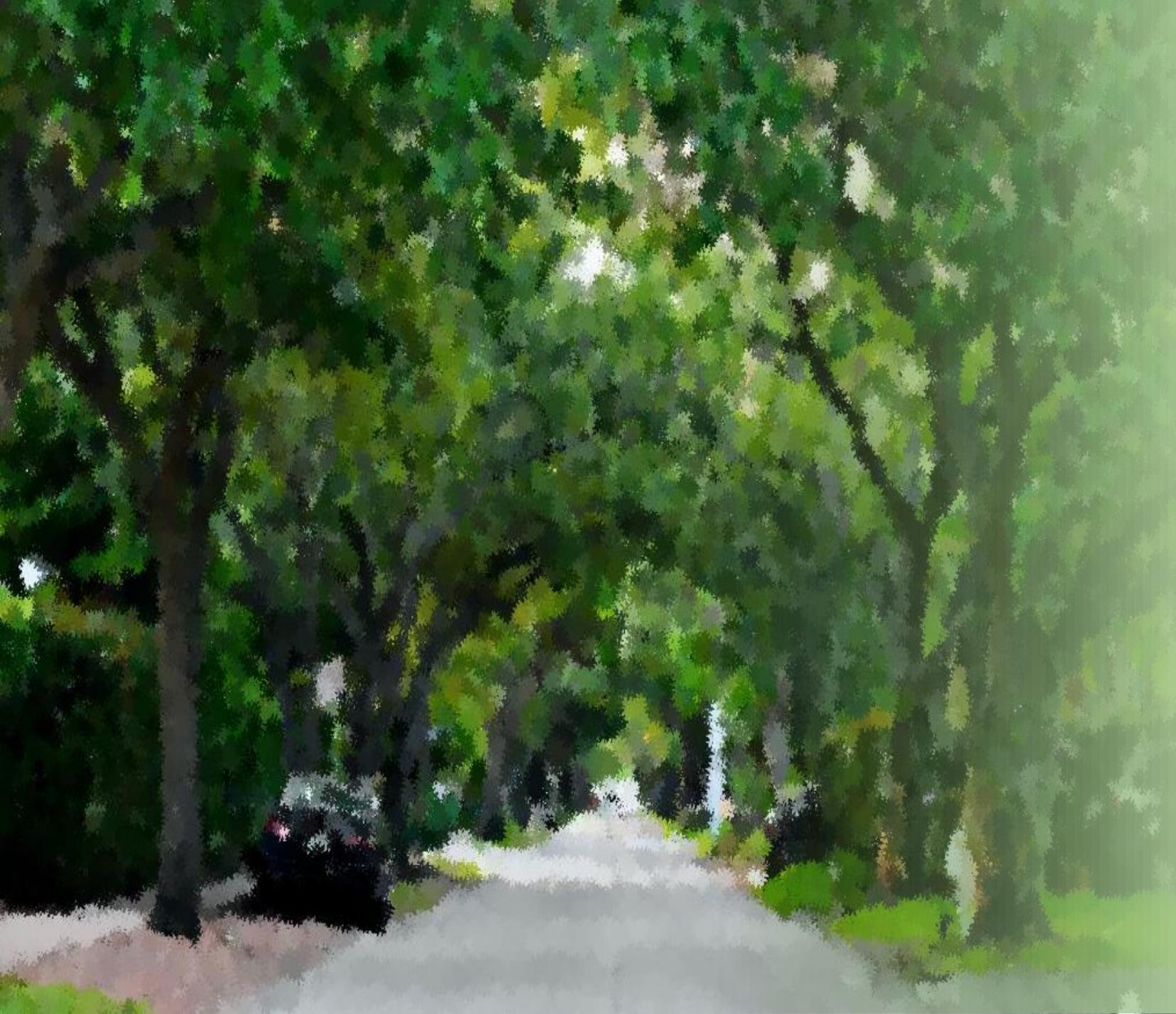




St. Pete's Urban Forestry Canopy

St. Pete currently has a 27.2% canopy cover based on 2017 land cover data. The economic value of our forest is nearly \$11 million annually, plus an additional \$53 million over the course of the trees' lifetime.

In 2022, the City of St. Pete adopted a 30% tree canopy goal. We are heavily invested in tree planting to subvert tree losses, improve community health, reduce heat island effect, and mitigate the impacts of climate change.



St. Pete Urban Forestry

In 2023, St. Pete started a Community Forestry program. This neighborhood-based format focuses on forestry planning and development by aligning with the priorities of the resident groups.

Priorities could include tree planting for a blend of the following strategies:

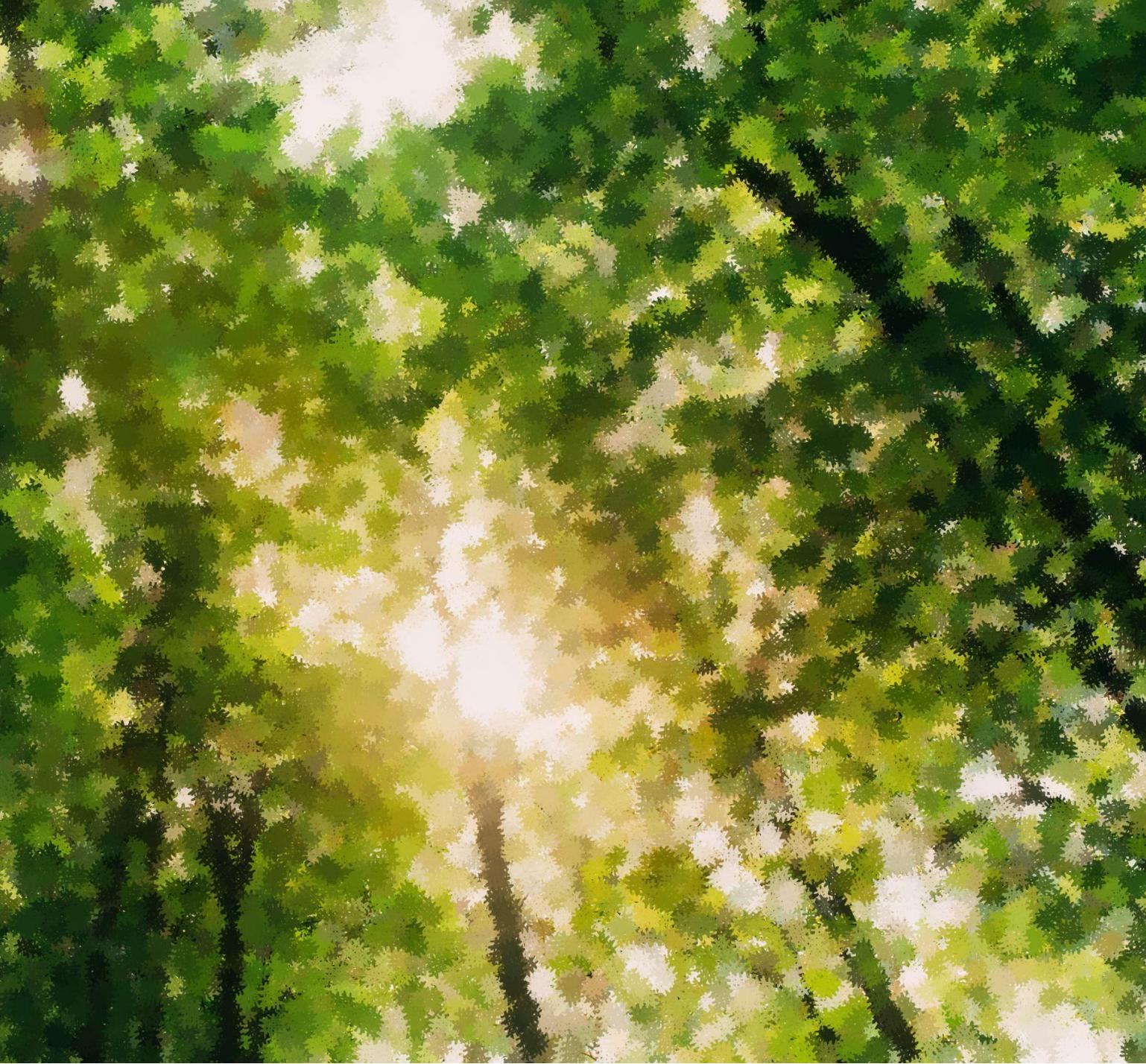
- Long-lived trees that provide shade and energy efficiency
- Trees that supply natural habitat
- Trees that provide seasonal floral display



St. Pete Community Forestry

Robust community engagement is vital to this format. To begin, resident groups, or “tree teams” are trained to gather data on existing neighborhood trees to better understand the species biodiversity, age and condition of the existing forest asset, and the mapping of potential planting locations of new trees.

In 2023, eight new neighborhoods were trained on TreePlotter, an online tree inventory mapping tool. Currently, 15 neighborhoods are actively performing their inventories and more than 4500



St. Pete Urban Forestry

The City of St. Pete uses TreePlotter, a tree inventory program. This program records trees and generates economic benefits using iTree data sourced from the USDA US Forest Service research.

Over the last 30+ years, the Forest Service has studied the impact common native and introduced tree species has on communities by tracking species, size, land use, and condition factors. This allows us to annually report these community tree benefits.

2023 St. Pete Community Tree Benefits

ECOSYSTEM BENEFITS



Total Tree Value and Savings

Total Annual Monetary Benefit: \$112,603.30

Benefits are only calculated for trees with defined species, DBH, condition, and crown light exposure based on i-Tree research.

CARBON (LIFETIME)



Carbon Storage
9,602,258.00 (lbs) ?

CO₂ Storage
35,208,224.00 (lbs) ?

CO₂ Storage
Monetary Benefit
\$699,944.70 ?

AIR QUALITY (ANNUAL)



Air Quality Monetary
Benefit
\$45,932.62 ?

Pollutants Removed
6,592.52 (lbs) ?

STORMWATER (ANNUAL)



Stormwater Monetary
Benefit
\$49,686.86 ?

Runoff Avoided
692,500.40 (ft³) ?

Interception
2,206,412.20 (ft³) ?



St. Pete Community Tree Benefits

This chart illustrates the 2023 community tree benefits derived from inventorying 4,500 trees across 15 participating neighborhoods in St. Pete.

The amount of annual benefits increases when including factors such as energy efficiency (shade), increase in property value, and positive impacts on resident health.

2023 Crescent Heights Tree Benefits

ECOSYSTEM BENEFITS



Total Tree Value and Savings

Total Annual Monetary Benefit: \$37,607.82

Benefits are only calculated for trees with defined species, DBH, condition, and crown light exposure based on i-Tree research.

CARBON (LIFETIME)



Carbon Storage
3,845,611.80 (lbs) ?

CO₂ Storage
14,100,568.00 (lbs) ?

CO₂ Storage
Monetary Benefit
\$268,492.25 ?

CARBON (ANNUAL)



Carbon Monetary
Benefit
\$8,035.05 ?

CO₂ Sequestered
439,180.53 (lbs) ?

AIR QUALITY (ANNUAL)



Air Quality Monetary
Benefit
\$19,975.62 ?

Pollutants Removed
2,882.71 (lbs) ?

STORMWATER (ANNUAL)



Stormwater Monetary
Benefit
\$9,597.12 ?

Runoff Avoided
118,004.84 (ft³) ?

Interception
375,979.78 (ft³) ?

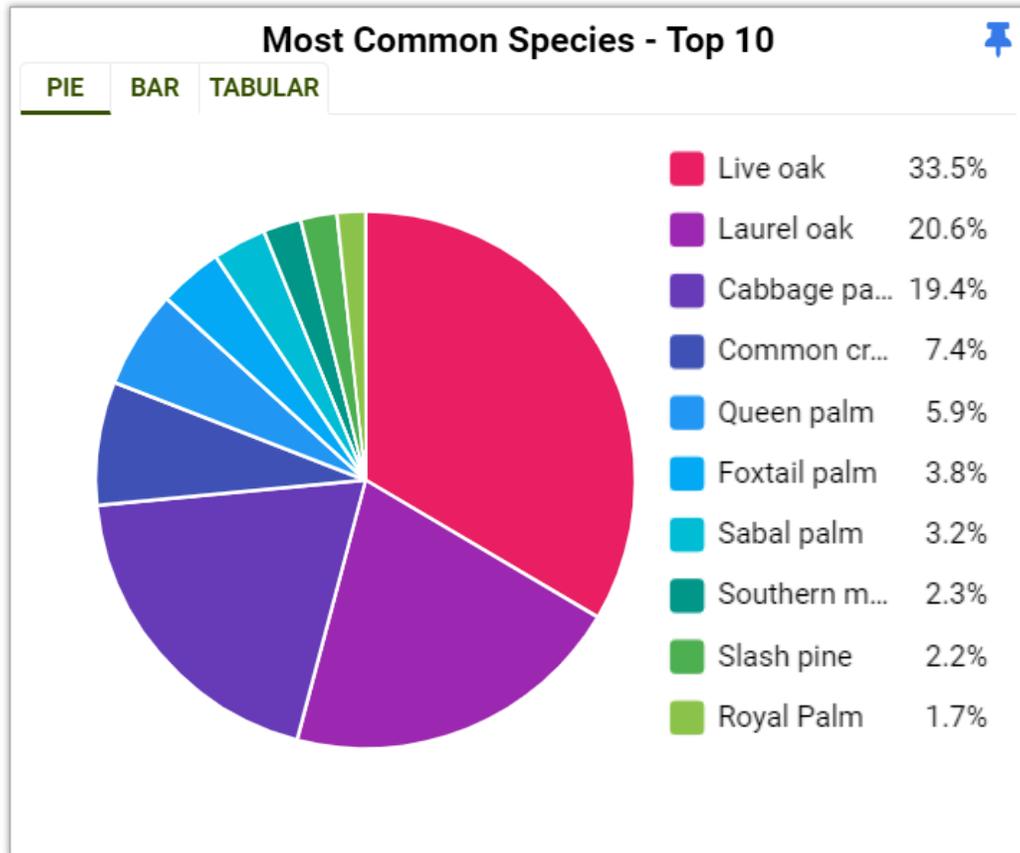


Crescent Heights Tree Benefits

Crescent Heights has inventoried 1700 trees (approximately 40% of their total public and private property trees).

They currently hold the highest annual urban forestry value of all St. Pete neighborhoods at \$36,607.82.

2023 St. Pete Top 10 most common species

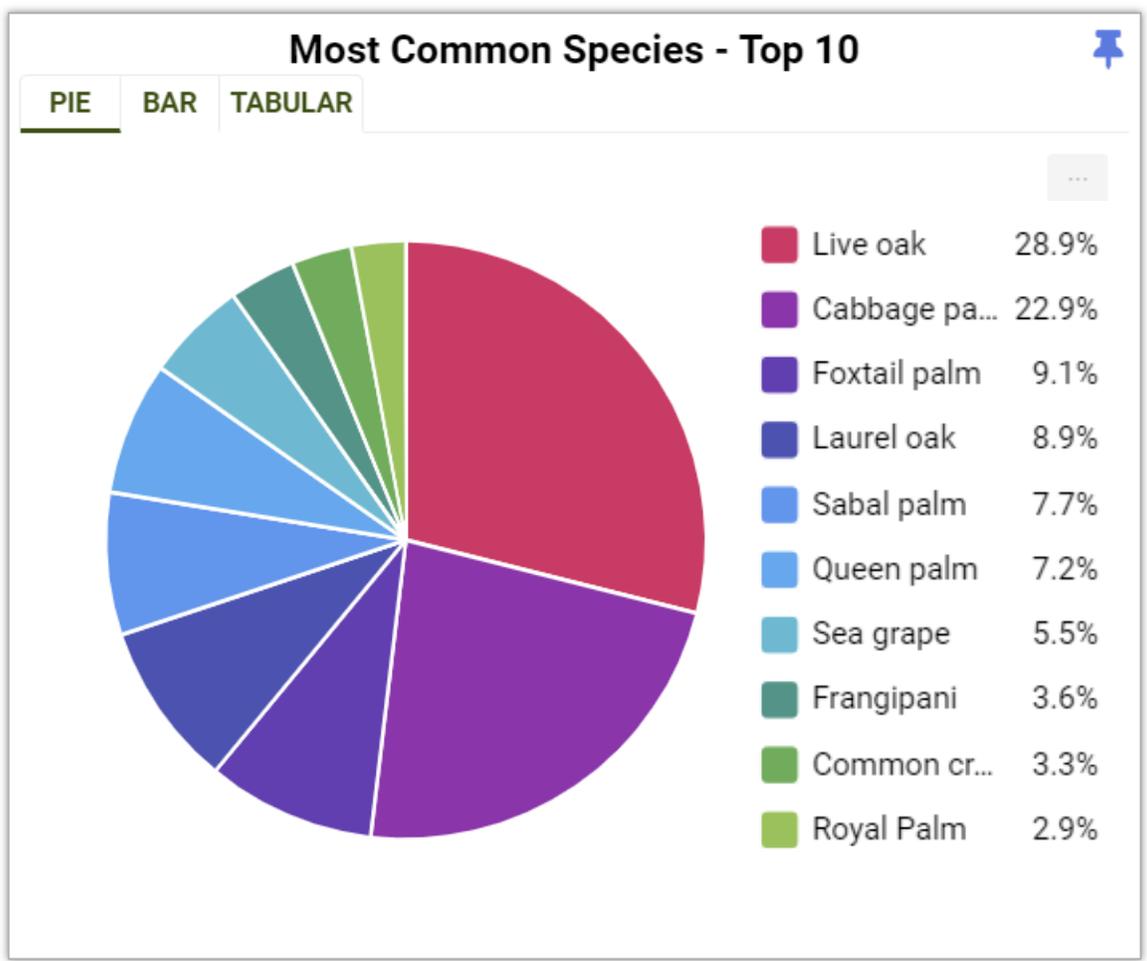


St. Pete Tree Biodiversity

One of the vulnerabilities of St. Pete's urban forest asset is its marginal species diversity. While most of the top 10 species are native to the Pinellas peninsula, the top two species make up more than 50% of the total tree species. The urban forestry standard is to have **no more than 5% of any one species and no more than 10% of any one genus.**

Managing biodiversity increases forest stand resilience from biotic diseases and abiotic vulnerabilities.

2023 Old Southeast Top 10 most common species

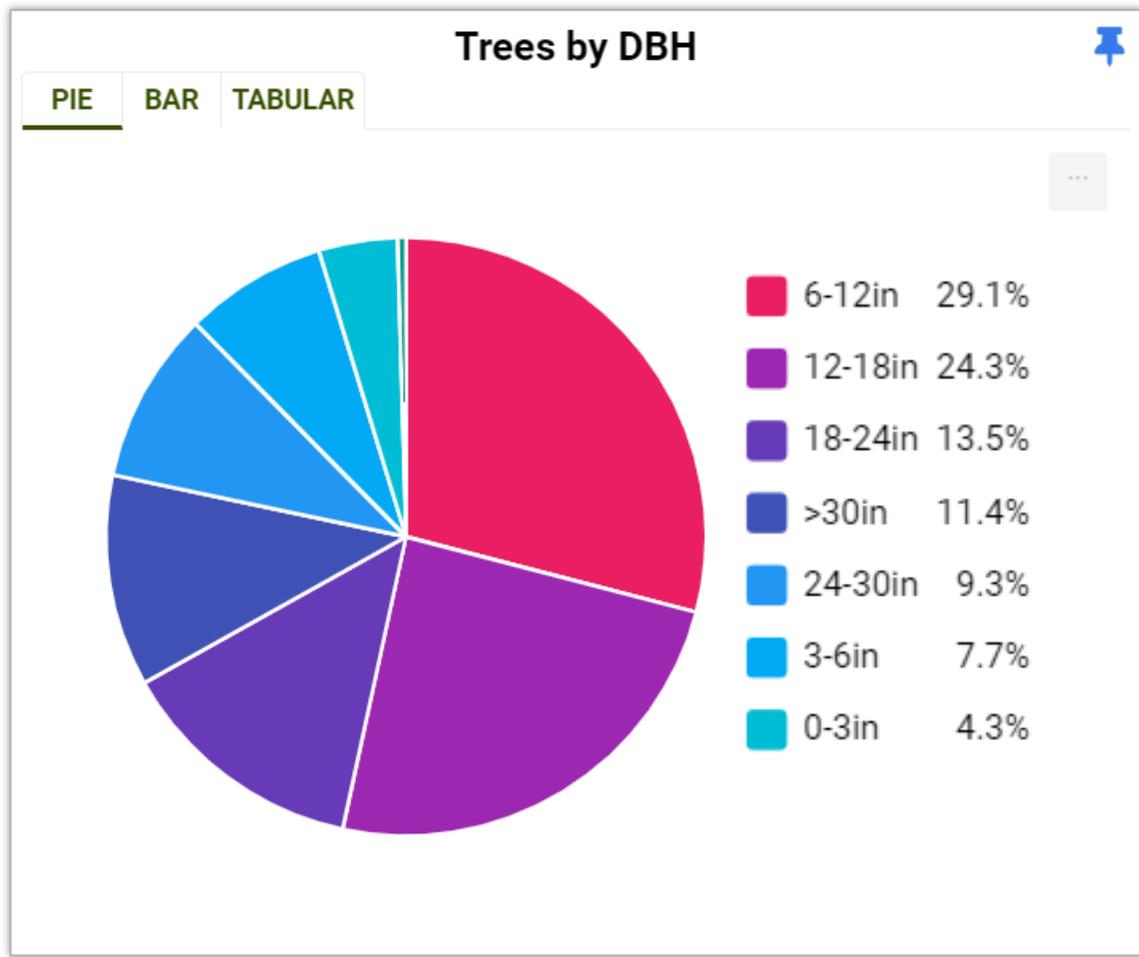


Best St. Pete Tree Biodiversity

Establishing high biodiversity within the forest stand enhances natural resilience to biotic diseases, and abiotic susceptibilities.

Based upon their current tree inventory, Old Southeast Neighborhood Association features the most distinguished tree stand.

2023 St. Pete Trees by DBH



*Optimal tree age diversity would contain 15% in each size class

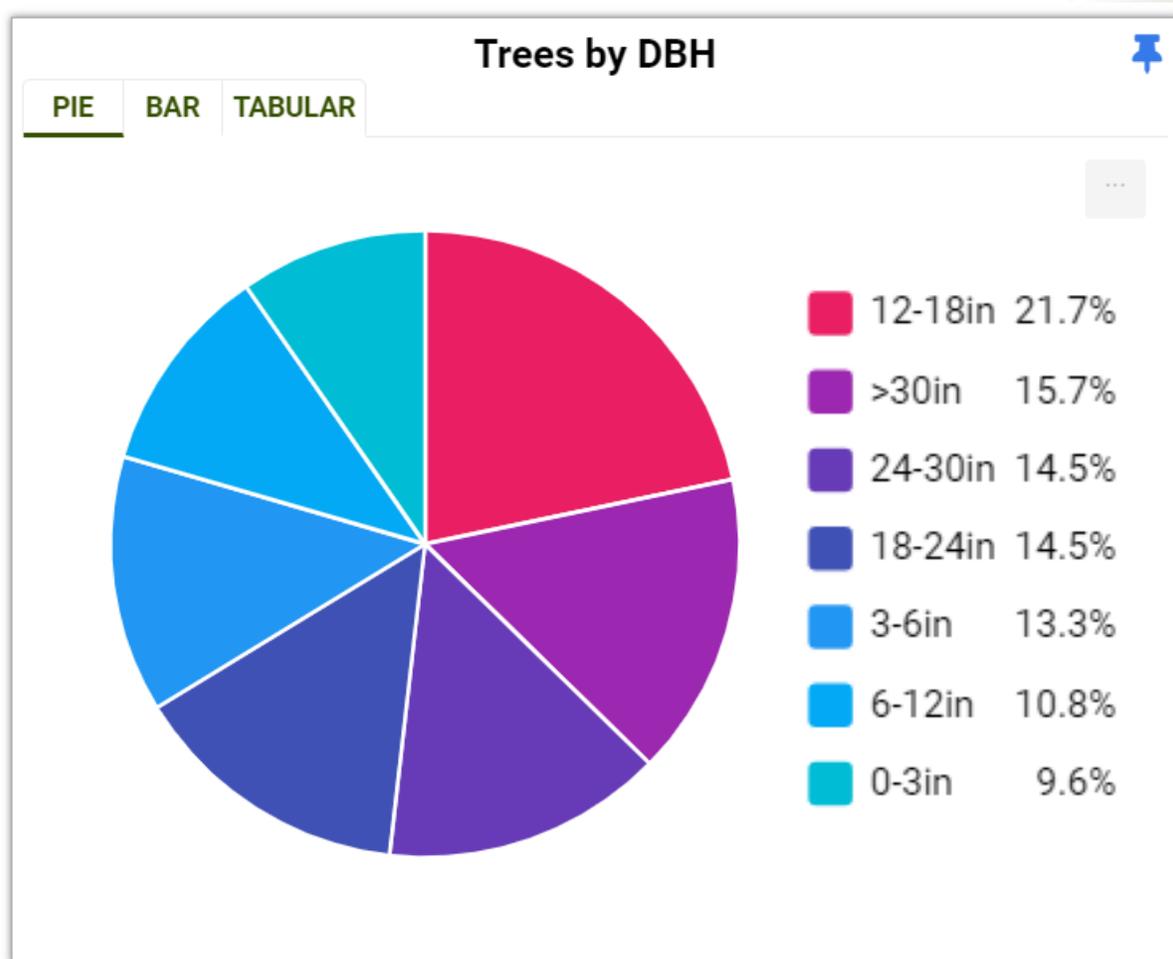
St. Pete Tree Age Diversity

St. Pete's urban forest has a second vulnerability: *limited age diversity*. A healthy and resilient urban forest should have a mixed age.

St. Pete faces poorly-aged stand vulnerabilities within its large Laurel Oak population. Most Laurel Oaks were planted within a ten-year period and are consequently failing simultaneously. This chart reflects the uneven tree size distribution heavily favoring the 6-18" diameter size in St. Pete.

Best urban forestry management practice is to conduct tree planting investments in consecutive five-year increments across the urban forest stand

2023 Euclid/St. Paul Trees by DBH



*Optimal tree age diversity would contain 15% in each size class

St. Pete Tree Age Diversity

Currently, Euclid/St. Paul Neighborhood Association features the most diverse tree age based on their 2023 tree inventory.

For the last 50-80 years, Euclid/St. Paul has invested in their tree stand, leading to an even-aged tree inventory.

2023 St. Pete Tree Inventory Mappers



St. Pete Tree Inventory Mapping Residents

In 2023, more than 2000 trees were mapped by 73 trained residents in 15 neighborhoods.

More than 1200 volunteer hours were logged mapping trees in those neighborhoods.

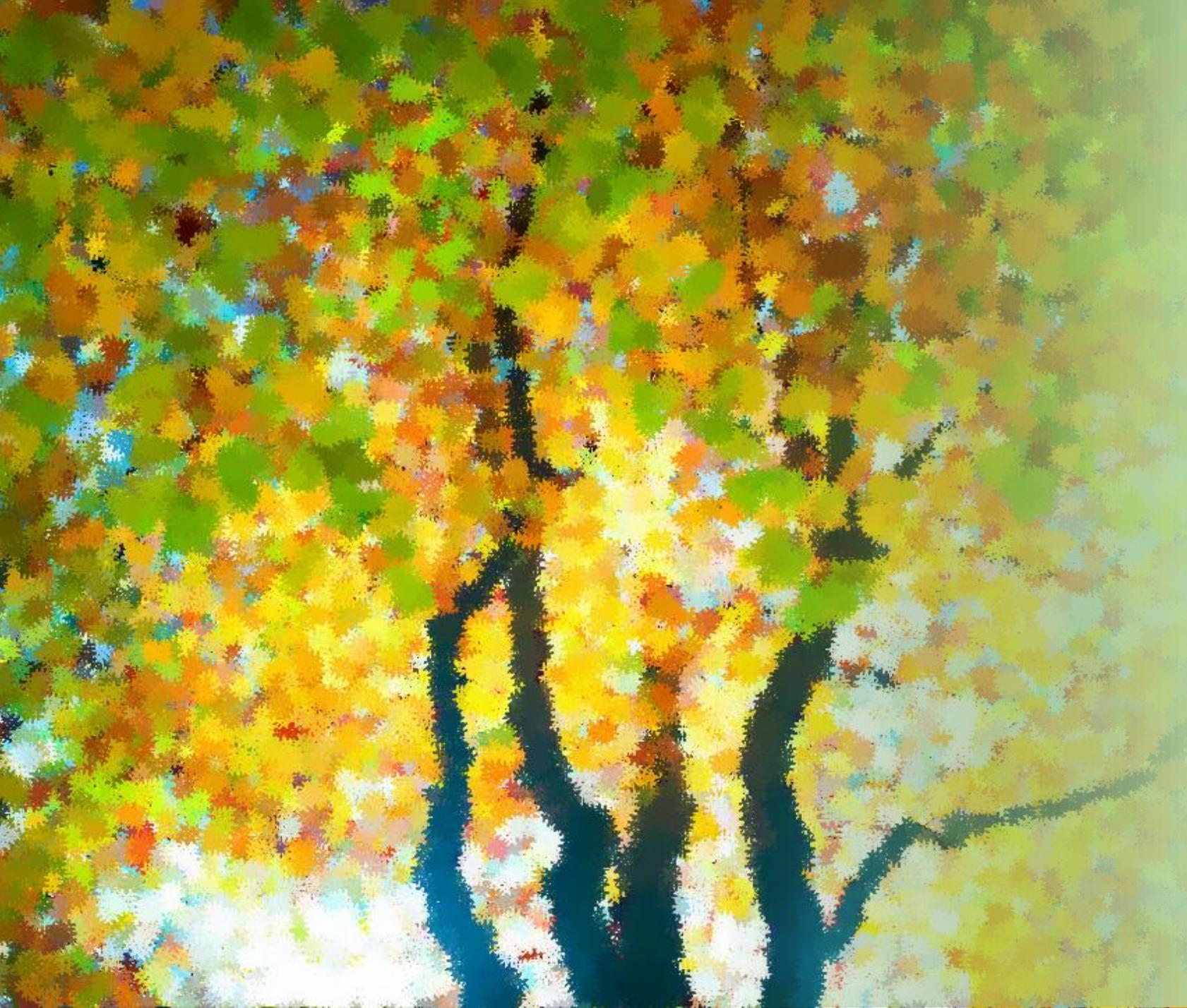
These tree mapping volunteers invested **\$38,160** (using Independent Sector's \$31.80 per volunteer hour value) in the 2023 St. Pete Community Forestry program.



Urban Forestry Action Items

There are several tasks that neighborhoods and residents can complete to improve St. Pete's urban forest. Listed below are some suggestions for neighborhood tree teams to create a more resilient community forest:

- Complete a street and park tree inventory in your neighborhood
- Coordinate with residents to inventory trees on private property
- Collaborate with St. Pete Urban Forestry staff to develop plans and set neighborhood tree canopy goals.



Questions?

Would you like to
schedule a
neighborhood tree
inventory training?

Please contact Dean
dean.hay@stpete.org

Thank you